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Sacred and Quality of Life

- ▶ [Spirituality, Religiosity, and QOL](#)

Safe Sex Effect of Pornography

- ▶ [Pornography, Sexual Socialization, and Satisfaction](#)

Sagacity

- ▶ [Wisdom](#)

SAIS

- ▶ [Subjective Age Identity Scale \(SAIS\)](#)

Salient Values for the Future

- ▶ [Values Aspired to by Adolescents and by Adolescents' Parents in Relation to Their Children's Future](#)

Salutogenesis

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Definition

Salutogenesis (the origin of health) is defined as a constant movement in a continuum on an axis between total ill health (dis-ease) and total health (ease). Antonovsky A. The salutogenic approach to aging. Lecture held in Berkeley, January 21, 1993.

Sense of coherence is defined as “a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli from one’s internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement” (Antonovsky, 1987, p. 19).

Salutogenesis (the origin of health) is defined as constant movement in a continuum on an axis between total ill health (dis-ease) and total health (ease). Antonovsky, 1987.

The Background

In the late 1970s, salutogenesis was introduced by Aaron Antonovsky, a medical sociologist interested in stress theory, who had undertaken a traditional epidemiological study on the effects of menopause on women who had undergone extremely stressful life events; some of them had survived the Holocaust (Antonovsky, 1979, 1987). The women were interviewed in depth. Based on the qualitative analysis of the interviews, Antonovsky began to form a new theoretical framework for health. This was a phenomenon he later called salutogenesis – the origin of health. The salutogenic question what creates health was asked instead of searching for the causes of diseases. Salutogenesis is a stress resource-oriented concept, which focuses on resources and maintains and improves the movement toward health and well-being. It gives the answer why people despite stressful situations and hardships stay well. The salutogenic model of health, developed and formulated in the framework of system theory thinking, started from the assumption that the everyday life is chaotic rather than in order and predictable (Antonovsky, 1987). How do we manage the stress we meet in living in a constantly changing world? The answer Antonovsky gave was the sense of coherence.

Health as a Process

According to Antonovsky (1979, 1987), health was seen as a movement in a continuum on an axis between total ill health (dis-ease) and total health (ease). It is a continuous movement meaning that even if we are affected by diseases, we can to some extent still be healthy (Fig. 1).

Antonovsky distinctly stated that the salutogenesis was not limited by the disciplinary borders of one profession but rather an interdisciplinary approach and a question of bringing coherence between disciplines and realize what connects them. Furthermore, it is not only a question of the person but an interaction between people and the conditions of the living context.

The Key Concepts

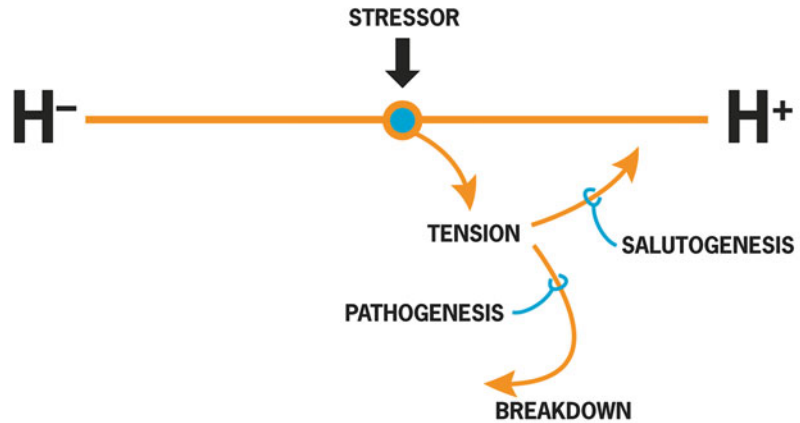
A theoretical description of the core concepts and outcomes can be found in Antonovsky's books (1979, 1987) and more recently in a doctoral thesis (Eriksson, 2007) and "the salutogenic theory in a nutshell" (Lindström & Eriksson, 2010). The salutogenic model of health is based on two core concepts: the sense of coherence (SOC) and the generalized resistance resources (GRRs).

Sense of Coherence

The SOC refers to people's beliefs about their capacity to cope with stressors in everyday life. It is a resource that enables people to manage tension, to reflect about their external and internal resources, and to identify and mobilize them in order to promote effective coping. SOC is a life orientation, a way of viewing world as comprehensible, manageable, and meaningful (Antonovsky, 1987). The basic assumption is that things will go well, having the confidence and trust that one can manage whatever happens in life, being able to learn from one's life experiences, and manage, either by one self, or trusting one gets the support needed from the close environment. A crucial element in the salutogenic orientation is to view stimuli as challenges, not as threats leading to breakdown, and to view challenges as being a natural part of everyday life (Antonovsky, 1985). *Comprehensibility* refers to the extent to which you perceive the stimuli that confront you as making cognitive sense as information that is ordered, consistent, structured, and clear (Antonovsky, 1987). The person scoring high on the sense of comprehensibility expects that the stimuli they encounter in the future will be predictable, ordered, and explicit. This is the cognitive component of the SOC (Antonovsky, p. 17). *Manageability* is the extent to which a person perceives that resources are at their disposal and are adequate to meet the demands posed by the stimuli that bombard them. "At a person's disposal" refers to resources under the person's own control or to resources controlled by legitimate others. This is the instrumental/behavioral component of the SOC (Antonovsky, p. 17). *Meaningfulness* refers to the

Salutogenesis,

Fig. 1 The health continuum “ease/dis-ease” (Lindström & Eriksson, 2010)



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extent to which a person feels that life makes sense emotionally and that problems and demands are worthy of investing energy in, are worthy of commitment and engagement, and are seen as challenges rather than burdens. This is the motivational component of the SOC (Antonovsky, p. 18). A person with a strong SOC is more likely to define stimuli as non-stressors or as irrelevant or benign (Antonovsky, p. 134).

Generalized Resistance Resources

The generalized resistance resources (GRRs) are of both external and internal character (Antonovsky, 1979, 1987). The GRRs are of any character such as material, knowledge/intelligence, ego identity, coping strategy, social support, ties, commitment, cultural stability, philosophy, or a stable set of answer, in other words, ranging from material to virtual spiritual dimensions of the mind, processes, and psychological mechanisms. The main thing is that people are able to use the GRRs for their own good and for health development. The GRRs, characterized by underload–overload balance and participation in shaping outcomes (empowering processes), provide a person with sets of meaningful and coherent life experiences, which in turn create a strong SOC. Common to all GRRs is that they facilitate making sense out of the countless of stressors with which we are constantly bombarded. In so doing, the GRRs give the prerequisites for the development of a strong

SOC. Important for the development of a strong SOC is the balance between underload and overload, participation in shaping the outcome (empowerment), consistency, and emotional closeness (Sagy & Antonovsky, 1999).

The outcome in Antonovsky’s model was health and indirectly well-being, which in turn here has been expanded to well-being and quality of life (Fig. 2).

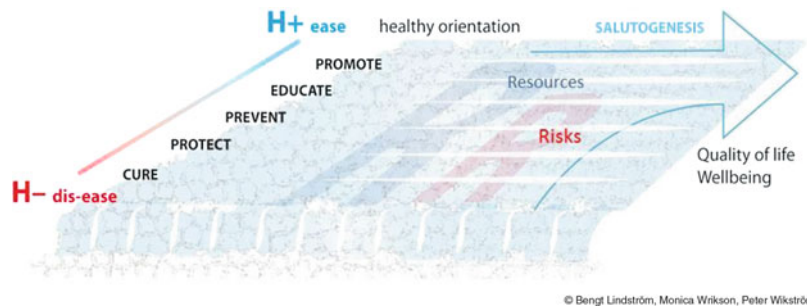
The image of a river has often been used as a metaphor to describe the development of health but mainly using disease/death and health as end points. However, if we use the salutogenic approach instead, health will be related directly to *life* where the salutogenic process leads to quality of life and well-being. Health thus becomes a means to the production of well-being and the good life. Here the flow of the river is in the direction of life (horizontally in this image). Health is seen as a continuum between unhealth and health (vertical).

Measuring Sense of Coherence

The Orientation to Life questionnaire is the original name of the instrument for measuring sense of coherence (SOC-29) consisting of 29 items. A shorter form of 13 items (SOC-13) was later developed (Antonovsky, 1987). The SOC questionnaire is a 7-point Likert scale summed into a score ranging from 13 to 91 (SOC-13) or 29 to 203 (SOC-29) points. High scores are

Salutogenesis,

Fig. 2 Health in the river of life (Modified after Lindström & Eriksson, 2010)



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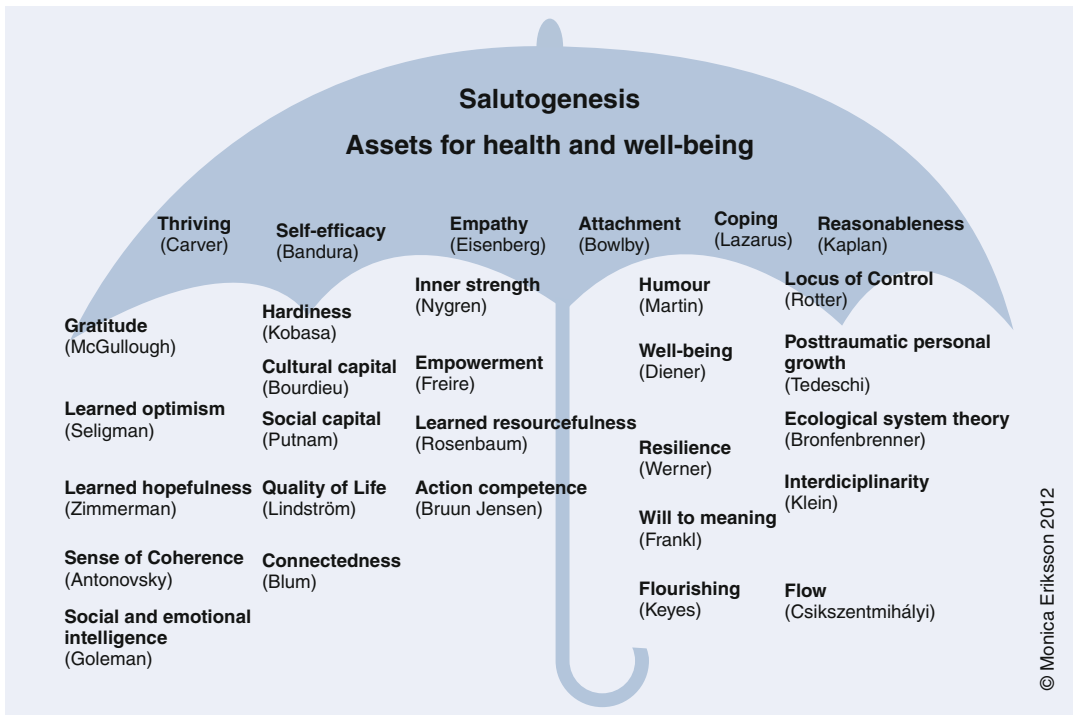
analogous with a strong SOC indicating a better coping capacity. A detailed description of the questionnaire is found elsewhere (Antonovsky). Up to 2003, the SOC questionnaire had been used in at least 33 languages in 32 countries (Eriksson and Lindström, 2005). A recent update shows that there are additional translations in at least 16 languages – Afar, Bilein, Hidareb, Kunama, Nara, Saho, Tigre, Tigrinya (local languages in Africa) (Almedom, Tesfamichael, Saeed Mohammed, Mascie-Taylor, & Alemu, 2007), Albanisch (Roth & Ekblad, 2006), Kroatian (Singer & Brähler, 2007), Brazilian (Bonanato et al., 2009), Hungary (Biro, Balajti, Adany, & Kosa, 2010), Korean (Han et al., 2007), Lingala (Pham, Vinck, Kinkodi, & Weinstein, 2010), Persian, and Swahili (Rohani, Khanjari, Abedi, Oskouie, & Langius-EKLOF, 2010) – and in additional 13 countries, Eritrea (Almedom et al., 2007), Hungary (Biro et al., 2010), India (Suraj & Singh, 2011), Iran (Rohani et al., 2010), Italy (Ciairano, Rabaglietti, Roggero, & Callari, 2010), Korea (Han et al., 2007), Kosovo, Croatia (Singer & Brähler, 2007), Republic of Congo (Pham et al., 2010), Spain (Virues-Ortega, Martinez-Martin, Del Barrio, Lozano, & Grupo Espanol, 2007), Sudan (Abdelgadir, Shebeika, Eltom, Berne, & Wikblad, 2009), Taiwan (Tang & Li, 2008), and Turkey (Öztekin & Tezer, 2009). In all, the SOC questionnaire has been used in at least 49 languages in 45 countries all over the world, in all continents, in varying cultures, and on different samples as healthy populations, several groups of patients, and disabled people and among professionals as an example. Most of the studies used one of the original scales, the SOC-29 or the SOC-13.

SOC and Quality of Life

The impact of the SOC on health, well-being, and quality of life has been extensively reviewed and synthesized (Eriksson, 2007, Eriksson & Lindström, 2006, 2007). In general, a strong SOC was associated with good functioning, well-being, and health, particularly mental health. The SOC seemed to protect against anxiety, depression, burnout, and hopelessness; it was strongly and positively related to health resources such as optimism, hardiness, control, and coping. The SOC tended to buffer against stress during the whole life cycle, from adolescence to adulthood to old age (Eriksson & Lindström, 2006, 2007; Lindström & Eriksson, 2010). The findings were consistent; the stronger the SOC, the better the quality of life. As a conclusion, the SOC seemed to be a resource that enhances the quality of life directly or mediated by a good perceived health. Furthermore, the findings from prior research confirm the results among others on children (Öien, Langeland, & Natvig, 2009, Baker, Mat, & Robinson, 2010), cardiac patients (Bruscia, Shultis, Dennery, & Dileo, 2008), diabetic patients (Abdelgadir et al., 2009), refugees (Ghazinour, Richter, & Eisemann, 2004), older adults, and in families (Margalit & Kleitman, 2006).

Other Concepts Related to Salutogenesis

Salutogenesis is much more than only the measurement of the SOC. It is a much broader concept focusing on resources, competencies,



Salutogenesis, Fig. 3 Salutogenesis as an umbrella concept (Modified after Eriksson & Lindström, 2010)

abilities, and assets on different levels (individual, group, organization, community). Today we can talk about salutogenesis as an umbrella concept, here visualized in Fig. 3, showing some other concepts contributing to the explanation of health and quality of life. It does not claim to cover the hold spectra of personal resources; instead it aims to open up a reflection of other resource-oriented constructs than the SOC. In the next, some of the concepts are described. However, to scrutinize all of them becomes limited within the space of this assignment.

Self-Efficacy and SOC

The concept of self-efficacy is stemming from the social learning theory, a concept of self-reflection, a belief system, where cognitive, social, emotional, and behavioral skills are organized. Self-efficacy refers to effective functioning, in other words about a personal capability in the sense of what one can do under different sets of conditions with whatever skills

one possesses (Bandura, 1995). In his second book, Antonovsky discussed the relationship between the SOC and self-efficacy (1987, p. 59). An intended outcome of a given behavior that is of value to one is referred to as meaningfulness of the SOC; further, the belief that performing the behavior will indeed lead to that outcome comes closely to the comprehensibility dimension of the SOC, and finally, the belief that one can successfully perform that behavior refers to the manageability component. In a recently published review on SOC and self-efficacy, some similarities between the concepts were suggested (Posadzki & Glass, 2009). Comprehensibility, manageability, and meaningfulness have their equivalents in Bandura's beliefs regarding sense of control over thoughts, feelings, and actions. Antonovsky's sense of comprehensibility may be equivalent to the cognitive aspect of self-reflection; and further, the manageability matches the behavioral component in self-efficacy; and finally, meaningfulness corresponds well with the emotional

component of self-efficacy (Posadzki & Glass, p. 928).

Hardiness and SOC

Hardiness, developed by Kobasa (1982), is a multidimensional personality trait that is hypothesized to protect people from the effects of stress (Eschleman, Bowling, & Alarcon, 2010). Similar to Antonovsky, Kobasa asked the salutogenic question why some people exposed to stressful situations stayed well and others did not. The hardiness concept, derived from the existential theory of personality, uses different terms but relates to the same dimensions, i.e., control (Antonovsky manageability), commitment (meaningfulness), and challenge (comprehensibility and meaningfulness). Antonovsky was aware of the potential overlap with the concept of hardiness and discussed this in his second book (1987, pp. 35–38). He considered the hardiness and the SOC to be two separate theories. Sullivan (1993) contrasted the SOC with hardiness, expressing similarities but also clear distinctions between the two. First, the control component in hardiness differs from the manageability dimension in the sense that Antonovsky stated that the individual need *not* to perceive events to be under his direct control, but only under some kind of control still having the conviction that he will participate in shaping the outcome (Sullivan, p. 1777). Second, the commitment dimension in hardiness comes closely to the meaningfulness component in the SOC. Third, the concept of challenge by Kobasa describes a positive attitude toward changes as stimulating and interesting experiences valuable to cope with. This dimension comes closely to the meaningfulness component of the SOC (Sullivan, p. 1777). In a meta-analysis of the concept of hardiness, Eschleman and colleagues (2010) found that hardiness was most strongly associated with sense of coherence, optimism, and self-esteem negative affectivity.

Resilience and Personal Growth

The concept of *resilience* is a familiar concept related to coping with adversities

(Werner & Smith, 2001). Do resilience and SOC described as the same? The answer is no; however, there are similarities and differences between the two concepts (Eriksson & Lindström, 2011). First, the starting points are completely different. While Antonovsky refers to a positive outcome independent of stress under certain conditions, research on resilience starts by recognizing the risk for a negative health outcome. Both the concepts are process oriented (in a continuum), not part of personal characteristics. Both the SOC concept and resilience can be applied to different levels, the individual, group (families), or society. A further development of resilience research is the concept of posttraumatic personal growth (Calhoun & Tedeschi, 2006). What makes people not only survive but also perceive personal growth after encountering adversities? The Resilience to Personal Growth Model has integrated SOC as capacity to cope with life events. Here a strong SOC is an important factor for developing personal growth. The concept is distinct from sense of coherence or resilience, which emphasize how people resist adversity or bounce back from. PTG emphasizes a transformation of people in the aftermath of traumatic events that may shatter the assumptive world of those experiencing them, requiring a reconceptualization of fundamental beliefs about self, others, and the future, producing personal growth.

Reasonableness

The Reasonable Person Model (RPM) is a conceptual framework linking supportive factors in the environment with perceived health and well-being (Kaplan & Kaplan, 2003). People are more reasonable, cooperative, helpful, and satisfied when the environment supports their basic informational need (Kaplan & Kaplan, p. 1484). How to deal with the overwhelming amount of somewhat confusing information and even untrustworthy information and with civility toward others? The model proposes three dimensions essential for developing reasonableness. When the RPM model put emphasis on exploration and understanding, meaningful action, and restoration, the focus in the salutogenic model of

health is on comprehensibility, manageability, and meaningfulness (Antonovsky, 1987). Antonovsky discussed the complexity of communities and social organization using civility as an outcome of coherence (Antonovsky, 1993). Civility affirms plural commitments and loyalties to oneself and to others. The foundation of civility is that of respect, and finally, it presupposes constraints against domination, oppression, and deprivation (Antonovsky, p. 973).

Flourishing

Flourishing can be seen as an expression of mental health (Keyes, 2007). Keyes is talking about a mental health continuum, derived from the salutogenic framework of health (ease/dis-ease continuum) and further completed with the pathogenic paradigm looking at health as the absence of diseases. Mental health described as flourishing, opposite to languishing, is a new approach in research on well-being. Two comprehensive dimensions have emerged: a hedonic well-being dimension (i.e., positive emotions toward life) and eudaimonic well-being (i.e., positive psychological and social functioning in life) (Keyes). Signs of mental health are feelings of being happy with life, finding interest in life, and being satisfied with life (eudemonic well-being). Mental health as flourishing is a concept and framework having a clear salutogenic approach, focusing on people's potentials and strengths while also taking into account the prevalence of mental illnesses. In a recently published book, *Flourish: A Visionary New Understanding of Happiness and Well-Being*, Martin Seligman presents a new concept of well-being as flourishing, stating that the topic of positive psychology is well-being, that the gold standard for measuring well-being is flourishing, and that the goal of positive psychology is to increase flourishing. This is what he calls a new well-being theory (Seligman, 2012, p. 13).

Empowerment

The concept of empowerment introduced by Paulo Freire aimed to reduce inequity through the learning process and mobilize the uneducated

(Freire, 1970). The core is centered on the creation of a respectful dialogue, thereby enhancing a sense of social community, i.e., building social capital. Empowerment is about giving people control and mastery over their lives. It is about the development of abilities and coping skills and endowing people with the ability to work for active critical conscious raising. Conceptually empowerment is still more seen as a principle or an idea rather than a solid theory (Eklund & Eriksson, 2011). Some attempts to catch the essence of empowerment are found related to the salutogenic construct. Findings from an ongoing review of the SOC and empowerment showed that empowerment is something more than only a feeling of sense of coherence. Conceptually the two constructs differ (Eklund & Eriksson).

Cross-References

- ▶ [Assets Mapping](#)
- ▶ [Sense of Coherence](#)

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by the individual (including flirting, kissing, touching, intercourse, or any other form of sex in its widest sense), whereas ► [sexual orientation](#) is more complex, in that it encapsulates constructs of both sexual attraction and identity (Wilmot, 2007).

Sexual orientation, as defined by the American Psychological Association (2010), is an enduring emotional, romantic, sexual, or affectional attraction towards others, while also often encompassing an individual's sense of personal and social identity based on those attractions, and membership of a ► [community](#) with others who share them. Sexual preference is often considered to overlap with sexual orientation, but it is distinguished in the research literature as it suggests a degree of "choice."

Sexual behavior is a major determinant of conception rates, human immunodeficiency virus transmission, sexually transmitted infection rates, and other ► [health](#) outcomes. Understanding sexual orientation at the population level is vital for appropriate service development, monitoring of discrimination, and understanding the unmet needs of the population. Nonheterosexual orientation has been shown to be linked with the experience of ► [prejudice](#), social ► [stress](#), increased risk of ► [mental illness](#) and poorer mental health outcomes (including increased rates of substance misuse, self-harm, and suicide) (King et al., 2008; Meyer, 2003).

There are few data sources on the prevalence of same-sex behavior and orientation in England. The Adult Psychiatric Morbidity ► [Survey 2007](#) (APMS 2007) (McManus, Meltzer, Brugha, Bebbington, & Jenkins, 2009) was used as an opportunity to establish prevalence estimates and assess the impact of question format on reporting.

SAM

- [Social Accounting Matrix](#)

Same-Sex Attraction

- [Sexual Orientation](#)

Same-Sex Behavior and Orientation in England

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Synonyms

[Homosexual behavior and orientation in England](#); [Nonheterosexual orientation and behavior in England](#); [Sexual identity](#); [Practice, sexual](#); [Preference, sexual](#)

Definition

Sexual behavior refers to how people behave sexually and encompasses all sex acts performed

Description

Background

The official government estimate of the lesbian, gay, and bisexual (LGB) population in the UK is 5–7 % (Betts, 2008). However concerns have been raised about the accuracy of this estimate

Same-Sex Behavior and Orientation in England, Table 1 LGB prevalence from existing UK surveys

Survey	Coverage	Year	LGB (%)	Sample size
Integrated Household Survey	UK	2009/10	1.5	238,206
Citizenship Survey	England and Wales	2009/10	2.3	9,203
British Crime Survey	England and Wales	2009/10	2.2	22,995
General Lifestyle Survey	Great Britain	2008	1.1	3,443
Northern Ireland Life and Times Survey	Northern Ireland	2005	1.7	1,199
British Social Attitudes Survey	Great Britain	2005	1.4	1,732
Scottish Census Small Test	Scotland	2005	1.3	692
DTI Fair Treatment at Work Pilot Survey	Great Britain	2008	2.4	2,704

as it was derived from combining responses from a series of questions about sexual behavior, sexual identity, and sexual attraction in the past and present. A review of UK data sources identified ten surveys in which 0.3–3 % defined themselves as LGB (Betts, 2008). A review of international data identified 19 surveys (all of which were carried out in the USA or Canada) and reported a range of 0.9–4.9 % self-identifying as LGB (Taylor, 2008). Because of concerns about the quality of these data, APMS 2007 was used to assess the prevalence and characteristics of the nonheterosexual population in a random probability household sample of people living in England, for the first time. Further information about the survey methods can be found in McManus et al., 2009; Chakraborty, McManus, Brugha, Bebbington, & King, 2011; and Hayes et al., 2012. Following this, the Office for National Statistics (ONS) introduced a sexual identity question into the Integrated Household Survey in 2009. In the first year this survey found 1.5 % of the population identified themselves as LGB (Joloza, Evans, & O'Brien, 2010).

Results

By combining question types in APMS 2007, it was found that 94.5 % of the population identified themselves as “entirely heterosexual,” 0.8 % defined themselves as “entirely homosexual,” and 4.7 % fell between these two extremes. If one considers the population identifying themselves as LGB, in this case participants who answered “bisexual,” “mostly homosexual/mainly gay or lesbian,” and “entirely homosexual/completely

gay or lesbian,” then prevalence is 1.75 %, which is consistent with other surveys (Table 1). A number of people (1.7 %) identified themselves as “other”; it could be argued that this is consistent with findings from “asexuality” studies (Poston & Baumle, 2006; Prause & Graham, 2007) or may identify those who feel they don’t fit neatly into existing categories of sexual orientation, such as transgender.

Sexual orientation and behavior were explored using two alternative questions which were randomly assigned. A higher number of people described nonheterosexual experience when it was more clearly defined as “kissing or touching, or intercourse, or any other form of sex” (Version B) (6.5 % vs. 3.9 %). Otherwise there was no statistical difference between question types. Both versions of the sexual orientation questions yielded similar results when compared on age, ethnicity, and gender demonstrating that people’s willingness to report their sexuality was not dependent on sociodemographic factors or version of the question. The responses to the questions on sexual orientation and sexual behavior were usually consistent. However a total of 31.4 % of those identifying themselves as bisexual had only ever had opposite-sex partners, and 8.1 % of people identifying as nonheterosexual sexual reported no same-sex partners. These distinct groups would be lost in measures of behavior alone. Regression analysis showed that single marital/civil status was the only sociodemographic variable significantly associated with nonheterosexual orientation.

Conclusions

As the collection of sexual orientation data become more acceptable and routine, estimates are likely to become more valid. There is evidence that current surveys are likely to underestimate the true size of the LGB population (Aspinall, 2009). The survey described was the first to provide a probability sample estimate combining sexual orientation and sexual behavior. Improving data quality is vital for groups involved in health service research and service commissioning, groups involved in providing services to LGB populations, and the UK Government (which now recognizes sexual orientation as one of the seven statutory equality dimensions (House of Commons, United Kingdom Government, 2009) to facilitate the monitoring of social inequalities.

Questions Measuring Sexual Orientation and Partnerships

Version A

Which statement best describes your sexual orientation? This means sexual feelings, whether or not you have had any sexual partners.

1. Entirely heterosexual (attracted to persons of the opposite of sex)
2. Mostly heterosexual, some homosexual feelings
3. Bisexual (equally attracted to men and women)
4. Mostly homosexual, some heterosexual feelings
5. Entirely homosexual (attracted to persons of the same sex)
6. Other

Have your sexual partners been:

1. Only opposite sex
2. Mainly opposite-sex but some same-sex partners
3. Mainly same-sex but some opposite-sex partners
4. Only same sex
5. Or I have not had a sexual partner

Version B

Please choose the answer below that best describes how you think of yourself:

1. Completely heterosexual
2. Mainly heterosexual

3. Bisexual
4. Mainly gay or lesbian
5. Completely gay or lesbian
6. Other

[example for male recipients] Sexual experience is any kind of contact with another person that you felt was sexual (it could be just kissing or touching, or intercourse, or any other form of sex). Has your sexual experience been:

1. Only with (women) or a (woman), never with a (man)
2. More often with (women) and at least once with a (man)
3. About equally often with (women) and (men)
4. More often with (men) and at least once with a (woman)
5. Only with (men) or a (man), never with a (woman)
6. I have never had any sexual experience with anyone at all

Cross-References

- ▶ [Homosexuality, Attitudes Toward](#)
- ▶ [Minority Health](#)
- ▶ [Prevalence](#)
- ▶ [Sample Survey](#)
- ▶ [Sexual Orientation and Mental Health](#)
- ▶ [Survey](#)

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Same-Sex Couple Family

► Family Structure

Same-Sex Domestic Violence

► Same-Sex Partner Violence

Same-Sex Marriage in Canada

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Synonyms

[Civil unions in Canada](#); [Gay marriage](#); [Same-sex unions](#)

Definition

Since the Canadian government passed the Civil Marriage Act on July 20, 2005 (2005, c. 33), marriage has been defined nationwide as the “lawful union of two persons to the exclusion of all others.” Because this definition is explicitly gender neutral, any two persons, regardless of their gender or their partner’s gender, may be legally wed in Canada.

Description

History in Canada

The protection of the rights of gay, lesbian, and bisexual individuals has a long history in Canada. The first major step occurred in 1969 when the federal government, under the leadership of then Prime Minister Trudeau, removed homosexuality from the criminal code. The issue was revisited in 1995 when the Supreme Court of Canada held

that although “sexual orientation” is not specifically listed in the Canadian Charter of Rights and Freedoms (1982), people are still protected from discrimination based on their sexual orientation under the charter. The following year, the Canadian Human Rights Act (1985), which protects the rights of all individuals to be treated with equality, was amended to explicitly include sexual orientation as one of the areas protected from discrimination.

Based on a Supreme Court of Canada ruling in 1999 (*M. v. H.*, 1999), same-sex couples were extended many of the financial and legal benefits (e.g., family law, pension benefits, income tax) of heterosexual couples in common-law relationships; however, they still did not have the legal right to marry. As many of the laws pertaining to couples are governed by provincial jurisdiction, the decision to legalize same-sex marriage began on a provincial basis. The first province to enact this legislation was Ontario. The ruling was made on June 10, 2003, when the Court of Appeal for Ontario judged the definition of marriage as a union between a man and a woman to be unconstitutional and in violation of the Canadian Charter of Rights and Freedoms. Similar legislation was put into effect in British Columbia on July 8, 2003 and Quebec on March 19, 2004. Additional provinces and territories followed suit. By July 2005, all provinces and territories, except for Alberta, Prince Edward Island, Nunavut, and the Northwest Territories, had legalized same-sex marriage.

Even though most provinces permitted same-sex couples to wed, the legal definition of marriage falls under federal jurisdiction, and therefore, legislation to change the definition of marriage from “the union of one man and one woman to the exclusion of all others” to “the lawful union of two persons to the exclusion of all others” was introduced by then Prime Minister Jean Chrétien in July 2003. This legislation also explicitly noted that under the protection of the Charter of Rights and Freedoms, any religious officials who felt that same-sex marriage was contrary to their religious beliefs would not be compelled to perform these marriages. Following debates in Parliament and in the Senate, Bill C-38

was passed into law and received royal assent on July 20, 2005, redefining marriage and extending the right to marry any person of their choosing to all Canadians.

The Canadian public largely supports same-sex marriage. An Angus Reid poll conducted in September 2009 found that 61 % of Canadians supported the legalization of same-sex marriage; another 23 % were supportive of same-sex unions (Angus Reid Strategies, 2009). This represents an increase in public support since the law was passed; in 2002, 49 % were supportive while 46 % opposed (The Strategic Counsel, 2002). Younger Canadians tend to be more supportive of same-sex marriage (The Strategic Counsel).

Impact of Marriage on Same-Sex Couples

Only two studies have specifically looked at the impact of marriage on Canadian same-sex couples. The first, a phenomenological investigation of same-sex marriage (Alderson, 2004), was conducted with 22 married or soon-to-be married same-sex couples, primarily from Canada. In the second, MacIntosh, Reissing, and Andruff (2010) measured ► **relationship satisfaction** in 26 married lesbian or gay couples and conducted in-depth interviews with 15 of the first same-sex couples to wed in Canada.

In his study, Alderson (2004) asked the question, “What is your experience of being in a same-sex marriage?” and his results emerged along three different themes: individual development; history, politics and activism; and relationships and marriage. Individually, participants reflected on their experience of feeling same-sex attraction and coming out. They also discussed homophobia they experienced from others and the negative beliefs which they themselves held and had to overcome. Politically, couples described the need to be treated as equals and to have the same rights as all members in their society.

When asked about their reasons for getting married, couples in Alderson’s study (2004) expressed how they wanted their relationships recognized and how they wanted to show their formal commitment to their partners, their family

and friends, and society in general. Some noted that marriage was a spiritual journey which created a sense of family and brought new and greater depth, understanding, and completion to their relationship. Couples also commented on the importance of the legal recognition and the rights that afforded them. Still others fought for marriage as a political issue in the hopes of making things better for the younger generations.

Participants in Alderson's study (2004) were also asked about specific benefits and drawbacks of same-sex marriage. All participants reflected on the power held by the institution of marriage and how being married had empowered them and allowed them to solidify their commitment to their partner. They also noted that the language of marriage legitimized the nature of their relationship socially and increased understanding and recognition. Finally, participants commented on the benefits of marriage with respect to medical decision making and issues of inheritance. Only two drawbacks were noted. First, as with any relationship gay or straight, things might not work and the relationship might end in divorce. Second, some participants expressed concerns that some gay and lesbian couples may just marry on impulse or solely for political reasons.

The second study, conducted after the national legalization of same-sex marriage, noted that legal marriage has had a great effect on the ► **quality of life** of these couples, primarily on social, relational, and political domains (MacIntosh et al., 2010). Participants highlighted that a legal marriage extends all of the practical rights and responsibilities to same-sex couples which had previously only been afforded to married heterosexual couples; all married couples are entitled to partner pension and health benefits, income tax benefits, inheritance, and power of attorney. Additionally, distinctions are made between common-law and married couples in matters of family law, immigration law, medical and legal decision making, and protection and rights upon dissolution of the relationship; a legal marriage extends and protects these rights for individuals in same-sex relationships. The majority of participants in this study noted how

their marriage allowed them to feel like full participants in society, and they expressed a sense of belongingness and feelings of entitlement which they had previously been denied. Social elements also discussed by these couples included being able to use the language of marriage (e.g., wife, husband, in-laws) and their level of outness. Ninety-two percent of couples reported increased acceptance and understanding from friends and family because of the language used to describe their relationship. The majority of participants also indicated that they felt more comfortable and more entitled to be out because of increased social awareness and acceptance. Participants noted that their marriages had created a sense of normalization for their relationships, and they noted a sense of pride at being able to publicly demonstrate that their relationships were no different than those of heterosexual couples.

Couples in the study by MacIntosh et al. (2010) all noted that marriage had a positive impact on their relationship, and they scored significantly higher in relationship satisfaction compared to population norms for married heterosexual couples. Most couples in this study also reported that their marriages had increased their sense of family; they felt welcomed into their partner's family, and they felt more open to, and more entitled to, have children of their own. Only two couples reported that their marriages had a negative impact on already strained relationships with extended family. The majority of couples also noted a sense of surprise that getting married actually increased the closeness in their relationships, and they reported feeling more secure, more relaxed, and at peace. Some couples expressed anger for having been denied these feelings throughout their relationship before the legalization of same-sex marriage.

With respect to the political implications of their marriage, couples in the study by MacIntosh et al. (2010) again described the importance of being granted legal rights and being afforded full equality in society. Primarily, they noted a sense of being protected and accepted by society, and they acknowledged a sense of safety and security knowing that they had the right to care for and

make decisions for an ill partner. They also discussed the importance of marriage for allowing access to parental rights for children born or adopted into the family. Ninety-two percent of participants also discussed how offering same-sex civil unions was not acceptable and not the same as nor equal to marriage.

As demonstrated by these two studies, the impact of legal marriage on the quality of life of gay, lesbian, and bisexual individuals is overwhelmingly positive, broad, and significant. The right and ability to choose to marry whomever one loves is empowering, on an individual as well as a societal level.

Cross-References

- ▶ [Decision Making](#)
- ▶ [Human Rights](#)
- ▶ [Sexual Orientation](#)
- ▶ [Thematic Analysis](#)

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Same-Sex Partner Violence

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Synonyms

[Lesbian, Gay, Bisexual, Transgender, Queer \(LGBTQ\) relationship violence](#); [LGBTQ intimate partner violence](#); [Same-sex domestic violence](#); [Same-sex/gender partner violence](#)

Definition

Same-sex partner violence consists of a pattern of coercive and/or violent behavior between partners of the same-sex/gender where one partner seeks to intimidate, control, hurt, and/or abuse their intimate partner. Violence can take many forms including emotional abuse, verbal threats, physical violence and/or sexual violence, and assaults. In same-sex partner violence, homophobia and transphobia may also be used as controlling tactics that are specific to LGBTQ relationship, for example, threats to reveal a person's sexual or gender orientation to a family member or an employer, threats to jeopardize someone's immigration process because of their sexual or gender orientation, and telling someone that they will not be loved by anyone else because they are gay, lesbian, or transgender (Hart, 1986; Renzetti, 2001; Ristock, 2002). While the term "same-sex" partner violence is most commonly used in the research literature and reflects the fact that most of the research to date has focused on the experiences of gay men and lesbians, it should be noted that this term ends up excluding the experiences of those who identify as transgender. In this entry, the more inclusive term LGBTQ relationship violence is used where appropriate.

Description

Background

Early conceptualizations of domestic violence focused on heterosexual relationships and did not take into account that violence can occur in any intimate relationship. Research and activism examining violence in same-sex relationships began in the mid-1980s and primarily focused on violence in lesbian relationships (Hart, 1984; Renzetti, 1992; Ristock, 2002). While more research has emerged that explores the experiences of gay and bisexual men in violent relationships, we know far less about the experiences and needs of those who identify as transgender (Ristock, 2011). To date, research in this area lags behind the foundation of knowledge that has been established for understanding heterosexual domestic violence. Research in this field must also take into account the larger context of homophobia and transphobia that still exists in society despite many advances in human rights for lesbians, gay, bisexual, transgender, and queer people.

What Current Research Tells Us

It has been difficult to determine the true prevalence of violence in LGBTQ relationships, in part, because of the differing definitions of abuse used by researchers and also because of sampling difficulties when trying to research marginalized communities. We do know that all forms of violence and abuse exist (psychological, physical, sexual, and economic) and that there have been cases where the violence has been lethal (Ristock & Timbang, 2005). It appears from several studies that psychological abuse is the most common form of violence, that relationship violence is more often experienced by those under 40, and that physical and sexual abuse often co-occur (in gay men's abusive relationships, in particular). Further, several studies have identified a pattern where violence occurs in a person's first intimate same-sex relationship (Donovan & Hester, 2008; Irwin, 2008; Ristock, 2002) suggesting a particular set of circumstances in which abuse may occur. For example,

a person entering into a first same-sex relationship may be dependent on their abusive partner if the partner has been "out" longer. They may also lack confidence as to what behaviors are acceptable in intimate same-sex relationships and may be invested in maintaining the relationship as a way to confirm their identity and sense of self.

Several smaller studies have been conducted that show the need to consider the particular and specific contexts that surround LGBTQ people's experiences of relationship violence. This research reveals the ways that violence is reinforced in a larger context of social structures that create inequalities, disadvantages, and vulnerabilities to violence. For example, Pantalone, Lehavot, Simoni, and Walters, (2011) found that living in poverty and early exposure to violence were part of the pathway to domestic violence for sexual minority men with HIV. Other studies have revealed the impact of structural and systemic violence in the lives of LGBTQ people. For many LGBTQ people, domestic violence is just one form of violence that they have experienced. Survey research has found that 20 % of women and 25 % of men have experienced victimization based on their sexual orientation. Many lesbian and bisexual women have experienced sexual abuse and/or male violence in addition to the violence in their same-sex relationships. One study found 60 % of all transsexual/transgender people have been victimized by hate violence. Finally, many LGBTQ people of color have experienced the combined effects of racial violence and oppression as well as violence in relationships (Brown, 2011; Donovan & Hester, 2008; Ristock & Timbang, 2005; Taylor & Ristock, 2011).

Barriers in Services

A large body of research has addressed the barriers LGBTQ people face when accessing services for relationship violence. Research has consistently found that it remains difficult for LGBTQ persons to tell family members, coworkers, and/or neighbors what is happening because of the larger context of homophobia, transphobia, and heterosexism. Victims of same-sex partner violence are

more likely to turn to informal supports (friends) or to counselors for therapy rather than call the police, use the criminal justice system, access health-care services, or turn to shelters for battered women because they fear encountering discriminatory attitudes (Donovan & Hester, 2008; Ristock & Timbang, 2005). There are very few places that gay and bisexual men or transgender people can specifically turn to as victims of violence since most services have developed to respond to women who have been victimized by domestic violence. Thus, many LGBTQ people leaving abusive situations are at risk of homelessness because of the limited housing and shelter options available. Other research suggests that many services remain ill-equipped in addressing LGBTQ relationship violence because they are working from heteronormative frameworks developed to address the needs of heterosexual women (Durish, 2011; Robinson & Rowlands, 2009). Overall, access to support services for LGBTQ people very much depends on where one lives. It remains more difficult to find appropriate services in rural and northern locations while there may be more options in large urban centers with visible LGBTQ communities.

The Need for Future Work

Much more research is needed if we are to adequately understand and respond to the issue of violence in LGBTQ relationships. For example, very few studies have been conducted with perpetrators of violence, and fewer still have evaluated the effectiveness of specific intervention and prevention strategies. In sum, as long as LGBTQ identities remain stigmatized, there is a risk of research on same-sex relationship violence being used to pathologize LGBTQ people. Thus, above all, work in this area requires taking an ethical stance so that it is linked to anti-oppressive and social justice efforts.

Cross-References

- ▶ [Child Maltreatment: Physical Abuse](#)
- ▶ [Child Maltreatment: Sexual Abuse](#)

- ▶ [Dating Violence](#)
- ▶ [Domestic Violence](#)
- ▶ [Elder Abuse](#)
- ▶ [Violence Against Women](#)

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Same-Sex Unions

▶ [Same-Sex Marriage in Canada](#)

Same-Sex/Gender Partner Violence

▶ [Same-Sex Partner Violence](#)

Sample

▶ [Estimator](#)

Sample Frame

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Synonyms

[Sampling frame](#)

Definition

A sample frame is the list of members of the population of interest from which a probability sample is selected. A sample frame does not always include all members of the population of interest. For example, suppose that a study is going to conduct surveys of residents in

a particular neighborhood and intends to use telephone directories as the sample frame. Residents of the neighborhood who do not have a landline telephone service will not be included in the sample frame for the study. The sampling frame is a critical component in probability sampling Cochran (1977). Without an adequate sample frame, it is impossible to apply probability sampling.

Description

In many disciplines, researchers attempt to get representative samples in their study. Probability sampling is often considered as the best way to get representative samples Babbie (2010). Probability sampling can occur when all members or elements of the population of interest have the same chance of being selected for the study. The sample frame is the list of members or elements of the population of interest from which a sample is selected in a probability sampling method. Sample frames may not be complete: omissions of some members of the population in sample frames are almost inevitable.

For example, suppose that a study is going to analyze the association between ▶ [physical activity](#) and ▶ [health outcomes](#) among students of a university. The most practical and commonly used sample frame for such a study is the student roster from the registrar's office. The student roster is the list of students of the university. It may omit students who are on probation or are not registered in any courses. Researchers can use the student roster to randomly select student samples. All students listed in the student roster will have the same opportunity to get selected for the study.

Another example: suppose that a study is going to investigate whether health-related quality of life, socioeconomic factors, and illness variables are associated with ▶ [mortality](#) among older residents in low-income neighborhoods. There are several choices for sample frame including telephone directories, street directories, and property maps. None of these sample frames

are likely to include all residents or households in low-income neighborhoods. Each presents a degree of incompleteness and bias. Households without landline telephone service will not be included in telephone directories, and illegal housing units are unlikely to be listed on official records. Studies that need representative samples of low-income households should not use telephone directories as the sample frame since low-income households are unlikely to have a landline telephone service.

One way of getting a sample frame for studies of individuals is using membership lists Hage et al. (1990). Most organizations keep and update membership lists. Suppose that a study is going to conduct surveys of ► [nursing home residents](#) to explore whether generic self-reported health-related quality of life and illness variables are associated with mortality among nursing home residents with and without cancer. The researchers may acquire the list of residents from the nursing home administration as the most appropriate sample frame for the study Drageset et al. (2012). Access to lists of employees or individuals in an organization may be difficult. Organizations may have concerns with the confidentiality and privacy of the list of individuals in their organizations. Lists of individuals such as patients, welfare recipients, runaway youth, criminal offenders, juvenile delinquents, and domestic violence victims will be difficult to access. In conducting any research involving people, researchers need to seek approvals from institutional ► [ethics](#) review boards and ensure that they can protect the confidentiality and well-being of respondents.

Samples in a study are not always individuals. They can be cities, sport clubs, hospitals, insurance companies, childcare facilities, and so forth. When researchers want to establish representative samples, they can develop and use a comprehensive list of the sampling elements as sample frame. When researchers develop a list of those sampling elements as sample frame, they should exclude ► [outliers](#). For example, a study which is going to use a list of American cities as sample frame for a study on

quality of life issues may decide to omit New York City and Los Angeles because of their size and unique characteristics.

Cross-References

- [Outliers](#)
- [Sample Survey](#)
- [Survey Research](#)

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Sample Size

- [Survey Research](#)

Sample Survey

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Synonyms

[Questionnaires and sample surveys](#); [Scientific survey](#); [Survey](#)

Definition

Survey sampling is the process of selecting individuals (a sample) from a population of interest (theoretical population) so that the selected individuals not only represent the population but that the findings from the sample can be generalized to the population from which the sample came from.

Description

How to Select Individuals in Your Study

When conducting a survey, researchers often select a sample from a population of interest (theoretical population) because it is impossible to survey to the whole population. The goal is to ensure the sample is (a) representative of the population and (b) that the survey findings from the sample can be generalized back to the theoretical population from which the sample was drawn. There are two major types of sampling methods: random/probability sampling and non-probability sampling. Overviews of the statistical theory of sampling can be found in Cochran (1977), Kalton (1983), Kish (1995), and Lohr (1999).

Random/probability sampling is any sampling method that involves some form of random selection and some randomization process. For example, a sampling plan may be created so that every individual in a population has an equal chance of being selected to take the survey. This can be accomplished by using computers to randomly select individuals to be in the sample via generating random numbers or selection procedures. There are two major random sampling techniques available to researchers: simple and stratified random sampling.

- Simple random sampling means every individual in a population has an equal chance of being selected. This can be accomplished by using a computer random number generator to help select individuals to be in the sample from the population randomly.
- Stratified random sampling involves dividing the population into homogenous,

nonoverlapping subgroups (called strata) and then selecting individuals randomly from each subgroup to create the sample. This type of sampling ensures that the sample not only represents the overall population but also the key subgroups of the population. This type of sampling is most appropriate to sample a population disbursed across a wide geographic region, for instance, if researchers are interested in determining physicians' practice strategies in New York (NY) State. More practicing physicians live in the five boroughs of Manhattan than the rural communities of NY. If a simple sampling method was used, then the chances of selecting physicians from the rural area to be included in our sample are far less than those physicians in Manhattan. Physicians selected in Manhattan may have very different practice strategies than those in the rural parts of NY. As a result, a stratified random sampling should be utilized to minimize the chances that one subgroup (physicians from Manhattan) overrepresent the sample than other subgroups (physicians from rural areas of NY). Otherwise this can lead to sampling bias and reduce the generalization of the findings back to the bigger population, which are NY physicians.

Non-probability Sampling: there are situations where randomly selecting a sample from a population is not plausible or possible (i.e., cost or time). As a result, non-probability sampling is employed. Individuals in the sample are usually selected on the basis of accessibility (called convenience sampling) or for a particular purpose (called purposive sampling) based on the goals of the researcher. It is important to realize that non-probability sampling does not necessarily mean the sample does not represent the population, but with this type of sampling, researchers cannot be sure that their sample is representative of the larger population. As a result, researchers must be careful when they generalize their findings based on the sample back to the population from which they are drawn from. Convenience and purposive sampling are two most common types of non-probability sampling methods.

- Convenience Sampling: participants are selected based on convenience and

availability. For instance, participants may be selected on a first-come, first-served basis to take the survey. Therefore, the selection of individuals is not necessarily considered random.

- **Purposive Sampling:** participants are selected from a population based on a researcher's predetermined selection criterion. For instance, individuals may be selected based on their race, age, gender, or health status. As a result, individuals are not selected randomly to be in the sample. This type of sampling is appropriate when researchers wish to survey a certain population such as smokers, or sexual orientation, or disease groups in a particular race or gender group.

If individuals are not selected randomly from a population, as is the case for non-probability sampling, then sampling bias, which is a type of selection bias, can occur. Sampling bias refers to instances where some individuals in the population are less likely to be chosen than others. This results in a sample that is biased, potentially hurting the external validity of the findings from the sample to the population. The most common types of sampling bias include self-selection bias (individuals select themselves to take the survey), exclusion (individuals are not included in the population because they lack an address or a phone number to be reached to take the survey), and specific real area (i.e., a survey of patients in the hospital to measure physician care is biased sample because it does not include patients seen by physicians at home).

Sampling bias may be a threat to both internal and, more importantly, external validity. External validity refers to the accuracy in the generalization of the findings from a sample to the population. Sampling bias can lead to over- or underrepresentation of the findings to the population. In particular, sampling bias limits researchers' generalizations to individuals, place, or time. The way to overcome sampling bias and increase external validity is to ensure the sample is selected using random sampling procedures, rather than nonrandom ones. However, if random procedures cannot be used, then the findings should not be generalized to individuals or contexts outside of that survey sample.

Cross-References

- ▶ [Estimator](#)
- ▶ [Mean Square Error of Survey Estimates](#)
- ▶ [Psychometric Analysis](#)
- ▶ [Response Bias\(es\)](#)
- ▶ [Response Format](#)
- ▶ [Response Shift](#)

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Sampling Distribution

- ▶ [Estimator](#)

Sampling Error

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Synonyms

[Standard error](#)

Definition

Sampling error is a statistical error resulting from estimating a parameter, e.g., the mean of a variable of interest, in a sample rather than the population. Different samples will produce different estimates of the unknown parameter;

the difference between an estimate and the true value is referred to as sampling error. This terminology is used with regard to parameter estimation in the usual (frequentist) paradigm which assumes the existence of a true, underlying parameter value.

Description

Quantification

In general, the true parameter value, and thus the magnitude of sampling error, is unknown. However, if the observed data represents a random sample from the population, the sampling error associated with the estimate of a particular value (e.g., mean, proportion, difference between means) can be predicted from the relevant theoretical sampling distribution, using the observed sample standard deviation and sample size. Theoretical sampling distributions describe the expected probability distribution of a statistic, e.g., a sample mean, which is itself considered as a random variable. For example, consider some normally distributed variable with population mean μ and standard deviation σ (variance σ^2). We may estimate the population mean by calculating the arithmetic mean \bar{x} and standard deviation s in a sample of given size. The associated sampling distribution of the mean then describes the distribution of *means* expected if the mean was repeatedly calculated in independent samples of the same size. The expected mean of the sampling distribution is the population mean, μ , and the expected standard deviation is σ divided by the square root of the sample size. The standard deviation of the sampling distribution is referred to as the statistic's standard error and is the quantity typically referred to as the sampling error. In practice, the standard error (SE) of the mean is typically estimated using the sample standard deviation as the population value tends to be unknown.

Contributing Factors

A major factor influencing the magnitude of sampling error is sample size. As seen in the formula for the standard error of the mean, as sample size

increases, the standard error of the mean decreases. As sample size approaches the population size (i.e., as $n \rightarrow N$), the standard error approaches 0. This corresponds with the logic of being able to estimate the true mean without error if one has access to the entire population (i.e., a census).

In addition to sample size, sampling error is also influenced by population size and the extent to which one's sample is representative of the underlying population. Statistical analyses are performed in a subset of the population in order to reduce cost and increase the feasibility of data collection. The intention though is to make predictions that can be generalized to the underlying population. The extent to which a feature varies in the population and the sampling strategy can each affect how well a given sample represents the population. Representativeness can be increased by random sampling (in which population members are selected using numerical randomization procedures), probability sampling (in which all members of the population have a nonzero probability of being selected), and stratified sampling (in which participants are randomly selected from mutually exclusive, homogeneous population subgroups).

Consequences

The magnitude of sampling error affects the reliability or precision of parameter estimates obtained in a population subset. In samples of adequate size, the precision of an estimated statistic can be expressed using a confidence interval for the true population value, derived from the theoretical sampling distribution. Greater sampling error (resulting from smaller sample size) results in a wider confidence interval, reflecting reduced precision of the sample estimate. Precision also affects statistical power to detect differences between different samples in a variety of statistical contexts.

What It Is Not

Sampling error can be distinguished from non-sampling error, which results from factors such as data measurement/entry errors and selection bias or participant nonresponse bias.

Non-sampling errors also reduce the reliability of sample estimates but are not attributable to sampling fluctuations and hence cannot be reduced by increasing sample size.

Cross-References

- ▶ [Inference, Statistical](#)
- ▶ [Sampling Frame](#)
- ▶ [Standard Errors](#)

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Sampling Frame

- ▶ [Sample Frame](#)

San Francisco, Sustainable City

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Definition

Officially the City and County of San Francisco, San Francisco is the only consolidated city-county in California. Occupying a land area of 48 square miles on the northern end of the San Francisco Peninsula, it has an estimated population of 800,000 as of 2010. San Francisco is the economic, transportation, cultural, and spiritual

hub of the San Francisco Bay Area, a region with a land area of 8.8 thousand square miles and a population of around 7.5 million.

The San Francisco Sustainable City Plan, specifically, traces its origins to 1995, although the region's interest in and commitment to environmental conservation dates to the city's settlement, if not before. The Sustainable City Plan was created under the direction of Beryl Magilavy, Director of the San Francisco Department of the Environment, and was mobilized by volunteer energy and based generally upon the Agenda 21 model as this had been applied in numerous European jurisdictions. The City and County of San Francisco adopted the plan in July 1997. This move meant that sustainability became a fundamental goal for policy and planning in San Francisco and established a series of objectives to be achieved by 2001.

Description

San Francisco's status as an international metropolis traces its origin back to the gold rush. From then on, it gradually grew to be a gateway center of financial, banking, and trade activities on the Pacific Coast. For long, what San Francisco meant for the West Coast was what New York meant for the USA as a whole. Like most US cities, San Francisco's urban morphology witnessed signification transformation in the post-World War II decades. Driven by the rise of a postindustrial economy and globalization forces under a world city hypothesis, downtown San Francisco was "Manhattanized" to cater to the needs of a corporate economy (Godfrey, 1997; Walker, 1996). From the 1990s on, some new dynamics of the information technology industry have been injected into San Francisco's economy dominated by corporate headquarters, financing, and tourism and turned San Francisco into a locus of digital and media industries of global importance (Graham & Guy, 2002; Pratt, 2002).

San Francisco's modern environmentalism is embedded in its progressive tradition, which partially grew out of a grassroots' response to its

Manhattan-style dense urban redevelopment in the 1960s and 1970s. It was felt that unfettered large-scale urban redevelopment generated negative environmental impacts, in addition to pressures on infrastructure and social equity. A progressive urban regime was ultimately established in San Francisco's local political culture, one important component of its mission is a balanced approach toward development between economic, social, and environmental domains (DeLeon, 1992, 2003; McGovern, 1998). San Francisco has efficient transport infrastructure within the city and linking the city with the region, Bay Area Rapid Transit (BART) system, putting it in a leading position in reducing transport impact on environment against other US cities.

The Sustainable City Plan itself was, at the time of its development in 1996, ambitious in terms of its embrace of the sustainable development language and framework articulated in Agenda 21, the outcome document of the 1992 Rio Earth Summit, as well as in terms of civic participation, cross-sectoral engagement and reach beyond just city operations to the private sector. As a creature of the city's Environment Department, the initiative was developed and led by Beryl Magilavy, at the time the department's director and who later made an unsuccessful run for the Board of Supervisors. The Plan involved community drafting, included nearly 350 individuals, local institutions, and city government representatives and went to public hearing in June 1996, following which further refinements to the plan were made. While the Plan sets specific goals and objectives for its 5-year life span, including recommendations for the private sector, its status as a "non-binding guideline for policy and practice in the City and County of San Francisco" (Board of Supervisors, 1997) meant that its direct influence on policy was limited.

San Francisco provides a fascinating social scene for both insiders and outsiders. It is regarded as the most liberal city, as seen in its progressive tradition, populist culture, and tolerance of differences – may they be different racial, sexual, religious, or gender groups

(Black, Gates, Sanders, & Taylor, 2002; DeLeon, 2003; Ramirez, 2003; Robinson, 1995). The attractive social settings constitute a major factor of San Francisco's quality of life or livability. The city's emulation of all parts of Richard Florida's 3 T model – talent, tolerance, and technology – provides a telling illustration of San Francisco's leading performance in attracting creative class to live and work in (Florida, 2002).

San Francisco as a sustainable city is built upon the three pillars of a prosperous and creative economy, environmentalist pursuit, and liberal social settings. In addition, the city is endowed with important attributes of good quality of life – a Sunbelt city with a pleasing Mediterranean style microclimate, a high amenity with cosmopolitan flavor, and a tourist Mecca destination. The city has benefitted from a succession of charismatic mayors who have advanced social justice and sustainability agendas, including a sustainable, local food policy, the first ban on plastic shopping bags in the USA, a proposal for a city-imposed carbon tax, municipal composting, and other initiatives. One dominant critique of the Sustainable City Plan, its failure to address the role of affordable housing within the sustainable city, continues to haunt the city, which has some of the lowest conditions of housing affordability among American cities.

Cross-References

- ▶ [Agenda 21](#)
- ▶ [Creative Class \(Richard Florida\)](#)
- ▶ [Livability](#)
- ▶ [Sustainability](#)

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Santa Cruz County (USA) Community Assessment Project

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Synonyms

[Community indicator projects](#); [Community quality of life indicators](#)

Definition

Santa Cruz County, California, has one of the oldest community indicator projects in the United States, having started in 1994 and continuing through 2012 and beyond.

The Community Assessment Project (CAP) accomplishes four major goals: (1) to assess the [quality of life](#) in the county; (2) to educate community members about the economy, [education](#), [health](#), public safety, natural environment, and social environment of the region; (3) to act as a catalyst for social and political change; and (4) to help evaluate the impact of social and political change in the county (Zachary, 2007; Zachary et al., 2010). Now the CAP is having secondary impacts, changing how organizations work together on countywide initiatives and within new programs (Zachary et al., 2010). Finally, the CAP is contributing to an alignment between outcomes for programs and for the entire county. Individual programs are being evaluated for their impact on their customers with indicators that are identical to the ones used to evaluate quality of life at the county level.

Description

Santa Cruz County, California, is located next to the Monterey Bay, along the Central Coast of California, 65 miles south of San Francisco. It is a predominantly urban county, with large parcels of agricultural land in the southern parts of the county and extensive redwood forests in the northern parts of the county. There were 263,054 residents in 2010, the majority of whom are Caucasian (60%), followed by an increasing Latino/Hispanic population (32%) (US Census 2011).

The Santa Cruz County Community Assessment Project (CAP) was started in 1994 by the United Way of Santa Cruz County when it convened a collaborative of over 25 agencies ranging from public and private health organizations to education, human services, and civic organizations. Dominican Hospital, one of two hospitals in the county, was an especially critical partner in the project. California state legislation (SB697) had been passed which required nonprofit hospitals to demonstrate the benefits they offered to their communities. The Patient Protection Affordable Care Act passed in 2010

now has a similar federal mandate for nonprofit hospitals in the United States to demonstrate their community benefits.

Applied Survey Research (ASR), a nonprofit social research and evaluation firm, was contracted by the United Way to be a partner and researcher for the CAP and to incorporate best practices from other assessment efforts across the nation. The Santa Cruz CAP partners looked to dozens of community assessment projects and incorporated best practices especially from the Jacksonville, Florida project, the longest running community indicator project in the United States (Chambers, 2004).

The CAP is accomplished through a ten-step community improvement cycle designed by ASR together with community stakeholders (Zachary, 2007; Zachary & Brutschy, 2011).

The CAP System

Step 1 is to develop leadership including one lead agency that has the resources and willingness to coordinate the project and to help facilitate the change efforts that emerge from the project and to form a steering committee that includes key allies and champions (Smolko, 2006; Chambers, 2004; Zachary et al. 2010). In Santa Cruz County, the United Way was the lead agency in 1994, helping to invite key organizations and individuals to join the steering committee, to obtain funding for the CAP project from a wide range of sources so that the project would be more sustainable, and to facilitate community change efforts. The CAP steering committee includes all of the county agency leaders such as human services, health services, and probation, as well as nonprofit leaders, community foundation leaders, elected officials, members of the media, and large businesses.

Step 2 is to establish diverse participation in the CAP effort including hospitals, county government agencies, businesses, foundations, local experts, faith communities, elected officials, nonprofit organizations, and members of vulnerable populations such as youth, the elderly, immigrants, and people with disabilities.

Step 3 is to commit to a results framework and to agree upon the type of indicators to use for

data collection. The framework, based on Results Based Accountability as developed by Mark Friedman, starts with overall results the community wants to achieve and then works backwards to determine the appropriate means for achieving change (Friedman, 2005). Step 4 also includes a community-wide process to agree upon final indicators. Some communities use a voting system to rank indicators within each domain area. ASR uses indicators that are understandable to the general user and the public, that respond quickly and noticeably to change efforts, that are relevant for policy decisions, and that are available on a regular basis. Currently, there are approximately 125 indicators in the six domain areas of education, economy, health, public safety, the social environment, and the natural environment.

Step 4 is the data collection phase where ASR staff members collect primary and secondary data. There are two central primary data collection methods: a telephone survey of a random sample of residents and/or a face-to-face survey of residents. Rigorous face-to-face surveys are especially good in reaching low-income and vulnerable populations since researchers can survey in specific neighborhoods. ASR used to perform a face-to-face survey in Santa Cruz County, but due to financial constraints, a telephone survey is now conducted every 2 years. Secondary data are collected from a variety of sources, including but not limited to US Census; federal, state, and local government agencies; health organizations; libraries; and schools. Typically, local data are compared to state and national data, where possible. Some indicators are chosen as “key” indicators. The key indicators are not necessarily the most important quality of life indicators but are most indicative of the overall condition of that particular subject area.

Step 5 is a “community data party” to analyze the results of the data collection efforts. Primary and secondary data are analyzed by subpopulations, including breakdowns by geographic region, race, gender, ethnicity, income level, and age. ASR meets with community members to share preliminary data at this data party. The goal is for participants to become familiar

with the data, to discuss the story behind the data, and to decide collectively what data matter the most to each group (Phillips, 2003; Friedman, 2005). This information also helps to point the way to political and social action (Phillips, 2003; Holden, 2009).

Step 6 is to publish the report and promote the findings for a wide audience. In Santa Cruz County, reports are available in three forms: a complete data report with all of the indicators available in hard copy, a website that contains all the data, and a summary of the report mailed to every household. Each year, community heroes are nominated to receive awards at the yearly press conference for the CAP. Heroes are individuals or groups who have made great strides in improving the quality of life in a particular goal area of the CAP. This is also the time when ASR and CAP staff members create a press release and then arrange in-person meetings with the media to discuss the report findings. The meetings are generally held prior to the press conference with the daily and weekly newspapers, as well as public and commercial radio stations, to allow for advance notice to develop stories to be released immediately following the press conference.

Step 7 is to conduct community conversations in which stakeholders collectively develop community goals and benchmarks. Community members are asked to review the trend lines for data and determine whether the trend lines are going in the right direction. Community members are encouraged to create goals for community action and the appropriate benchmarks to be reached within 5 years. Typically, communities create two to four goals in each of the six domain areas. Several thousand people participated in setting the CAP goals for 2005–2010.

Step 8 is to encourage community action towards the goals. Nonprofit organizations and businesses are encouraged to “adopt a community goal” and to work towards completion of that goal. In many cases, the data findings act as a catalyst for community change. In Santa Cruz County, the CAP data on health access, teen substance abuse, youth binge drinking, and

childhood obesity helped to catalyze action to create countywide initiatives to improve outcomes for children and youth (these community improvements are described more fully below).

Step 9 is to refine linkages between program and community efforts by encouraging program staff to adopt internal indicators that are identical to CAP indicators at the county level. In this way, program efforts can be evaluated for their impact on their customers, while county trends can be tracked to see if program efforts are having a wider impact at the population level. There are increasingly more program efforts in the county that are linking their performance outcomes to community-wide outcomes that are captured by the CAP data (Zachary et al., 2010).

Step 10 is to regularly review the data, to update the report, and to support sustained work on the community goals. Community members review the data and determine if there are new data that they would like to have collected. The new data pieces can be added to the primary data collection efforts in the form of new survey questions for the telephone survey or in secondary data collection efforts. Efforts are also made to sustain the community initiatives and the community change efforts. One successful aspect of ► [sustainability](#) in Santa Cruz County is to have funding for the CAP from a wide variety of sources rather than overdependence on just a few sources.

Outcomes of the CAP

In the early years of the CAP, the community focused their improvement efforts on children and youth, especially in the areas of health. Many community partners believed that trying to improve the health of children and youth was “the low-hanging fruit,” therefore a great place to focus coordinated community-wide action planning. The belief was that it was easier to find agreement, develop community will, and obtain resources if they were targeted to the health of children and youth (Zachary et al., 2010). The following table shows a range of initiatives in the county that emerged out of

Santa Cruz County (USA) Community Assessment Project, Table 1 Children and youth initiatives related to the Santa Cruz County CAP

Initiative	What are the goals?	Who does it serve?	Key CAP indicators
Healthy Kids	Provide universal health care for children	Children 0–18 who are from low-income families regardless of immigration status	Access to health care Low-income health care Health insurance Birth weight Breastfeeding Immunization levels Dental care
Together for Youth	Decrease drug and alcohol use	Teens	Binge drinking Acceptance of adult alcohol provision Acceptance of marijuana use Tobacco use Substance use by students Methamphetamine concerns
Go for Health	Decrease childhood and youth obesity	Children and youth	Breastfeeding Physical activity Fruit and vegetable consumption Obesity Diabetes Knowledge of the obesity campaign
Safe Schools/Healthy Students	Decrease drug/alcohol use; decrease violence and gang activity; improve educational outcomes	19,000 high school students in one school district	Binge drinking Tobacco use Substance use by students High school dropout rates Satisfaction with school system School safety

CAP efforts and the ways in which the initiatives are aligned with CAP indicators. The initiatives use the indicators internally to evaluate how they are serving their own customers, and they use the same county-wide indicators to evaluate whether they are having a larger impact on the county as a whole (Table 1).

Healthy Kids Program: Universal Health Care for Children 0–18

The 1999 CAP telephone survey showed alarming percentages of people without health insurance or access to care. These data acted as a partial catalyst for CAP stakeholders to call a summit conference to decide how to improve

health-care coverage in the county. CAP stakeholders had set a goal of universal health care in the county, and summit conference participants agreed to begin with universal health care for children. CAP steering committee members and CAP funders were key partners at the summit and during the community planning effort that followed, including the director of the county health agency, the local health trust, the community foundation, and hospitals. These Santa Cruz County health partners and stakeholders worked to create a new health-care program, known as Healthy Kids which offers medical, dental, vision, and mental health coverage to children ages 0–18, from very low-income families regardless of immigration status (Zachary, 2007).

Together for Youth: Decreasing Substance Abuse
When the first CAP was published in 1995, it showed high rates of youth who self-reported using marijuana and alcohol, higher than the California rates or those of the nation. The data were a shock for the community, many of whom did not know that drug and alcohol rates were that high for teens. In 1995, staff of the United Way of Santa Cruz County, Dominican Hospital, and the Santa Cruz County Alcohol and Drug Program used the CAP data to mobilize a coalition of over 110 non-profit groups, county government agencies, and individuals to find solutions to improve the situation for youth. The United Way helped to facilitate meetings of the coalition known as Together for Youth to develop seven strategies including new laws, public education, a grand jury report, youth leadership training, referral and home visiting programs, new teen centers and treatment services, and a public policy panel on youth access to alcohol (Zachary, 2007). The efforts led to county and city ordinances banning open alcohol containers on the beaches and to monitoring alcohol outlets. Since 1994, subsequent CAP data have shown consistent decreases in overall alcohol and drug use. Substance use has also decreased in the state of California as a whole, but the decreases in Santa Cruz County are larger than the decreases in the state. In 2012, the initiative turned its attention to prescription drug use, in addition to binge drinking and marijuana use.

Go for Health: Childhood Obesity

In the 2002 CAP press release, ASR staff highlighted the high rates of childhood obesity in the county and the fact that the county ranked near the bottom at 63rd of California's 66 counties and health jurisdictions for overweight children aged 5 to under 20 years old. That message was immediately picked up by several media outlets including print, radio, and television news since the information came as a big surprise to the public who considered Santa Cruz County a very healthy place to live. The United Way Board of Directors directed staff to convene community meetings and develop partnerships to address childhood obesity on a countywide level. This resulted in a group of over 150 organizations that launched a new countywide initiative called *Go for Health*. Ultimately, the initiative developed 24 outcomes, indicators, action steps, and many of the indicators tracked by the CAP, such as breastfeeding; parent knowledge of healthy eating; safe neighborhoods in which children can play; fruit and vegetable consumption by students and by telephone survey respondents; overweight/obesity of children, students, and telephone respondents; student engagement in physical activity; and whether students are achieving physical fitness goals. There have been some early successes from the initiative including allowing food stamp recipients to use their Electronic Benefit Cards at farmers' markets so that recipients could buy good-quality, organic, and local produce (Zachary et al., 2010). Recent data as of 2009 show slight improvements in obesity rates for low-income children under the age of 5, but no improvements for those children ages 5–19.

Safe Schools/Healthy Students: Aligning Performance Measures to Population Results

The Safe Schools/Healthy Students program is an example of the impact of the CAP at a program level rather than at a population level. CAP data brought attention to difficulties in the schools, especially in the southern part of Santa Cruz County in a school district known as the Pajaro Valley Unified School District (PVUSD). The school district provides K-12 education to over 19,000 students, the majority of whom are Latino

and from very low-income families. CAP data consistently showed that the schools in PVUSD had some of the lowest Academic Performance Index Scores (API), some of the worst third-grade reading scores, and the highest ► [dropout rates](#) in California. These findings were not unknown to the general population, but the fact of having all of the CAP data in one place helped to heighten the awareness and attention on educational outcomes in PVUSD. The two local daily newspapers had an important role in publicizing the findings.

PVUSD received a federal grant known as Safe Schools/Healthy Students (SS/HS) to improve the schools, and 30 school and community partners, many of whom were also CAP partners, worked together to ensure that every student in the district received services at some level including substance abuse prevention services, mental health counseling, parent information, and assessment of every school for safety. ASR was hired to evaluate the project and used CAP data and a telephone survey with some identical questions to the CAP resident survey, to determine the perceptions of parents. Evaluation findings showed that high school students reported less use of alcohol or other drugs over time, while students and parents reported that schools were safer than before the project. Most interestingly, the CAP telephone survey of respondents in that region in 2009 showed that parents overall perceived schools to be safer. In other words, not only did parents involved in the SS/HS project view schools as safer, but the intervention appears to have had an impact on overall public perceptions of the schools in South County including among respondents who did not have children in the schools.

Summary and Conclusions

The CAP data show that over the last 19 years, improvements have been made in the quality of life for children and youth in the county. The implementation of the community improvement cycle with an emphasis on steps 7 and 8, developing community goals and turning data into action, has contributed both directly and indirectly to community changes. The Santa Cruz County CAP example reveals a series

of common activities throughout the 10-step improvement cycle that are important including:

- Leadership in championing an issue (the United Way)
- The participation on the CAP steering committee of key political and social actors who lead crucial county government agencies, foundations, businesses, and non-profit organizations
- The provision of high-quality data that showed alarming trends
- The ability to share those data trends with a wide audience through relationships with the local media
- The importance of a results framework, such as Results Based Accountability, to focus CAP stakeholders on the outcomes that they would like to achieve for the county
- Interagency input to understanding the issues and gaining commitment to contribute to changing outcomes
- Agreement on action plans
- Implementation of actions including legislative changes, new services and programs, and changes to existing services and programs
- Aligning program ► [performance indicators](#) for customers with CAP population indicators
- Ongoing evaluation of program performance and population level changes
- Seeking funding from a variety of sources in order to sustain the action and the CAP itself

The goal setting and community action steps set the Santa Cruz County CAP process apart from many other community indicator projects in the United States. Many community indicator projects focus on collecting good-quality data and letting other community partners use the data to accomplish community change. Other community indicator projects are institutionalized within their local governmental structures, so action comes from government agencies. The Santa Cruz County case is different from those other types in that it sits squarely inside civil society, especially within nonprofit organizations, but with ties to government and businesses. Further, the Santa Cruz County CAP process was explicitly designed to motivate political and ► [social change](#) efforts.

The long-standing CAP process also had some secondary impacts on the community, including establishing closer bonds between agencies and individuals and developing new relationships across agencies and organizations that then led to new programs/initiatives such as the Safe Schools/Healthy Students project (SS/HS).

The CAP has contributed to people's greater understanding of data and indicators and contributed to an institutional environment where policy actors know each other, work together, understand and trust the community indicator data, and are committed to improving outcomes for young people. The CAP, led by the United Way with ASR, has created an "institutional fit" in Santa Cruz County by bringing together the indicators and the decision makers in steps 7 and 8. The process is in many ways a bottom-up approach, with actors coming from a wide range of agencies and organizations, with many from the nonprofit sector. Non-profit organizations have taken the lead in the action steps. Step 9, to align programs and community outcomes, is increasingly occurring in the county as program staff develop indicators for customers that are identical to CAP indicators for the county.

Future Research

As indicator projects are sustained over longer lengths of time, it will be important to analyze their secondary impacts on quality of life. Those secondary impacts can be seen through the *Safe Schools/Healthy Students* example in Santa Cruz County where individuals who were involved in the early days of the CAP grew to know one another and embark on several countywide initiatives and ultimately on more individual program performance efforts. As part of an analysis of those secondary effects, it will also be crucial to research the impact of alignment of program performance indicators with countywide CAP indicators.

Cross-References

- ▶ [Benchmarking](#)
- ▶ [Community-Based Participatory Research](#)

- ▶ [Community Indicators Consortium](#)
- ▶ [Community Participation](#)
- ▶ [Happiness](#)
- ▶ [Healthy Communities](#)
- ▶ [Life Satisfaction](#)
- ▶ [Social Indicators Research](#)
- ▶ [Subjective Indicators](#)

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Saskatoon Built Environment

- ▶ [Neighborhood Design and Quality of Life in Saskatoon](#)

SAS-SR

- ▶ [Social Adjustment Scale Self-Report \(SAS-SR\)](#)

SAS-SR: Screener

- ▶ [Social Adjustment Scale Self-Report \(SAS-SR\)](#)

SAS-SR: Short

- ▶ [Social Adjustment Scale Self-Report \(SAS-SR\)](#)

Satellite Cities

- ▶ [Garden City Movement](#)

Satisfaction

- ▶ [Contentment](#)

Satisfaction in Tibet

- ▶ [Ethnic Tibetans: Application of the Personal Well-being Index \(PWI\)](#)

Satisfaction of Needs

- ▶ [Need Fulfillment](#)

Satisfaction with Family Relationships

- ▶ [Communicative Correlates of Family Satisfaction](#)

Satisfaction with Friendships

- ▶ [Friendship Satisfaction](#)

Satisfaction with Government Index

- ▶ [Public Attitudes Toward the State in Asia-Pacific Region](#)

Satisfaction with How Democracy Works

- ▶ [Democracy, Satisfaction with](#)

Satisfaction with Life

- ▶ [Satisfaction with Life Scale \(SWLS\), an Overview](#)
- ▶ [Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older](#)
- ▶ [Subjective Well-Being \(SWB\)](#)
- ▶ [Temporal Satisfaction with Life Scale \(TSWLS\)](#)

Satisfaction with Life as a Whole

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Synonyms

[Happiness](#); [Life as a whole, satisfaction with](#); [Life satisfaction](#); [Satisfaction with life as a whole, single-item measure](#); [Well-being, subjective](#)

Definition

Satisfaction with life as a whole refers to subjective well-being and constitutes a cognitive, overall judgement. This judgement

results from comparing one's own circumstances with what is considered an appropriate standard (Diener, Emmons, & Larsen, 1985). Satisfaction with life can be described in different terms, which all have more or less the same meaning. Examples of synonyms are "happiness" or "subjective well-being."

Description

In recent years, there has been an increasing need for measuring people's satisfaction with life. Scholars from various disciplines have stressed the importance of using both objective and subjective indicators for assessing someone's quality of life (e.g., Allardt, 1993; OECD Better Life Index). Doubts about the exclusive use of objective indicators have arisen from observations on the "paradox of well-being," which means to say that people can experience subjective well-being even when facing difficulties that would predict them to be unhappy. As Allardt (1993) points out, objective indicators only measure material conditions and overt behavior (such as someone's standard of living, health status, and personal income). Subjective indicators, on the contrary, are geared at measuring someone's attitude to life (such as satisfaction and happiness).

Arriving at an adequate measuring instrument for life satisfaction is no straightforward matter; after all, the phenomenon to be measured refers to something which is subjectively experienced. A well-known and often-used scale is the Satisfaction with Life Scale developed by Diener et al., which comprises the following five items (with answer categories ranging from 1: strongly disagree to 7: strongly agree):

1. In most respects, my life is close to what I consider ideal.
2. My living conditions are excellent.
3. I am satisfied with my life.
4. So far, I have gained the important things I want from life.
5. If I could live my life over, I would change almost nothing.

An alternative approach is to ask just one general question, such as: "All things considered, how satisfied are you with your life at the present moment?" (with answer categories ranging from 0: completely dissatisfied to 10: completely satisfied). A combination of questions can also be used, which are aimed at measuring satisfaction in certain specific life domains, such as family, work, and leisure. Single-item measuring instruments are often the best choice for comparing life satisfaction at the international level. Multiple-item measuring instruments, which tap into the different components of life satisfaction, are more suitable for analyses at the individual level.

The determinants of life satisfaction comprise the demands made by and the resources available in the different life domains. Work and family resources generally enhance overall life satisfaction; work and household duties tend to have a negative impact (Bäck-Wiklund, van der Lippe, Dulk, & van Doorne-Huiskes, 2011). Work as a source of income or social self-esteem has a positive effect, but work can also be a burden in terms of time and therefore can be difficult to combine with other tasks, such as running a household. Long working hours, work-related stress, and job insecurity all have a negative influence on life satisfaction; care responsibilities for relatives who do not form part of the own household also have a negative influence. Results are mixed with respect to factors such as training opportunities and flexible work arrangements: flexible work arrangements, for instance, can have a positive effect in certain respects, but a negative effect in other respects.

Resources and demands both have a direct effect on overall life satisfaction. Research has shown, however, that the impact of resources and demands at home and at work is mediated by cross-domain transfers of experiences between these different domains. In internationally comparative studies, for instance, workers appear to be more satisfied in countries with more elaborate social policies and regulations for ensuring the quality of work and life. Likewise, being able to reconcile the different domains of personal life, work and family is an extremely important determinant of overall life satisfaction.

The current trend of increasing the work volume of employees carries the risk of a more uneven distribution between work and leisure time, and greater conflict between investing in one's career or the family. This can generate general feelings of dissatisfaction, disillusionment, or anxiety. The balance between the different life domains can be improved by regulating working hours and introducing flexible time management models which meet the needs of both employer and employee. An effective integrated network of family support services is also essential.

Other correlates of overall life satisfaction are age, employment, and income. With respect to age, younger people are more satisfied with life, although the difference with other age groups is usually small; also, the age effect need not be linear. People in employment report significantly higher levels of life satisfaction than unemployed people (Gallie & Russell, 1998). Work not only provides someone with income, it also renders other benefits, constituting a source of psychological stability and personal development. However, income has a cost side to it as well: earning an income takes time, which leaves fewer hours for other life domains, such as family or leisure. Indeed, the effect of income on life satisfaction tends to be underestimated if the aspect of working hours is left out of the equation (Pouwels, Siegers, & Vlasblom, 2008). Longitudinal studies on life satisfaction and happiness have demonstrated, by the way, that people's happiness does not increase with an increase in GDP or income (e.g., Diener, 2000).

The causal connection between life satisfaction and certain life events remains a troubled question in the social sciences (Clark, Diener, Gerogellis, & Lucas, 2008). For example, it is a well-known fact that events such as losing one's job or getting married have a large and significant cross-section effect on satisfaction. As discussed by Clark et al. (2008), it seems likely, though, that in itself the occurrence of these events correlates with past or present level of life satisfaction. For instance, relatively unhappy people have a higher chance of

becoming unemployed (Clark, 2003), and happy people are more likely to get married (Stutzer & Frey, 2006). By using panel data, the causality between life satisfaction and certain life events can be teased out. However, most studies on the subject are based on cross-sectional samples, which means that the causal direction of the relation between life satisfaction and life events often remains unclear (e.g., higher life satisfaction may result in someone working hard rather than be caused by it).

Cross-References

- ▶ [Life Satisfaction, Concept of](#)
- ▶ [Life Satisfaction Judgments](#)
- ▶ [Romanian-Hungarian Cross-Border Region, Personal Well-Being Index](#)

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Satisfaction with Life as a Whole, Single-Item Measure

► [Satisfaction with Life as a Whole](#)

Satisfaction with Life Domains Scale for Cancer (SLDS-C)

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Synonyms

[Life satisfaction measure](#); [Perceived quality of life](#); [SLDS-C](#); [Quality of life, subjective](#)

Definition

The Satisfaction with Life Domains Scale for Cancer (SLDS-C) is a brief self-report measure of ► [quality of life](#) that uses a familiar and easily understood graphic ► [response format](#) of seven smiling and frowning faces to indicate feelings of satisfaction with 17 life domains relevant to the quality of life (QOL) of cancer patients.

Description

The Satisfaction with Life Domains Scale for Cancer or SLDS-C was developed by Baker and colleagues (Baker, Curbow, & Wingard, 1991, 1992; Baker, Jodrey, & Intagliata, 1992) who adopted the “faces” response format of Andrews and Withey (1976) to assess the quality of life of cancer patients undergoing bone marrow transplantation (BMT). The 17 life domains included in the measure were identified as relevant based on interviews with cancer patients. An eighteenth item, “your transplant,” was included in the BMT version of the SLDS-C. The SLDS asks respondents to indicate their

level of satisfaction or dissatisfaction with different parts of their life by choosing for each domain one of seven faces ranging from an upturned smile (scored 7) to a face with a deep frown (scored 1). Scores on the instrument consist of the total sums of the ratings of the individual items. The SLDS-BMT has been shown to be a useful tool for studying the QOL of cancer patients receiving this demanding treatment (Baker et al., 1994; Baker, Zabora, Jodrey, Pollard, & Marcellus, 1995; Sutherland et al., 1997).

A general form of the SLDS for Cancer (SLDS-C) was derived from the SDS-BMT by omitting the item that specifically asks about satisfaction with the BMT treatment (Baker, Curbow, & Wingard, 1992). The SLDS-C has been employed as a measure of the QOL of adult cancer survivors in a number of studies (Matthews, Baker, Hann, Denniston, & Smith, 2002; Dean-Clover et al., 2010). The SLDS-C is included as a measure of QOL in the ongoing national multiyear follow-up questionnaire surveys of thousands of survivors of the 10 most common cancers being conducted by the American Cancer Society (Smith et al., 2007; Stephens, Stein, & Landrine, 2010).

Reliability

The ► [reliability](#) of the SLDS-C was initially shown to be relatively high with a ► [Cronbach alpha](#) of .93 for a sample of 135 cancer patients (Baker, Curbow, & Wingard, 1992) and remained high in later administrations of the measure; as for example, an alpha of .94 was obtained in a survey of 352 cancer survivors (Baker et al., 2007). ► [Test-retest reliability](#) of .70 has also been obtained in repeated administrations of the SLDS-C (Baker, Curbow, & Wingard, 1992).

Validity

Initial validity of the measure was demonstrated by significant positive correlations with both present and future Cantril Ladders of Life and the Bradburn Positive Affect Scale and a significant negative correlation with the Bradburn Negative Affect Scale (Baker, Curbow, & Wingard, 1992). ► [Concurrent validity](#) of the SLDS-C was later

demonstrated by a correlation of .76 with a cancer-specific QOL measure, the ► **Functional Assessment of Cancer Therapy Scale-General (Fact-G)** (Cella et al., 1993), in a survey of 352 survivors of the 10 most common cancers. Matthews administered the SLDS-C along with the generic health-related quality of life measure, the ► **SF-36** (Ware, Snow, Kosinski, & Gandek, 1993), to 586 long-term cancer survivors and found that the SLDS-C was significantly correlated with both the physical and mental component scores of the SF-36 (r_s .52, .47). In a study of African American and Hispanic cancer patients, the SLDS-C was shown to maintain adequate reliability and validity with culturally diverse populations (Baker, Jodrey, Zabora, Douglas, & Fernandez-Kelly, 1996).

The SLDS-C has shown its sensitivity to change in a comparison of scores obtained by 64 cancer patients who completed the measure of as part of a survey completed twice 2 years apart and showed statistically significant gain in scores (Baker, Curbow, & Wingard, 1992).

The factor structure of the SLDS-C has been examined in a study of 352 cancer survivors with a version of the measure that included the 17 domains of the general cancer form of the instrument with the addition of an 18th item that asks the respondents' satisfaction with their "medical treatment" similar to the item included in the SLDS-BMT about the specific treatment of BMT (Baker et al., 2007). Three SLDS-C factor subscales were derived from analyses of these data: "life as whole," "daily activities," and "social relationships."

Other Versions of the SLDS

Spagnola et al. (2003) in a study of female breast cancer patients seen in the oncology outpatient departments of two cancer centers administered an expanded version of the SLDS-C that included the original 17 domains, plus 21 items that were added to assess domains of particular relevance to breast cancer patients and four additional items to assess spirituality. A 32-item Satisfaction with Life Domains Scale for Breast Cancer (SLDS-BC) that produced the

largest factor loadings from the 42 items was obtained with five factors that explained 71 % of the variance. This version included all the items from the original SLDS-C except "the ability to attain sexual satisfaction." The five factors identified were labeled social functioning, physical functioning, internal locus of control, spirituality, and communication with medical providers. The Cronbach alphas showed a range of .90 – .93 for the five-factor subscales and an alpha of .93 for the overall 32-item scale.

An earlier form of a Satisfaction with Life Domains Scale was developed by Baker and Intagliata (1982), which employed the same faces format with 15 life domains identified as relevant in interviews with chronic psychiatric patients to assess change in the quality of their lives of this patient group as they were deinstitutionalized from state hospitals into community living situations. The Baker-Intagliata Satisfaction Life Domains Scale for Schizophrenia (SLDS-S), after being translated into French, was used for research on quality of life of schizophrenic patients in Canada (Caron, Mercier, & Tempier, 1997). After additional translations into the relevant languages, the SLDS-S has been used by the European Research Group on Schizophrenia (ERGOS) to monitor changes in QOL of patients with schizophrenia in France, Ireland, Portugal, and Spain (Kovess-Masfety et al., 2006). The SLDS-S has also been used to assess QOL of patients with schizophrenia or other severe mental disorders in Sweden (Johnson, 1991) and Italy (Carpiniello, Baita, & Rudas, 1997). Massoubre et al. (2002) have described the SLDS-S as one of the most widely used rating scales in the field of subjective quality of life for patients suffering from schizophrenia.

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Satisfaction with Life Scale (SWLS), an Overview

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Synonyms

Global life satisfaction; Happiness; Quality of life, subjective; Satisfaction with life; Subjective well-being measure; SWLS; Well-being, subjective

Definition

The Satisfaction With Life Scale (SWLS) is a five-item self-report instrument intended to

assess the respondent's overall life satisfaction (sometimes referred to as global satisfaction).

Description

Life satisfaction judgments represent the cognitive component of subjective well-being, or the experience commonly referred to as happiness (Diener, 1984, 2000; Diener, Suh, Lucas, & Smith, 1999). The SWLS has been extensively used as a subjective measure of the quality of life. Although primarily used as a self-report instrument, the SWLS has also been used to obtain informant reports regarding the life satisfaction of others (e.g., Pavot, Diener, Colvin, & Sandvik, 1991). The validity of the SWLS has been demonstrated with a wide range of ages and other dimensions of demographic diversity.

Scale Development

The SWLS was developed (Diener, Emmons, Larsen, & Griffin, 1985) as a self-report instrument to assess the respondent's "satisfaction with life as a whole" (Pavot & Diener, 1993, p. 137). Using standard test development techniques, a pool of 48 potential items was reduced to a final version of five brief statements yielding the present version of the scale (see Diener et al., 1985, for a complete description of scale development).

Scoring the SWLS

The scoring rubric for the SWLS is straightforward. Respondents indicate their degree of agreement with each statement of the SWLS using a seven-point Likert scale (7 = strongly agree, 1 = strongly disagree). The five responses are summed to produce a total score for the scale. Total scores can, thus, range from a minimum of 5 to a maximum of 35. Interpretation of scores is as follows: Scores ranging from 30 to 35 are indicative of a very high level of life satisfaction; scores of 25–29 represent high satisfaction, and scores of 20–24 constitute the average range of life satisfaction. Scores ranging 15–19, 10–14, and 5–9 represent the below average, dissatisfied,

and extremely dissatisfied levels, respectively. Normative score ranges are fairly well established for some populations. Mean scores for US college student samples typically range between 23.0 and 25.2, whereas mean scores for older adult samples have been observed to range from 23.6 to 27.9 (for a listing of mean scores for diverse populations, see Pavot & Diener, 2008).

Reliability and Validity

Good internal reliability for the SWLS has been consistently demonstrated. Observed coefficient alphas for the scale generally range between .79 and .89 (Pavot & Diener, 1993; 2008). Reported test-retest reliabilities have varied from .84 (across a 1-month interval) to .54 (across a 4-year interval) (Pavot & Diener, 1993). Much more extensive information on the reliability of the SWLS is available in a meta-analytic summary of 60 studies by Vassar (2008).

The discriminant validity of the SWLS has been established by consistent observations of negative relations with clinical measures of distress, such as depression, perceived stress, and suicide ideation (Pavot & Diener, 2008). The convergent validity of the scale is evident in moderate-to-strong correlations with other measures of well-being and positive affect (Pavot & Diener, 2008). Good convergence has also been observed between self-reports on the SWLS with informant ratings (Pavot et al., 1991).

Factorial Structure

Data from the SWLS have been repeatedly subjected to factor analysis. The results tend to confirm a single underlying factor that accounts for the greater proportion of the variance of the scale (Pavot & Diener, 1993), although some analyses have indicated that one item (item 5), with its temporal orientation toward the past, can sometimes show lower unity, but this item is still highly correlated with the remaining four items of the scale (Pavot & Diener, 2008).

Cross-Cultural Research

The SWLS has been translated to more than 25 languages (for a complete listing, see the

following webpage: <http://internal.psychology.illinois.edu/~ediener/SWLS.html>) and has been used in a number of cross-cultural studies. Researchers anticipating using the SWLS for cross-cultural research should be aware that evidence exists for differential response patterns across cultural groups, when sophisticated item response analysis is applied to the data (Oishi, 2006; Vitterso, Biswas-Diener, & Diener, 2005).

Cross-References

- ▶ [Cross-Cultural Validation](#)
- ▶ [Happiness Measures](#)
- ▶ [Quality of Life \(QOL\)](#)

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Satisfaction with Life Scale Adapted for Children

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Synonyms

SWLS-C

Definition

The Satisfaction with Life Scale adapted for Children (SWLS-C) is a 5-item self-report measure designed to assess global life satisfaction of children and adolescents (ages 9 and above).

Description

The SWLS-C (Gadermann, Schonert-Reichl, & Zumbo, 2010) is based on the ▶ [Satisfaction with Life Scale](#) (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), one of the most widely used measures to assess life satisfaction in adults.

The SWLS-C was adapted for children from the SWLS by three researchers working in the area of children and adolescents' social and emotional development. Item wording and response format were changed in order to make them more understandable for children and adolescents.

Life satisfaction refers to the cognitive evaluation of one's life (Diener, 1984) and is one component of ▶ [subjective well-being](#) (Diener, Suh, Lucas, & Smith, 1999). The SWLS-C assesses the respondents' global life satisfaction and consists of items that do not refer to specific life domains but life overall (see [Table 1](#)).

The SWLS-C is one of the subscales included in the ▶ [Middle Years Development Instrument](#) (Guhn et al., 2012).

Satisfaction with Life Scale Adapted for Children, Table 1 Satisfaction with Life Scale adapted for Children (SWLS-C). For each of the following statements, please circle the number that describes you the best. Please read each sentence carefully and answer honestly. Thank you.

	Disagree a lot	Disagree a little	Don't agree or disagree	Agree a little	Agree a lot
1. In most ways, my life is close to the way I would want it to be	1	2	3	4	5
2. The things in my life are excellent	1	2	3	4	5
3. I am happy with my life	1	2	3	4	5
4. So far I have gotten the important things I want in life	1	2	3	4	5
5. If I could live my life over, I would have it the same way	1	2	3	4	5

Scoring

The items are rated on a 5-point ▶ [Likert-type scale](#) ranging from “disagree a lot” (1) to “agree a lot” (5). Items are added up and the total score ranges between 5 and 25.

Reliability and Validity

Previous research with a stratified random sample of 1,233 grade 4–7 students indicates strong psychometric properties of the SWLS-C (Gadermann et al., 2010). Psychometric analyses demonstrated a unidimensional factor structure, high ▶ [internal consistency](#) (▶ [Cronbach's alpha](#) equal to .86 and ▶ [ordinal alpha](#) equal to .90), and evidence of convergent and ▶ [discriminant validity](#). Differential item functioning and differential scale functioning analyses indicated that the SWLS-C measures satisfaction with life in the same way for different groups of children (i.e., with regard to gender, first language learned at home – English vs. other language(s) than English – and across different grades).

Furthermore, a separate study examined the cognitive processes of children and adolescents when responding to the SWLS-C to investigate how they interpret and respond to the items (Gadermann, Guhn, & Zumbo, 2011). Think-aloud protocol interviews were conducted with 55 students in grades 4–7. The response strategies utilized by the students were in line with ▶ [multiple discrepancies theory](#) (Michalos, 1985) and previous empirical findings. These two studies provide evidence for the meaningfulness of the inferences of the SWLS-C scores.

Cross-References

- ▶ [Adolescent Life Satisfaction Measurement](#)
- ▶ [Convergent Validity](#)
- ▶ [Cronbach's Alpha](#)
- ▶ [Differential Item Functioning \(DIF\)](#)
- ▶ [Discriminant Validity](#)
- ▶ [Internal Consistency](#)
- ▶ [Likert Scale](#)
- ▶ [Middle Years Development Instrument](#)
- ▶ [Multiple Discrepancies Theory](#)
- ▶ [Ordinal Alpha](#)
- ▶ [Reliability](#)
- ▶ [Satisfaction with Life Scale \(SWLS\), an Overview](#)
- ▶ [Subjective Well-being](#)

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Satisfaction with Life Scale Score Reliability

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Definition

Scale score ► **reliability** in life satisfaction research refers to the consistency of measurement as applied to life satisfaction scales. Particular attention is given to the proper interpretation of reliability information as well as the way in which it is reported in the literature.

Description

Score ► **reliability** is an important characteristic of high-quality research. Briefly defined, ► **reliability** refers to the consistency of the measurement. While there are many forms of reliability, the two most common types in the context of social science research include ► **internal consistency** (the degree to which the test items correlate with one another) and ► **test-retest reliability** (the degree to which the measure is stable over time). In the academic community, there are problems associated with understanding the nature of ► **reliability**, as well as the way in which ► **reliability** is reported in research studies. The issue is that many consider ► **reliability** to be a property of the measure itself rather than the scores produced by the measure. Thus, it is common to find statements such as, “the XYZ measure is reliable with ► **Cronbach’s alpha** = 0.84,” with the 0.84 alpha often

a citation from a previous study. The problem with such an approach is that reliability estimates are affected by the sample composition and by scale score variance and, as a result, vary from study to study. As a simple example, we are not able to infer that reliability estimates based on a sample comprised of older adults would yield equivalent coefficients to a sample composed of adolescents. Demographic variables such as gender, socioeconomic status, and age may all affect the precision of the estimate.

► **Reliability** reporting practices have been studied in the area of life satisfaction research. Vassar and Hale (2007) conducted a study to examine reporting practices of three youth life satisfaction scales: the Student Life Satisfaction Scale (SLSS), the Brief Multidimensional Students’ Life Satisfaction Scale (BMSLSS), and the Multidimensional Students’ Life Satisfaction Scale (MSLSS). A literature search revealed 48 usable articles and 78 unique samples from which data were collected using these measures. Overall, results indicated that for the MSLSS, 68 % calculated and reported reliability estimates from the actual data, 24 % induced reliability estimates from a previous study or test manual, and 7 % made no mention of ► **reliability**. For the BMSLSS, 66 % calculated and reported reliability based on their actual sample data, 24 % induced estimates from another study, and 16 % did not mention score reliability. For the SLSS, 54 % calculated and reported reliability coefficients using sample data, 41 % induced reliability, and 4 % made no mention of score ► **reliability** for the measure. Improvements must still be made in reliability reporting; nonetheless, these results are generally encouraging when compared to other areas of study.

In another study, Vassar (2008) examined score ► **reliability** for the ► **Satisfaction With Life Scale (SWLS)**. A meta-analytic approach known as ► **reliability generalization** was used to determine a mean alpha estimate across studies using the SWLS as well as to determine which sample characteristics contributed to variance in alpha estimates across studies. Sixty-two journal articles were used for this analysis. Mean alpha for the SWLS across 77 samples was .78.

Gender, language (English/non-English), country (US-based sample, non-US sample), scale mean, standard deviation, and youth samples were all significantly related to variability in alpha. In a previous report, Wallace and Wheeler (2002) examined score ► [reliability](#) using the same method for the Life Satisfaction Index and found that the mean alpha coefficient across 39 samples was 0.79. Due to low power, no statistically significant relationships between alpha variance and sample characteristics were found. ► [Reliability](#) reporting practices for these measures were also poorer in both studies. Vassar (2008) found that only 31 % of articles in his study calculated and reported reliability estimates from their own data; Wallace and Wheeler (2002) reported an even smaller percentage (19 %) of studies estimating and reporting ► [reliability](#) information using sample data.

Based on the results of these studies, it is clear that more can be done in estimating and reporting reliability coefficients. Researchers should make it common practice to estimate reliability and to report those reliability estimates from the data at hand for each measure used. Doing so provides readers with a greater insight regarding a study's quality of measurement. Thorough reporting of reliability data also allows psychometric researchers the ability to investigate scale score reliability meta-analytically.

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Satisfaction with Living Partner

- [Relationship Satisfaction](#)

Satisfaction with Personal Security

- [Feeling Safe](#)

Satisfaction with Quality of Life Domains

- [Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older](#)

Satisfaction with Spirituality

- [Religion/Spiritual Fulfillment, Satisfaction with](#)

Scale Categories Effects

- [Life Satisfaction Ratings and Response Formats](#)

Scale Conversion

- [International Happiness Scale Interval Study](#)

Scale Label Effects

- [Life Satisfaction Ratings and Response Formats](#)

Scale Orientation Effects

- [Life Satisfaction Ratings and Response Formats](#)

Scale Transformation

- ▶ [International Happiness Scale Interval Study](#)
 - ▶ [Rescaling](#)
-

Scale, Interval

- ▶ [Interval Scale](#)
-

Scaling

- ▶ [Interval Scale](#)
 - ▶ [Multiple Scaling](#)
 - ▶ [Response Format](#)
-

Scaling-Effects Bias

- ▶ [Life Satisfaction Ratings and Response Formats](#)
-

Scalogram Analysis

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Synonyms

[Guttman scale](#)

Definition

Scalogram analysis is a method developed for evaluating statements or items in a measurement instrument to determine whether it forms a Guttman scale.

Description

Scalogram analysis has a long history in the psychological and social sciences and has been widely used. It is a method developed for evaluating statements or items in a measurement instrument to determine whether it forms a Guttman scale (Guttman, 1944). A Guttman scale is a unidimensional measure of attitude, preference, etc., where statements (items) represent increasingly positive feelings with respect to the object being measured. The endorsement of any statement implies the endorsement of a less positive statement. Scalogram analysis is used to determine whether a measure forms a Guttman scale where statements form a continuum from least to most favorable.

Response Pattern: The analysis begins with an examination of response patterns. For example, say a life satisfaction measure has five items ordered from least positive to most positive and the respondents are asked to indicate their agreement (1) or disagreement (0) for each item. An acceptable response pattern would be {1, 1, 1, 1, 0, 0}, as the first four statements were endorsed whereas the last two most positive statements were not. This is the expected pattern for a respondent who agrees with four items and disagrees with two. The pattern {1, 1, 0, 1, 0} would be unacceptable because the fourth most positive statement was endorsed but not the third which is slightly less positive than the fourth, and therefore this pattern contains an error. An error occurs any time a “0” appears to the left of a “1” in a respondent’s choices. This implies that respondents with the same score will have identical responses for all items in a Guttman scale. All respondents who agree with say four statements agree on the same four; all those who agree with three statements agree on the same three, and so on.

Criteria: A measure forms a Guttman scale if it meets two empirical criteria: the coefficient of reproducibility and coefficient of scalability. These coefficients are calculated from counting the errors in the expected response pattern. The total number of errors is the sum of errors across all the respondents. The total number of statements is the product of the number of statements

in the measure times the number of respondents. The coefficient of reproducibility (CR) is defined as one minus the ratio of total errors to total number of responses. A CR value of more than 0.90 suggests a valid cumulative and unidimensional Guttman scale. However, the second empirical criterion of scalability must be met as well.

A CR is designed to reproduce an individual's answers to each item from the knowledge of his or her total score. With the Guttman technique, the perfect scale implies that a person who answers a given question favorably will have a higher total score than a person who answers it unfavorably. In this situation the number of items endorsed by a respondent, giving a complete picture as to which items he or she agreed and disagreed with, serves as his or her score.

Perfect reproducibility cannot be expected in practice so it is important to measure the degree of reproducibility. The coefficient of scalability (CS) is based on the minimum marginal reproducibility (MMR). The MMR is the proportion of appropriate response patterns that would occur by chance alone given the number of respondents and the number of statements. It is defined as the frequency of responses to the modal of the i^{th} statement divided by the total number of responses. Essentially, MMR is the average overall frequency of each response.

The difference between CR and MMR represents the percentage improvement (PI), which is an indication of the extent to which CR reflects the response patterns instead of the inherent cumulative interrelation of the statements.

The MMR is used to calculate the coefficient of scalability (CS) defined as CR minus MMR divided by one minus the MMR. A CS value of .6 is the recommended minimum acceptable cut off. The CS essentially indicates the degree to which the data fit the theoretical Guttman model.

Scalogram analysis, or Guttman scaling, is a popular technique in socio-behavioral research, marketing, medicine, law, religion, and many other areas. The procedure appears in most commonly used data analysis software. Hays, R. D., and Phyllis (1990) have extended scalogram analysis to longitudinal data. Shye (1985) has

developed partial order scalogram analysis as well. An in-depth treatment of scalogram analysis, issues, and developments can be found in Maranell (1974).

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Scarcity Hypothesis

- ▶ [Affluence, Stress, and Well-Being](#)

Scarcity of Time

- ▶ [Time Pressure](#)

Scattered Settlements

- ▶ [Suburbanization](#)

Scavengers

- ▶ [Street Waste Pickers in Pretoria, South Africa](#)

SCF Extraction

- ▶ [Supercritical Fluid Extraction as a Green Technology](#)

Schedule for Meaning in Life Evaluation, Spanish Version

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Synonyms

SMiLE; Spanish version of meaning in life schedule

Definition

A respondent-generated instrument for the assessment of the importance and satisfaction in some areas of meaning in life (MiL). Originally designed and validated by Fegg, Kramer, L'Hoste, and Borasio (2008).

Description

The Schedule Meaning in Life Evaluation (SMiLE) was designed through a combination of qualitative and quantitative methods. It assesses three aspects by asking subjects: (a) to name three to seven domains that they judge to be relevant to their individual meaning in life, (b) to rate their current level of satisfaction in each of these domains using a seven-point Likert scale, and (c) to rate the importance of each of their chosen areas using an eight-point adjectival scale. The instrument enables three indices to be calculated: Index of Satisfaction (IoS), Index of Weighting (IoW), and Index of Weighted Satisfaction (IoWS) or total SMiLE index. The IoS indicates the mean satisfaction rating across the stated areas and ranges from 0 (not at all

satisfied) to 100 (totally satisfied); the IoW expresses the mean importance ascribed by the respondent to each of the chosen areas and ranges between 0 (not important) and 100 (extremely important); finally, the IoWS combines the weighting and satisfaction scores into a single value, thereby providing an overall estimate of MiL.

The authors of the SMiLE simultaneously developed German and English versions of the schedule in a healthy population (Fegg et al. 2008) and also studied MiL in the general German population (Fegg, Kramer, Bausewein, & Borasio, 2007). The instrument was subsequently validated in French palliative care patients (Stiefel et al., 2008), and in 2010 a study of MiL was carried out in German patients with amyotrophic lateral sclerosis (Fegg et al., 2010).

A Spanish form of the schedule is now also available and a study of its psychometric properties provided evidence of both validity and ► **reliability** (Monforte-Royo, Tomás-Sábado, Villavicencio Chávez, & Balaguer, 2011). The convergent and discriminant validities of the Spanish adaptation were assessed by administering the schedule alongside measures of depression, general ► **anxiety**, death anxiety, ► **quality of life**, and ► **self-esteem**. The premise was that a lack of MiL would manifest itself in the form of tedium, despair, a perceived lack of control over one's life, and the absence of ► **life goals**, whereas a meaningful existence would be associated with a positive view of life, of the future, and of oneself, as well as with a satisfactory degree of self-realization (García-Alandete, Gallego-Pérez, & Pérez-Delgado, 2008).

Adaptation and Validation Process

Method

A sample of 250 undergraduates from two Spanish universities was recruited. Of these, 213 students (59 men, mean age 24.7 (SD = 7.0) years; 154 women, mean age 24.0 (SD = 6.2)) returned properly completed questionnaires.

Subjects Responded to the Following Self-Administered Instruments

Spanish form of the SMiLE (Monforte-Royo et al. 2011): Respondents first indicated three to seven areas that gave meaning to their lives, thereby generating a list of areas. They were then asked to rate, on a numerical scale from -3 (very unsatisfied) to $+3$ (very satisfied), the degree of satisfaction or dissatisfaction felt at that time with regard to each of these areas. Finally, respondents rated, on a scale from 0 (not important) to 7 (extremely important), the importance of each area with respect to the overall meaning of their lives. Once the three steps had been completed, a formula was applied to calculate the IoS, the IoW, and the IoWS.

Spanish form of the Rosenberg Self-Esteem Scale (RSES) (Martin, Nuñez, & Grijalvo, 2007): This consists of ten items scored on a four-point Likert scale (from strongly disagree to strongly agree). Possible total scores range from 10 to 40, with 40 indicating the highest level of self-esteem.

Zung Self-Rating Depression Scale (SDS) (Zung, 1965), Spanish form (Conde & Franch, 1984): The 20 items of this self-report instrument are scored on a four-point Likert scale, ranging from 1 (rarely/never) to 4 (almost all of the time or always). Possible total scores range from 20 to 80, with 80 indicating the highest level of depression.

Death Anxiety Inventory-Revised (DAI-R) (Tomás-Sábado & Gómez-Benito, 2005; Tomás-Sábado, Gómez-Benito, & Limonero, 2005): Originally validated in Spanish the DAI-R comprises 17 items scored on a five-point Likert scale. Possible total scores range between 17 and 85, with higher scores indicating greater death anxiety.

Kuwait University Anxiety Scale (KUAS) (Abdel-Khalek, 2000), Spanish form (Abdel-Khalek, Tomás-Sábado, & Gómez-Benito, 2004): The KUAS comprises 20 items scored on a Likert scale from 1 to 4. Possible total scores range between 20 and 80, with higher scores reflecting greater anxiety.

Spanish form of the SF-12 Health Survey (Ware, Kosinski, & Keller, 1996), as developed by Alonso et al. (1998): A brief version of the SF-36 Health Survey (Vilagut et al., 2005) the SF-12 comprises 12 items and provides scores regarding both mental and physical health. Possible total scores range between 0 and 100, with higher scores indicating better health.

Procedure: The Spanish form of the SMiLE was obtained by using a translation/back-translation procedure with bilingual subjects and following the recommendations of the Scientific Advisory Committee of the Medical Outcomes Trust (Scientific Advisory Committee of the Medical Outcomes T, 2002). In order to assess the temporal stability of the SMiLE, it was readministered after a 1-month interval to a random subsample of 58 students from the two universities involved. The procedure was the same at each test administration and 52 valid responses were obtained. A qualitative analysis was then performed of the areas defined in the first step of the SMiLE (during the first administration), comparing these with the responses given at retest. A statistical correlation analysis was also conducted regarding the number of areas chosen by respondents during the initial administration and at retest. The same procedure was applied to the indices of satisfaction, weighting, and weighted satisfaction.

Results

Table 1 shows the test-retest results for the subsample of respondents.

The analysis of internal consistency yielded a Cronbach's alpha of 0.61 for the IoS and 0.41 for the IoW ($n = 213$). The mean number of areas defined in the first step of the SMiLE was 4.99 ($SD = 1.59$) at test and 4.92 ($SD = 1.5$) at retest. The test-retest correlation for the number of areas chosen was 0.81 ($P < 0.01$).

The convergent validity of the SMiLE was assessed using the RSES and the mental dimension of the SF-12 (MD/SF-12), it being hypothesized that a strong sense of MiL would be associated with a positive view of life and

Schedule for Meaning in Life Evaluation, Spanish Version, Table 1 Means and standard deviations for the Index of Satisfaction (IoS), the Index of Weighting (IoW), and the Index of Weighted Satisfaction (IoWS) obtained at test and retest ($n = 52$), showing the Spearman's rho coefficients and significance level (P) (Monforte-Royo et al. 2011)

	Test	Retest	Rho	Significance
IoS	82.72 ± 14.28	80.33 ± 15.40	0.55	$P < 0.01$
IoW	84.09 ± 9.5	83.49 ± 9.96	0.61	$P < 0.01$
IoWS	83.81 ± 13.62	81.43 ± 14.29	0.48	$P < 0.01$

Schedule for Meaning in Life Evaluation, Spanish Version, Table 2 Spearman's rho coefficients between the SMiLE indices of satisfaction (IoS) and weighted satisfaction (IoWS) and the measures of self-esteem (RSES), mental dimension and physical dimension of quality of life (MD/SF-12 and PD/SF-12), anxiety (KUAS), depression (SDS), and death anxiety (DAI-R)

	RSES	MD/SF-12	PD/SF-12	KUAS	SDS	DAI-R
IoS	0.28*	0.31*	-0.14*	-0.23**	-0.17*	-0.19**
IoWS	0.30*	0.31*	-0.15*	-0.22**	-0.16*	-0.18**

* $P < 0.05$; ** $P < 0.01$ (Monforte-Royo et al. 2011)

quality of life. With respect to both the RSES and the MD/SF-12, the coefficients were positive and significant for the indices of satisfaction and weighted satisfaction (see Table 2).

Discriminant validity was estimated by comparing scores on the SMiLE indices with those on the KUAS, the SDS, the DAI-R, and the physical dimension of the SF-12 (PD/SF-12). Table 2 shows a negative correlation between both the IoS and the IoWS and the above-mentioned scales.

Discussion

The Spanish form of the SMiLE maintained the length, format and scoring system of the original instrument. Furthermore, the MiL areas chosen by respondents during the first step were classified into the same 13 categories as those used in the German, English, and French versions (Fegg et al. 2007, 2008; Stiefel et al., 2008) (i.e., ► Family, Friends, Work/Studying, ► Well-Being, Partner, ► Health, ► Leisure Time, ► Hedonism, Religiosity, Finances, Animals/Nature, ► Altruism, and Home/Garden). Fegg subsequently suggested the addition of a further two categories (► Art/Culture and Growth, which includes

► lifelong learning and self-development), the aim being to provide a more precise classification. Although this categorization is purely conventional, it is regarded as useful for classifying those aspects which people consider give meaning to their lives.

It is worth noting that the frequency with which each MiL area is chosen differs according to the study. For example, in the Spanish sample 99.5 % of students chose "Family" as one of the most relevant areas that gave meaning to their lives. Although this is consistent with the findings for the original sample comprising German and Irish students, the percentage there was slightly lower (89.7 %) (Fegg et al. 2008). The second area most commonly chosen by the Spanish students was "Friends," which was mentioned by 80.75 % of subjects, whereas this area was ranked third (75.8 % of responses) by German and Irish students. The most striking differences concern the areas of "Well-being" and "Health," where the percentages for Spanish students were 50.6 and 30.04 %, respectively, compared with only 4.8 and 11.5 %, respectively, among German and Irish students. Clearly, cultural and social differences affect the preference ratings such that they lean more towards one area or another.

As noted above, the analysis of internal consistency yielded Cronbach's alpha values of 0.61 and 0.41 for the responses regarding satisfaction and importance, respectively. These coefficients, which would be considered as very low in the case of nomothetic scales, are acceptable in respondent-generated instruments such as the SMiLE (Joyce, Hickey, McGee, & O'Boyle, 2003; Rapkin & Schwartz, 2004; Schwartz & Rapkin, 2004), and they are also very similar to the values obtained in the reliability study of the original version (0.71 and 0.49, respectively) (Fegg et al. 2008).

As hypothesized, the indices of satisfaction (IoS) and weighted satisfaction (IoWS) were positively and significantly correlated with self-esteem (RSES) and the mental dimension of the quality of life measure (MD/SF-12) but showed a negative correlation with depression (SDS), anxiety (KUAS), and death anxiety (DAI-R). This provides evidence of the instrument's convergent and discriminant validities. The negative correlation between the physical dimension of quality of life (PD/SF-12) and both the IoS and the IoWS does, however, require further research.

It should be borne in mind that the Spanish form of the SMiLE has so far only been validated in a sample formed exclusively by university students, although the authors of the adaptation are currently studying its properties in a sample of palliative care patients. At all events the properties of the Spanish form need to be investigated further both in the general population and in other clinical samples.

Cross-References

- ▶ [Cross-Cultural Adaptation](#)
- ▶ [Cross-Cultural Validation](#)
- ▶ [Meaning in Life](#)

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Schizophrenia and Bipolar Disorder Patients' and Proxy Quality of life Ratings

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Definition

► **Quality of life** (QoL) is a multidimensional concept that emphasizes an individual's satisfaction with all aspects of life and includes physical, social, environmental, and psychological well-being. QoL impairment is a particular syndrome observed in most psychiatric and somatic disorders, and severe impairment in QoL was observed among 46 % of patients with severe mental disorders, such as schizophrenia and bipolar disorder (Hansson, 2006; Ritsner, 2007; Michalak, Yatham & Lam, 2005). The magnitude of QoL deficits is considerable and remains relatively stable through the course of the illness despite fluctuations in other symptoms

(Bechdolf et al., 2005; Rister, Gibel, & Ratner, 2006). Therefore, ratings of QoL are regarded as more individualized measures specific to a certain patient when evaluating treatment outcome.

QOL measurement can be highly subjective as ratings can differ depending on who the rater is. Ideally, the primary source of information would be the patient, but the findings regarding the reliability of the QoL ratings made by psychiatric patients have been inconsistent. In reality, the assessment of QoL has often relied on proxy reports when evaluating the QOL of psychiatric patients.

However, proxy assessments of QoL in psychiatry have so far been an under-researched area (Becchi, Rucci, Placentino, Neri, & de Girolamo, 2004). In fact, psychiatric patients are the population for whom this kind of research is most needed since psychiatric symptoms mainly affect the cognitive, affective, and reality-testing functions on which the judgment of QoL is based (Atkinson, Zibin, & Chuang, 1997; Becchi et al., 2004; Hansson, 2006; Zimmerman & Magaziner, 1994). Therefore, the comparison of patient and proxy ratings is necessary to determine the feasibility and potential limitations of using proxies as surrogates when patients' QoL ratings are unavailable.

From this background, the objective of this essay is to clarify the relationship between patient and proxy evaluations of QoL in patients with severe ► **mental illness**, especially within the two most common psychiatric disorder populations: schizophrenia and bipolar disorder.

Description

Methods

Participants and Data Collection

Potential subjects were selected from the pool of patients scheduled for clinic visits in three university hospitals and one general hospital located in two adjacent urban cities in Korea. Most patients were outpatients, but 28 patients with schizophrenia were recruited from day hospitals at two centers. The clinical information of the chart was reviewed by a psychiatrist, and

then the stable patients who met the following inclusion criteria were selected and asked to participate in this study: (1) diagnosis of schizophrenia or bipolar disorder according to DSM-IV, (2) those with an identifiable primary caregiver, and (3) schizophrenia patients who were judged clinically stable by the psychiatrist and euthymic bipolar patients (YMRS score ≤ 6 and HAM-D ≤ 7). Patients with other Axis I or II disorders and serious general medical conditions were excluded because of the possible confounding effects of other disorders on QoL. The patients were instructed to self-rate their QoL, and the proxies were asked to choose the answers that best described the patient's situation. No contact was allowed between patients and caregivers to eliminate the possibility of discussion between patients and caregivers, which can become a potential confounding factor.

Instruments

1. World Health Organization QoL Scale

WHOQOL-BREF measures a broader and general conceptualization of QoL and a self-report scale consisting of 26 questions scored in four domains: physical health, psychological domain, social relationships, and environment. The questionnaire demonstrated good psychometric properties in chronic mental disease populations.

2. 36-Item Short-Form Health Survey (SF-36)

The Medical Outcomes Study 36-item short-form health survey (► SF-36) is a well-established, self-rated, generic QoL instrument and consists of 36 items grouped into the following eight scales: physical functioning, role physical, bodily pain, general health, vitality, social functioning, emotional role, and mental health. The score of each dimension (dimension score) is calculated, and these 36 items are grouped and summarized into two broad "summary scores": physical composite score (PCS) and mental composite score (MCS). The Korean version of the SF-36 showed a good internal consistency with Cronbach's α ranging from 0.60 to 0.90 in each eight domain.

3. Measuring Symptoms and Severity of Illness

The patients' psychiatric illness severity was rated by the psychiatrist using the Brief Psychiatric Rating Scale (BPRS) and Clinical Global Impression-Severity (CGI-S) in patients with schizophrenia, and bipolar patients were rated using the Young Mania Rating Scale (YMRS), Hamilton Rating Scale for Depression (HAM-D), and the CGI-S.

Result

Characteristics of Patients and Proxies

Our sample consisted of 131 patient-proxy pairs whose demographic and clinical characteristics are shown in Table 1. All subjects were maintained on stable medication regimen during the last 4 weeks.

Patient-Proxy Agreement at Group Level: Mean Differences

Table 2 shows the overall mean differences between patient and proxy scores in two QoL measures used in this study. In sum, the mean difference is not significant except in a few domains. For example, only the mean difference of the psychological domain in WHOQOL-BREF and physical function subscales ($p = 0.04$) in SF-36 turned out to be significant ($p = 0.03$) in schizophrenia group. In bipolar disorder group, proxies rated patients' physical function ($t = 3.31$, $p < 0.01$) and physical composite scores significantly lower than the patients did ($t = 2.1$, $p = 0.04$). In contrast, proxies' ratings on mental composite scores and other dimension scores were not significantly different from those of the patients.

Patient-Proxy Agreement at Individual Level: ICC

Inter-rater agreement between patient and proxy scores was evaluated by calculating ICCs. As shown in Table 3, the ICC agreement between patients' and proxies' scores in schizophrenia patients showed moderate-to-good agreement (ICC 0.4–0.7). In summary, these results reveal that the overall agreement for the two QoL measures is good, while the subscales were divided between good and moderate agreement.

Schizophrenia and Bipolar Disorder Patients' and Proxy Quality of life Ratings, Table 1 Demographic and clinical characteristics of patients and their proxies

Variable	Schizophrenia N(%) or Mean \pm S.D.	Bipolar disorder N(%) or Mean \pm S.D.	Proxy: Schizophrenia N(%)	Proxy: Bipolar disorder N(%)
Gender				
Male	36(44.4)	21(42.9)	27(34.2)	20(39.2)
Female	44(54.3)	29(50.0)	50(63.3)	30(58.8)
Missing	1(0)	0(0)	2(2.5)	0(0)
Age	32.2 \pm 9.90	33.6 \pm 10.5	51.0 \pm 12.2	47.2 \pm 10.9
Illness onset(years)	24.6 \pm 6.9	28.5 \pm 9.6		
Duration of illness (years)	7.0 \pm 6.6	5.1 \pm 7.5		
Number of admission	2.5 \pm 2.2	2.7 \pm 3.0		
Chloropromazine equivalent dose(mg)	492.2 \pm 288.8	231.0 \pm 202.8		
Education level				
Elementary school	2(2.5)	3(6.0)	7(8.9)	5(9.8)
Middle school	4(4.9)	1(2.0)	10(12.7)	5(9.8)
High school	39(48.1)	16(32.7)	17(21.5)	19(37.3)
University	27(33.3)	23(47.0)	37(46.9)	15(29.4)
Graduate school	2(2.5)	6(12.0)	4(5.1)	4(7.8)
Missing	7(8.6)	1(2.0)	4(5.1)	2(4.0)
Marital status				
Single	62(76.5)	26(52.0)	6(7.6)	2(3.9)
Married	10(12.3)	19(38.0)	49(62.0)	41(80.4)
Divorced	1(1.2)	1(2.0)	2(2.5)	1(2.0)
Others	3(3.6)	3(6.0)	11(14.0)	4(7.9)
Missing	5(6.2)	1(2.0)	11(14.0)	2(4.0)
BPRS (N = 71)	38.7 \pm 1.1			
YMRS		2.8 \pm 2.5		
HAM-D		5.9 \pm 4.2		
CGI	3.4 \pm 1.1	1.8 \pm 0.8		

Source: Kim et al. (2010)

Mean \pm S.D.: *BPRS* Brief Psychiatric Rating Scale, *YMRS* Young Mania Rating Scale, *HAMD* Hamikon Depression Rating Scale, *CGI* Clinical Global Impression

In the bipolar disorder group, at least moderate degree of agreement existed between patients' and proxies' reports in both scales (ICC 0.4–0.7), and some subscales showed good agreement levels, demonstrating ICC > 0.6, which was similar to the results from schizophrenia group. The expectation that the more observable domains would yield the highest levels of agreement was partially fulfilled with the environmental domain obtaining the high concordance in schizophrenia (ICC 0.7) and bipolar disorder group (ICC 0.6). However, the SF-36 results showed that the differences between the scales were small and did not show any consistent

pattern in the agreement levels of different subscales.

Discussion

Our result shows that patients with chronic mental illness and their family proxies have a moderate-to-good degree of agreement when assessing patients' QoL. Although a few studies that compared patient-proxy ratings in schizophrenic patients have been published (Becchi et al., 2004; Sainfort, Becker, & Diamond, 1996; Wilson, Dowling, Abdolell, & Tannock, 2000), to our knowledge, this is the first study conducted on a sample of euthymic bipolar

Schizophrenia and Bipolar Disorder Patients' and Proxy Quality of life Ratings, Table 2 Mean scores, standard deviations and mean differences of the four WHOQOL-BREF domains and SF-36 domains in patients with schizophrenia, bipolar disorder and their proxies

	Schizophrenia				Bipolar disorder					
	Patient mean (SD)	Proxy mean (SD)	Mean difference	SD	Standardized difference	Patient mean (SD)	Proxy mean (SD)	Mean difference	Standardized difference	
WHOQOL-BREF										
Physical	53.3(17.0)	52.0(15.3)	1.3	19.2	0.1	60.3(16.8)	55.8(15.7)	4.8	18.3	0.3
Psychological	47.2(18.1)	42.0(16.7)	4.9	19.0	0.3	55.7(17.0)	52.4(16.0)	3.6	20.0	0.2
Social	45.8(17.3)	41.9(16.5)	3.9	19.6	0.2	55.3(15.1)	50.1(15.8)	5.1	13.6	0.4
Environmental	49.7(17.9)	48.9(16.5)	0.8	17.1	0.1	56.5(16.9)	53.9(11.8)	3.3	15.0	0.2
SF-36										
Dimension scores										
Physical function	71.7(27.2)	79.9(31.2)	-8.2	33.0	-0.3	88.5(13.3)	80.6(17.4)	8.0	15.9	0.5
Role physical	52.8(37.2)	50.7(41.0)	2.1	42.3	0.1	67.4(36.0)	64.0(37.5)	3.5	39.2	0.1
Bodily pain	71.7(22.8)	71.5(21.8)	0.3	24.0	0.0	79.1(21.1)	77.1(20.0)	2.0	17.3	0.1
General Health	55.8(20.1)	56.0(19.4)	-0.2	23.1	0.0	61.8(19.8)	57.7(18.3)	4.1	23.1	0.2
Mental Health	61.4(20.2)	61.5(19.1)	-0.1	20.6	0.0	67.9(19.3)	68.0(17.5)	0.1	20.4	0.0
Role emotional	55.9(39.3)	55.9(43.4)	0.0	49.9	0.0	69.8(37.0)	62.1(42.2)	7.7	41.1	0.2
Social function	69.4(22.5)	66.7(23.7)	2.6	28.1	0.1	77.3(24.9)	76.2(24.5)	1.1	20.0	0.1
Vitality	50.6(20.2)	49.2(19.9)	1.3	24.9	0.1	57.7(19.7)	50.7(20.4)	6.9	26.2	0.3
Summary scores										
Physical	60.5(18.5)	61.5(18.0)	-0.1	18.3	0.05	70.9(15.2)	65.0(15.9)	4.9	24.8	0.2
Mental	58.6(19.1)	57.9(19.4)	0.7	21.1	0.03	69.9(26.0)	62.9(18.6)	7.0	18.6	0.4

Source: Kim et al. (2010)

Mean difference: Proxy score-patient score, *SD* Standard deviation of difference, *SD* Standardized difference (effect size) *d* = mean difference/standard deviation of difference

Schizophrenia and Bipolar Disorder Patients' and Proxy Quality of life Ratings, Table 3 Agreement (ICC) between patients' and proxies' ratings on WHOQOL and SF-36

	Schizophrenia			Bipolar disorder		
	ICC	Confidence Interval	P-value	ICC	Confidence Interval	P-value
WHO-QOL BREF						
Physical	0.4	0.1–0.6	0.005	0.6	0.2–0.8	0.004
Psychological	0.6	0.4–0.8	0.001	0.4	0.1–0.7	0.034
Social	0.5	0.2–0.7	0.004	0.7	0.7–0.9	<0.001
Environmental	0.7	0.5–0.8	0.001	0.6	0.4–0.8	0.001
SF-36						
Dimension scores						
Physical function	0.5	0.3–0.7	0.001	0.6	0.3–0.8	0.001
Role physical	0.6	0.3–0.8	<0.001	0.6	0.3–0.8	0.002
Bodily pain	0.6	0.4–0.8	<0.001	0.8	0.6–0.9	<0.001
General health	0.5	0.2–0.7	0.004	0.4	0.1–0.7	0.040
Mental health	0.6	0.4–0.8	<0.001	0.6	0.2–0.8	0.004
Role emotional	0.4	0.2–0.6	0.012	0.6	0.3–0.8	<0.001
Social function	0.4	0.1–0.6	0.011	0.8	0.6–0.9	<0.001
Vitality	0.4	0.0–0.6	0.025	0.3	–0.4–0.6	0.167
Summary scores						
Physical composite	0.7	0.5–0.8	<0.001	0.7	0.4–0.8	<0.001
Mental composite	0.6	0.3–0.7	<0.001	0.6	0.2–0.8	0.003

Source: Kim et al. (2010)

ICC Intra-class correlation coefficient

disorder patients that examined patient-proxy agreement of QoL ratings. One of the strengths of this study is the use of two QoL scales with different characteristics, which may provide a more objective picture of patients' QoL and may compensate for the limitations of each scale. Another strength of this study is the analysis of both group and individual level statistics, reflecting the recommendation that a full assessment of concordance both at the individual (usually by correlation) and group (by comparison of means) levels should be conducted to properly evaluate the agreement levels between patients and proxies.

Patient-Proxy Agreement at Group Level

Our results reveal that the mean scores for self- and proxy reports were similar in most subscales of the two QoL instruments used in this study and the differences in patient-proxy ratings were small (standardized mean differences 0.0–0.3 in schizophrenia group, 0.0–0.5 in bipolar disorder

group). This finding is consistent with previous studies reporting the median standardized differences of about 0.1–0.3 (Andresen, Vahle, & Lollar, 2001; Sneeuw, Sprangers, & Aaronson, 2002). The degree of difference between mean scores that can be allowed before one can conclude that agreement is satisfactory is controversial. The most pertinent issue is not whether the differences are statistically significant but whether they are clinically meaningful. Published precedents usually adopted the standards provided by Cohen (standardized mean difference < 0.2 small difference, 0.5 moderate difference, > 0.8 a large difference) for interpreting mean differences, which is clinically meaningful (Sneeuw et al., 2002). In our study, the mean difference in a few domains turned out to be very small, even if it reached a statistically significant level when analyzed by Cohen's standard, and little evidence of systematic bias in the patient-proxy rating was found. In accordance with our results, past studies on patient-proxy

difference in QoL measurement have found that the mean differences between two ratings are small and of questionable clinical meaning, suggesting the benefit of using proxy responses (Sneeuw et al., 2002).

Patient-Proxy Agreement at the Individual Level

In general, we found moderate-to-good agreement (ICC range, 0.4–0.8) between patient-proxy QoL ratings on both the WHOQOL-BREF and SF-36. In fact, the degree of agreement we obtained was higher than those reported for similar measures in psychiatric patient populations (Becchi et al., 2004; Gazalle et al., 2007). There seems to be several reasons that our study demonstrated better agreement than other studies. The circumstances in our sample favored agreement in that our subject had mild clinical symptoms, thereby provided reliable QoL ratings. In a study reporting a patient-proxy ICC range of 0.26–0.42 in patients with schizophrenia, the severity of psychiatric symptoms differed from our study in that more than 50 % of the participants were rated as having “very severe” symptoms (Becchi et al., 2004). These results show that the agreement level of patient-proxy ratings was affected by the severity of symptoms. Secondly, the close agreement may be due, in part, to characteristics resulting from the family ► culture of Korea. Generally, the tie between families is known as more tight-knit in Asian culture, and “family relation” is considered as paradigmatic domains in which the influence of culture is evident (Gaite et al., 2002). In our study, the percentage of family proxies who cohabited with the patients (86.7 %) is much higher than that of other Western countries where only half of the caregiver were family members. Thus, Korean family proxies are assumed to have more frequent contact and intense interaction with the patients. Proximity to the patients and having advantage of possessing similar sociocultural norms may lead family members to provide more valid assessment of QoL than might exist in Western countries. In a study conducted in India, where multigenerational family members cohabited in the same place, the agreement rate of QoL score

was 0.46, showing much higher agreement levels than that of Western countries ($r = 0.32$) (Lobana, Mattoo, Basu, & Gupta, 2001). Even though some found that the frequency and intensity of interactions between patients and families were not associated with the extent of agreement between the two respondents' assessments, the general trend is that QoL ratings are more accurate when the proxies live in close proximity to the patients (Lobana et al., 2001; Sneeuw et al., 2002). However, more research is needed to make a definite conclusion regarding the impact of patient and family interaction on the extent of agreement between patients and their family caregivers.

Effectiveness of Proxy Rating as a Surrogate of Patient Ratings

The next question we posed was whether proxy ratings can be substituted for patient ratings in subjects with chronic mental conditions. Studies report that proxy raters are likely to provide quite similar ratings to those of the patients even when moderate correlations are found (Sneeuw et al., 2002). Therefore, our finding that agreement between patients and proxies is sufficiently good would suggest that substituting patient scores with proxy scores is possible. In line with our findings, previous studies also reported that significant others can provide adequate information on both subjective and objective QoL indicators and the use of a family caregiver as a proxy respondent is considered a reasonable option that can improve external validity.

Patient-Proxy Agreement Levels Across Different Domains

As well as knowing the degree of agreement between patient-proxy ratings, determining which domains of multidimensional QoL patient and proxy reports may differ is very useful to provide evidence regarding the extent to which proxy respondents can be substituted for patients in QoL studies. Previous studies revealed that the extent of response agreement may differ depending on different subscale domains and different QoL measures used. Conflicting findings regarding agreement in specific domains have

been reported (Kemmler et al., 1997; Sneeuw et al., 2002). So far, the general consensus is that agreement was greater for more observable physical domains than non-observable emotional or social domains (Williams et al., 2006). In our results, different patterns of agreement were reported depending upon different QoL measures. In WHOQOL-BREF, subjective domain, such as the psychological subscale in schizophrenia and social subscale in bipolar disorder groups, showed significant mean differences. On the other hand, opposite findings emerged in the SF-36: significant difference was found in the more observable physical domains in both patient groups. In fact, there seems to be an increasing number of reports suggesting that the difference of agreement in objective vs. subjective domains may be smaller than has often been assumed. Studies using the same QoL measure found higher agreement levels for psychosocial domains, and patient-proxy were least likely to agree on physical complaints than any other domains. So far, there seems to be no clear answer to the question of whether agreement is better for some domains or not, and more research should be performed to elucidate these issues.

Limitations

This research has several limitations. First, the methodological shortcomings included a small sample size and cross-sectional design. Second, the selection of subjects was also a limitation as patients with mild symptoms are not likely to be representative of the patient population as a whole. Therefore, this result may not be extrapolated to patients whose symptoms are severe. Also, the research lacked measures of socioeconomic background which could potentially explain QoL differences, and therefore affect the agreement level of patient-proxy reports. Third, other factors, which were not measured, may influence the patient-proxy agreement, such as medication side effects, length of illness, depressive symptomatology, and insight level. In fact, past studies demonstrated that the main

differences in QoL ratings depended on extra-psychiatric variables, principally the educational history of both patient and proxies or caregiver burden of the proxies. The above factors are reported to have complex interactions which affect the patient-proxy QoL ratings and should be considered as important factors in the analysis of the agreement level. Lastly, since the WHOQOL-BREF and SF-36 are not disease-specific QoL instruments, but generic QoL instruments, they do not assess specific aspects relevant to the subjective experiences of patients with schizophrenia and bipolar disorder. In future studies, the content of the perceived impairment in QoL in schizophrenia and bipolar patients should be further investigated to clarify the specific characteristics of QoL of these two different mental illnesses. Despite this limitation, we selected a generic questionnaire rather than a disease-specific one according to the concept that the same standards for measuring QoL should be used for psychiatrically impaired patients.

Conclusion

In summary, results explained here indicate that proxy reports moderately to substantially correlate with patient reports of QoL and proxy ratings can be used as reasonable estimates of QoL in clinically stable schizophrenia and bipolar patients in Korea. Both patients and proxies contribute different but valid information on the patients' QoL, and therefore, gathering QoL information from multiple sources is desirable. In circumstances where a proxy measure as a substitute for patients' own ratings is often required, such as in real clinical and research settings, assessing the estimation of a patients' QoL can be verified by the family caregivers' report.

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Schizophrenia and Satisfaction with Life Scale

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Synonyms

DSM-IV; WHOQOL-BREF Taiwan version

Description

► **Subjective well-being** is an increasingly common indicator of the adequacy of psychiatric services. An easy-to-administer assessment tool of subjective well-being that is conceptually sound, valid, and reliable is needed for use in persons with schizophrenia who live in the community. The 5-item ► **Satisfaction with Life**

Scale (SWLS) is valid for persons with schizophrenia living in the community in Taiwan. Results from a total of 443 patients with schizophrenia in multiple areas of Taiwan in two studies reveal that the SWLS had good ► **internal consistency reliability**, factorial construct validity, and criterion-related validity.

Assessing Subjective Well-Being of People with Schizophrenia

Subjective well-being is an increasingly common indicator of treatment adequacy in healthcare services. Depending on the disease or illness, the core concern is how to enhance individual patients' subjective perceptions about their lives with self-imposed expectations, concerns, goals, and standards (e.g., Frisch, 1992; Michalos, 1985; World Health Organization [WHO], 1993). This concern is shared in the care of people with schizophrenia who live in the community.

In the existing literature, several multiple-domain quality of life (QOL) measurements have been developed and validated for assessing subjective well-being of people with schizophrenia, such as the Quality of Life Scale (QLS, Heinrichs, Hanlon, & Carpenter, 1984) and the Quality of Life Questionnaire in Schizophrenia (S-QoL, Auquier, Simeoni, Sapin, Reine, Aghababian, et al. 2003). These multiple-domain measurements share a common assumption that life domains included in the measurement are sufficient to assess subjective well-being. Nevertheless, subjective well-being, especially when it is based on an individual's quality of life, is personally defined by a person's self-imposed expectations, concerns, goals, and standards (e.g., Frisch, 1992; WHO, 1993). Because each person may have different structures of life domains, multiple-domain measurements may not capture the life domains that each person ► **values** and thus may not accurately assess subjective well-being for all people.

To reflect individual differences, some authors have suggested that subjective well-being should be measured by allowing the respondent to nominate his or her valued life domains (e.g., Dijkers, 2003; O'Boyle, 1994). Unfortunately, such a suggestion has another drawback – that comparisons

across individual persons in terms of level of subjective well-being are not allowed. To preserve the idiosyncratic content of life for each individual and fulfill the purpose of comparison across persons or populations, subjective well-being should be measured globally to reflect the evaluation of various life aspects. In fact, Diener, Emmons, Larsen, and Griffin (1985) adopted this approach to assess individual satisfaction with the whole life and developed the 5-item Satisfaction with Life Scale (SWLS). The SWLS was developed to assess satisfaction with one's life as a whole, with the consideration that different people may have very different ideas about what constitutes a ► **good life**. The SWLS has been used extensively since 1985 and has good psychometric properties among people of different occupations and cultures (see Pavot & Diener, 1993).

Because the 5-item SWLS can be completed quickly without extensive effort and while preserving the idiosyncratic ► **meaning of life** for each individual, it is an ideal global measurement for persons with schizophrenia. Wu and Wu (2008) have provided empirical evidence to support the validity of the SWLS in assessing subjective well-being of people with schizophrenia. Below is a summary of their findings.

Empirical Evidence

Wu and Wu (2008) recruited a total of 443 participants (in two samples) from multiple psychiatric institutes in Taiwan who are over 18 with a DSM-IV diagnosis of schizophrenia or schizoaffective disorder, who lived in the community at the time of the study, and who have the ability to comprehend and provide reliable answers in a paper-and-pencil test. The percentages of male and female participants were about equal, and the mean age was 36.3 (standard deviation [SD]: 10.10) in the first sample and was 36.23 (SD: 9.73) in the second sample. They examined psychometric properties of the SWLS in people with schizophrenia with respect to internal consistency reliability, factorial construct validity, criterion-related validity, and known-group validity.

First, internal consistency reliability was evaluated by Cronbach's α index, and the values of the two samples were satisfactory (0.84 and 0.85, respectively). Second, factorial construct validity was supported in a confirmatory factor analysis with a single-factor model. Specifically, the five items in the SWLS were influenced by a single latent factor that reflects general ► **life satisfaction**. Third, correlation analysis showed that the SWLS positively correlated with the World Health Organization Quality of Life Assessment brief version – Taiwan (WHOQOL-BREF Taiwan version) (Yao, Chung, Yu, & Wang, 2002), a generic multiple-domain (i.e., physical, psychological, social, and environmental domain) quality of life measurement that has been validated for schizophrenia patients (Örsel, Akdemir, & Dag, 2004) and used in previous studies for schizophrenia patients (Chan, Ungvari, Shek, & Leung, 2003a, b).

The correlations between the SWLS and the general quality of life facet and four domains of WHOQOL-BREF (physical health, psychological health, social relationships, and environmental health) were 0.48, 0.49, 0.61, 0.48, and 0.48, revealing the positive association between these two instruments and thus supporting the criterion validity of the SWLS in assessing QOL for persons with schizophrenia living in the community. Finally, the SWLS scores of this patient group (20.50; 19.45) were lower than a sample of 604 healthy participants living in Taipei metropolitan areas (mean: 22.75; Wu, 2002), supporting the known-group validity.

Implications

In the past decades, the healthcare delivery system has been strongly influenced by the paradigm of evidence-based practice, which requires the care of individual patients being provided based on the best available evidence (Straus, Richardson, Glasziou, & Haynes, 2005). In this paradigm, outcome measures used in the healthcare practice must be supported by evidence of adequate validity and reliability. The results reported by Wu and Wu (2008) provide the evidence of validity and reliability of the SWLS for the use in persons with schizophrenia living in the community.

Because the psychometric characteristics of the SWLS were replicated in the samples, the SWLS is a reliable measure for persons with schizophrenia. Persons with schizophrenia who live in the community are in a relatively stable condition and thus are suitable respondents for the SWLS. However, as the SWLS requires self-report by the respondent, it may not be applicable to patients with vivid psychotic symptoms, disorientation, or comprehension problems.

The SWLS has the advantages of preserving the idiosyncratic content of life for each individual and of fulfilling the purpose of comparisons across persons or populations. As a global measurement, the SWLS has fewer items than a multiple-domain measurement and is easy and quick to administer in clinical practice and research. However, the SWLS cannot substitute domain measures of QOL if the main purpose is to evaluate QOL in different life areas.

The differences between the SWLS and domain-based QOL measurements can be inferred by the moderate correlation between the SWLS and the WHOQOL-BREF as reported above ($r = 0.48\text{--}0.61$). Specifically, the SWLS concerns general life satisfaction, whereas the WHOQOL-BREF concerns domain-specific QOL. Therefore, although both of them assess an individual's subjective well-being, they do not measure exactly the same construct. Hence, the correlations between these two instruments would not be very strong. Wu and Yao (2007) have examined the relationships between global (the SWLS) and domain measures (the WHOQOL-BREF) and reported that although global measures and domain measures are influenced by the same latent construct of subjective well-being in general, the measurement approaches they adopt (global or domain) also have a substantial impact on the meaning of scores. Therefore, although the SWLS as a global measure of QOL shares a common factor of QOL with domain measures like the WHOQOL-BREF, these two different types of measures may provide different information (global or domain specific).

Moreover, although there are two general items in the WHOQOL-BREF (general quality of life facet), the correlation between the general

facet and the SWLS is not higher than correlations of other domains. This is because the WHOQOL-BREF concerns health-related QOL; one of the general items only focuses on the “► health” domain, not the whole life evaluation, which results in a moderate correlation between the SWLS and the general facet of the WHOQOL-BREF. Based on the differences between the global and domain-specific approaches to subjective well-being measurements, researchers should choose an adequate measurement according to their research purposes. Thus, the SWLS is a quick-and-easy-to-administer global measurement of subjective well-being with adequate psychometric properties for persons with schizophrenia who live in the community.

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School Activities

► School Experiences

School and Student Engagement

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Synonyms

Meaningful participation in school; School connectedness/bonding; School engagement; Sense of belonging

Definition

Student or school engagement can be understood as a developmental process comprised of student thoughts, feelings, beliefs, and behaviors in relation to the schooling context and his or her lifelong learning trajectory. There is emerging consensus on a definition of student engagement that includes behavioral, emotional/psychological, and, more recently, cognitive components (Griffiths, Sharkey, & Furlong, 2009). Student engagement refers to *behaviors* (e.g., attention, compliance, prosocial actions, participation in academics and extracurricular activities), *emotions or affect* (e.g., interest, identification, belongingness, positive attitude/valuing of learning), and *cognitions* (e.g., self-efficacy, goal orientations, regulation, investment and strategies for learning, beliefs about school, teachers and peers). An engaged student has feelings and perceptions of belongingness, connectedness, and participation not only in the school setting but in all aspects of life as well (Appleton, Christenson, & Furlong, 2008; Wang, Willet, & Eccles, 2011).

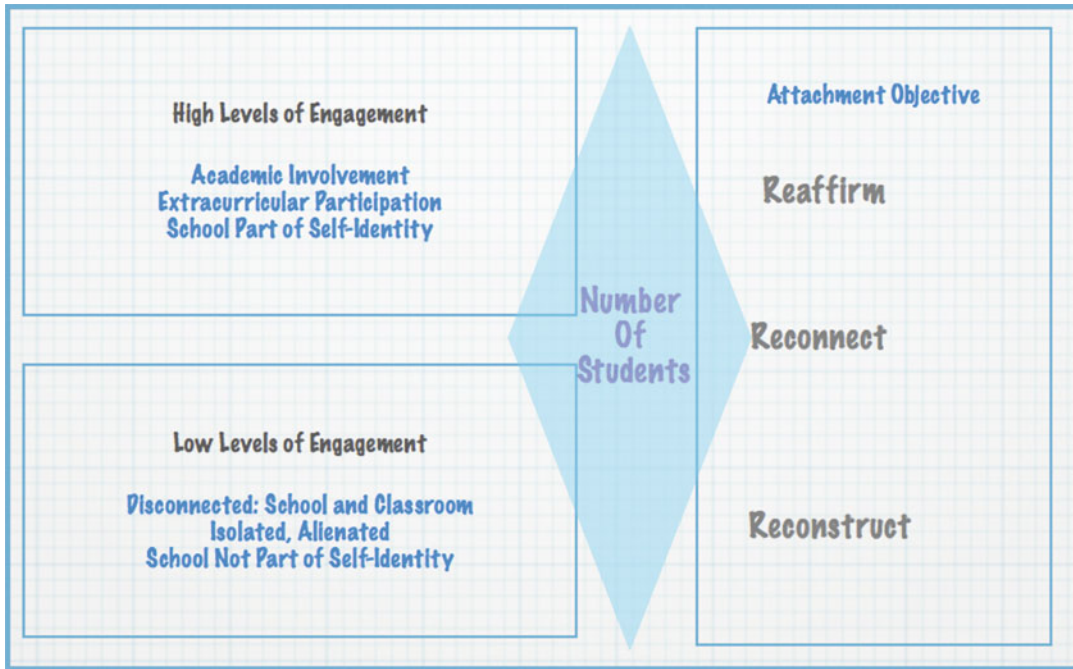
Description

Student engagement is part of a larger pattern that reflects whether a child is experiencing supportive and nurturing developmental contexts (school being one critical developmental context) (Furlong et al., 2003). When this system works synergistically with what is experienced at home and in the community, engagement lays the foundation of positive experiences for a lifelong pattern of living a meaningful and satisfying life. Positive engagement is important because it provides students with the opportunities associated with experiencing life in more rewarding and meaningful ways (Reschly, Huebner, Appleton, & Antaramian, 2008). Positive relationships with teachers and peers provide students with opportunities to steadily build positive self-perceptions, skills, and competencies (Jennings, 2003). These experiences and relationships are necessary to ensure positive development, which leads to better overall physical and mental

well-being. When students feel supported and cared for on a day-to-day basis, this allows them to build their understanding of what positive relationships look and feel like, which they can then generalize into other aspects of their lives. Students also need to feel connected to their teachers and peers and to help foster meaningful participation and encourage identification with school (Jennings, 2003). Overall, students who experience high levels of engagement have more favorable educational outcomes, experience positive physical and mental well-being, and tend to live happier and more interesting lives (Griffiths et al., 2009). Importantly, student engagement should be understood as both a process (e.g., the components and contexts that interplay to produce high and low levels of engagement) and an outcome (e.g., the internal state of being personally connected to school). As shown in Fig. 1, the connectedness or attachment objective will differ depending on the status of a student's engagement with school. For those students who already identify with their school, efforts would focus on **reaffirming** these positive bonds. Other students will have neutral identification with their school, and efforts will focus on how to reach out to these students and **reconnect** with them in a positive way. Finally, the experiences of some students have led them to develop negative attitudes toward their school and to reject their student role. For these youth, strategies are needed to **reconstruct** their personal relationships with teachers and peers.

Components of Student Engagement

The behavioral component of engagement is comprised of social and participatory actions that are visible indicators of the degree to which a student is connected to school and others (Jimerson, Campos, & Greif, 2003). Examples of behavioral markers of engagement include participation in extracurricular activities, academic and nonacademic school functions, social interactions, as well as homework completion, grades, and achievement scores. The psychological component refers to the affective aspects of student connectedness, such as positive feelings toward school, teachers, and peers

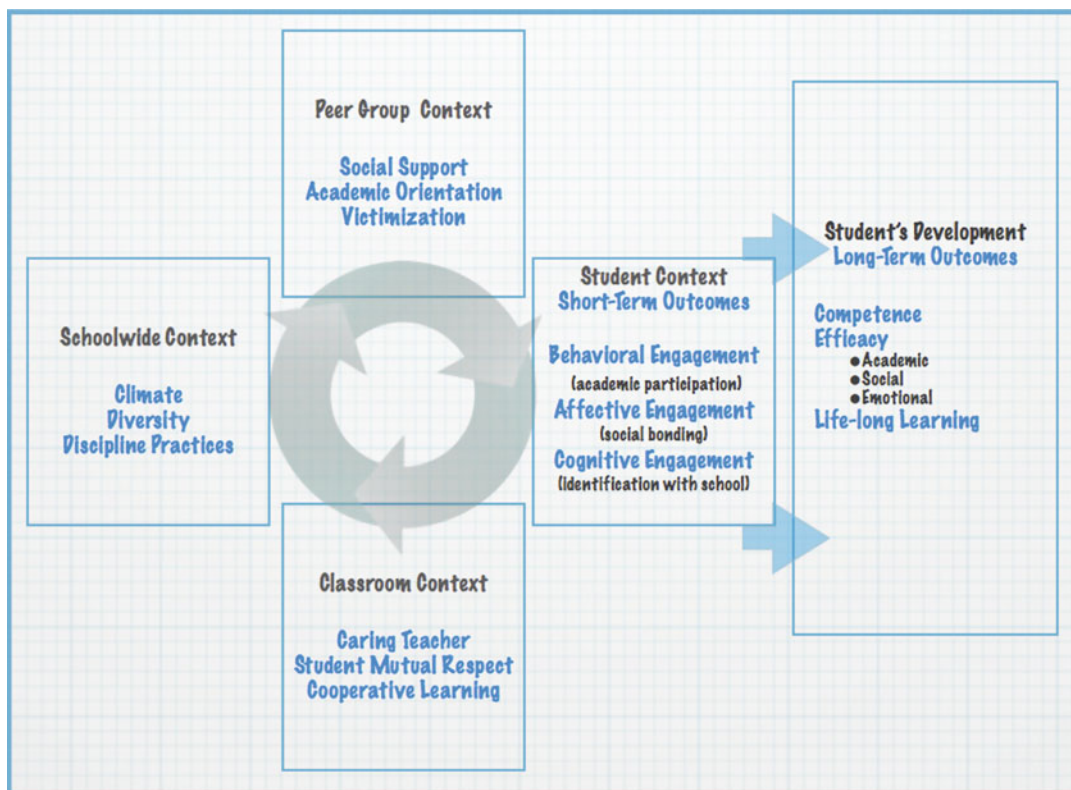


School and Student Engagement, Fig. 1 The school engagement continuum and the school connectedness objective

(Jimerson et al., 2003). And finally, the cognitive dimension describes students’ sense of self-efficacy, level of motivation, and perceptions and beliefs in teachers and peers (Jimerson et al.). Students who perceive teachers and peers as caring individuals have a positive sense of academic self-efficacy and have future aspirations coupled with clear, developmentally appropriate expectations are more likely to be engaged in school and in other social contexts as well. In addition, an academic dimension of engagement is also described and is sometimes embedded within the cognitive component or as a separate dimension altogether. In general, the academic dimension refers to a student having appropriate strategies for learning that are needed to thrive academically (Griffiths et al., 2009). As shown in Fig. 2, student engagement is relevant across socio-ecological contexts, and efforts should be made to help youth develop the ability to sustain positive engagement influences across the life-span.

Effects of High and Low Student Engagement

Positive or high levels of student engagement are linked to better overall physical and mental well-being (Griffiths et al., 2009). More engaged students tend to report higher rates of life satisfaction and live better quality lives (Lewis, Huebner, Malone, & Valois, 2011). Student engagement is negatively related to school problems and low grade point averages (Jennings, 2003). Students who have more positive social connections also tend to experience negative developmental outcomes less frequently (Maddox & Prinz, 2003). Highly engaged students are at reduced risk of experiencing depression, anxiety, and substance abuse compared to less engaged students (Bond et al., 2007). Moreover, engagement is also negatively associated with antisocial, delinquent, and risky behaviors (social withdrawal, fighting, suspensions, substance use, unprotected sex) (Carter, McGee, Taylor, & Williams, 2007). Overall, students who are less engaged in school



School and Student Engagement, Fig. 2 Relations among student engagement contexts and their relations with short-term and long-term student developmental outcomes

not only are at a greater risk of experiencing academic failure but also show higher rates of credit incompleteness and dropping out of school (Appleton et al., 2008). Positive linkages include increased academic achievement and graduation rates, safer schools, and healthier life choices overall (Stewart, 2008). Importantly, students who exhibit high levels of engagement and feel supported and accepted by their teachers and peers have decreased chances of bullying others or being the target of victimization (Li, Doyle-Lynch, Kalvin, Liu, & Lerner, 2011).

Facilitators of Student Engagement

What facilitates student engagement? Student engagement is fostered in a variety of ways and has positive, beneficial effects for all students. Facilitators of engagement are the contextual factors that affect how strongly a student feels

engaged or connected (Appleton et al., 2008). Through social modeling and encouraging prosocial behaviors and interactions with others, healthy relationships with peers, teachers, and others can be developed. Such positive interactions allow a student to experience positive connections with others, which helps encourage a lifelong pattern of building meaningful interpersonal connections. In addition, school discipline practices facilitate engagement when policies strive to create positive school climates (Griffiths et al., 2009). Teaching styles, parental supervision of schoolwork, and peer attitudes toward academic accomplishment are a few other ways that student engagement is enhanced (Appleton et al.). Student engagement can also be a target of intervention for at-risk students who show signs of disengagement through programs that focus on developing and enhancing positive social and emotional skills.

Cross-References

- ▶ [At-risk Children](#)
- ▶ [Attachment](#)
- ▶ [Motivation](#)

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School Attendance

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Synonyms

[School nonattendance](#); [Truancy](#)

Definition

School attendance refers to “regular attendance at any regular accredited educational institution or program, public or private, for organized learning at any level of education” (United Nations, 2008).

Description

School systems devote substantial resources to tracking and reporting school attendance, and many schools have procedures and technology for contacting parents when their child is absent. In many jurisdictions, monitoring school attendance is associated with compulsory school attendance laws and mandated accountability requirements (Leyba & Massat, 2009). School attendance is a key element of a broader

construct, student engagement, which is comprised of social, institutional, and intellectual engagement (Willms, Friesen & Milton, 2009). In the widely used monitoring system, *Tell Them From Me*, school attendance is an indicator that students value schooling outcomes and are willing to meet the formal requirements of schooling (The Learning Bar, 2011); it indicates a disposition toward learning, working with others, and functioning in a social institution (Willms, 2003). School attendance is related to ► [achievement](#) and attainment as it directly affects learning time, but it is also an important outcome in its own right. School attendance is one of the best markers of school completion; students that drop out of school tend to have a pattern of nonattendance early in their school career which increases during the middle and secondary school years (Rumberger, 1995).

The literature places greater emphasis on school *nonattendance* than on attendance. Nonattendance includes both authorized absence, as is the case when children are ill, and unauthorized absence, or truancy, when children miss school without permission. This makes the measurement of school attendance problematic, as school jurisdictions differ in their views as to what constitutes legitimate parent sanction and vary in the extent to which authorized absence is counted. For example, some parents allow their child to be absent to study for exams, complete homework assignments, or participate in family vacations. The measurement of school attendance and nonattendance is further complicated by whether it should include student absence from individual classes or being late for classes.

The causes of school nonattendance are complex and include a range of individual, peer, family, school, and community factors (Reid, 2008). A small percentage of children exhibit intense anxiety or other psychological problems, often characterized as “school refusal” or “school phobia” (Pelligrini, 2007). In contrast, students considered “truant” commonly have low literacy skills, often stemming from learning problems that can be detected during the preschool period, and exhibit conduct disorders. Truancy is related to family socioeconomic factors including family

structure (Willms, 2003), leading some analysts to attribute the problem to family dysfunction, poor parenting styles, and a lack of parental involvement in their child’s education. However, the school’s role is increasingly being recognized as important. Schools vary in their attendance rates, even after taking account of students’ family backgrounds, and some of this variation is associated with quality of instruction, teacher-student relations, classroom disciplinary climate, teachers’ expectations for success, ► [bullying](#), and school safety (The Learning Bar, 2011; Willms, 2003).

Discussion

School attendance is a core factor of student engagement at school. Students who are regularly absent from school at an early age are at risk of a pattern of disengagement that culminates in dropping out of school. Interventions aimed at increasing school attendance stress the importance of monitoring engagement, intervening early, building trusting relationships between students and teachers, increasing students’ literacy skills, tackling issues concerning bullying and school safety, and establishing effective family-school partnerships (Epstein, & Sheldon, 2002; Sinclair, Christenson, Lehr & Reschly Anderson 2003; Sutphen, Ford & Flaherty 2010).

Cross-References

- [Achievement](#)
- [Bullying](#)
- [Parenting Style](#)
- [School Safety](#)
- [Truancy](#)

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School Climate

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Definition

School climate is a general construct used to define a child's subjective school experience across numerous dimensions including physical, social, and emotional. These dimensions are shaped by various areas of school life including relationships, teaching and learning, environment, and safety.

This school experience can affect a child's ► **life satisfaction**. Life satisfaction, sometimes

referred to as perceived ► **quality of life** (PQOL, Huebner et al., 2004), has been defined as an individual's perception of the "quality of one's own existence" (Post, Van Dijk, Van Asbeck, & Schrijvers, 1998, p. 23).

Description

Children spend much of their waking hours in the school environment. Because of this, it is important that their school experience is positive. In order to determine how a student is influenced by his or her school environment, researchers have examined, and continue to examine, a construct known as *school climate*. A positive school climate "...fosters youth development and learning necessary for a productive, contributive, and satisfying life in a democratic society" (Cohen, McCabe, Michelli, & Pickeral, 2009, p. 182). As such, school climate is an important construct to define, examine, and measure in students.

Although researchers have examined the construct of ► **school climate** for more than 100 years, discrepancies in how this construct is defined have been noted. For example, Zullig, Koopman, Patton, and Ubbes (2010) note that definitions range from objective to subjective as well as measuring affect and context. Zullig et al. (2010) also highlighted that with the US Healthy People 2010 (U.S. Department of Health and Human Services, 2000) goals, as well as the 2020 goals (U.S. Department of Health and Human Services, 2010) for a healthy school environment, school climate becomes even more difficult to define. This difficulty in defining school climate may arise because a healthy school environment, as defined by the Healthy People goals, is related to the actual physical environment of a school (including mold and ventilation issues, as well as indoor air quality).

In addition, the difficulties in defining school climate may emanate from its history. Its beginnings can be traced as far back as the early twentieth century, where Perry (1908) was the first to clearly delineate how a school's climate could affect student learning, though more rigorous studies of school climate began in the 1950s

after the research regarding organizational climate began emerging (Zullig et al., 2010).

Although broad consensus of a definition of school climate is difficult, what is clear is that researchers have moved away from a more physical environment focus (Anderson, 1982) to viewing school climate as a measure of subjective school experience (Cohen, 2006), including feelings of safety (e.g., order and rules and social and emotional safety; Cohen et al., 2009). Specifically, school climate is “. . .based on patterns of people’s experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (Cohen et al., p. 182).

Measuring school climate can be challenging since no clear definition has been established, other than its subjective nature. However, Zullig, Koopman, and Huebner (2009) and Zullig et al. (2010) have proposed an eight-factor measure of school climate that encompasses (1) positive student-teacher relationships, (2) school connectedness, (3) academic support, (4) order and discipline, (5) school physical environment, (6) school social environment, (7) perceived exclusion/privilege, and (8) academic satisfaction. These eight areas represent what researchers nearly universally agree and comprise essential areas of school climate: safety, relationships, instruction and learning, and institutional environment (Cohen et al., 2009). Each of these four areas is briefly elaborated upon below.

Safety. Safety within a school encompasses both physical and socio-emotional safety and has been shown to promote, or complicate, a student’s motivation to learn (Goodenow & Grady, 1993) and ultimately academic achievement (Sherblom, Marshall, & Sherblom, 2006). Physical safety includes having a clear plan for dealing with violence and everyone in the school feeling physically safe, while socio-emotional safety refers to teaching conflict resolution and the manner with which aggressive behavior, such as bullying, is viewed and subsequently addressed. Fortunately, most students are not exposed to physical violence (Mayer & Furlong, 2010), but this is counterbalanced by high exposure to bullying behavior in schools.

Bullying behavior is a public health concern, and studies have implicated aggressive behavior as problematic for both adolescent victims and perpetrators (Boulton, Trueman, & Murray, 2008; Hawker & Boulton, 2000; Roland, 2002) where psychological well-being and pro-social skills are negatively impacted.

Relationships. Relationships within a school are also important for school climate and generally include respect for diversity, school community and collaboration, morale, and how connected students feel to their school. Of all the various relationships that involve students, none are more important to academic success than teacher-student relationships (Doll et al., 2009). This is likely because students find emotional security with their teachers and internalize teachers’ values as their own (Pianta, 1999), which spurs student engagement and appropriate behavior. Similar to teacher-student relationships, peer relationships spur participation and interest in learning, enhance psychological well-being, and bolster academic success (Wentzel & Caldwell, 1997; Wentzel & Watkins, 2002). School connectedness has also been shown to be strongly related to student academic and health outcomes (McNeely, Nonemaker, & Blum, 2002) and risk behavior (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Karcher, 2002; Kirby, 2001). The United States Centers for Disease Control and Prevention (2009) defines school connectedness as “the belief by students that adults and peers in the school care about their learning as well as about them as individuals.” Greater school attachment, which ultimately improves teacher-student and peer relationships, is fostered by a positive school climate (Blum, McNeely, & Rinehart, 2002; Goodenow & Grady, 1993).

Instruction and Learning. Quality and creativity of instruction; social, emotional, and ethical learning; professional development; and leadership all comprise effective instruction and learning. Western educators have sometimes undervalued creative students because they associate creative students with impulsive and disruptive behavior and nonconformity (Dawson, 1997; Scott, 1999) and therefore fail to see the

importance and significance of fostering creative classroom environments. However, when creativity is defined and structured through the lens of “novel and personally meaningful interpretations of experiences, actions, and events” as suggested by Beghetto and Kaufman (2007), research shows that supportive teacher feedback cultivates student confidence in the translation of creativity to real-world innovations (Beghetto, 2006). The encouragement of active, creative, and collaborative learning through real-world projects then promotes civic education owing to their applied nature and encourages student interaction (Ghaith, 2003; Wentzel & Watkins, 2002). Furthermore, evidence-based social and emotional learning programs have resulted in notable gains in achievement tests as well as increasing an academic emphasis within students (Battistich, Schaps, & Wilson, 2004; Bradshaw, Koth, Thornton, & Leaf, 2009; Elias & Haynes, 2008). Finally, research demonstrates that when teachers feel supported by their principals and peers, they are more committed to their profession (Singh & Billingsley, 1998). This implies that school leadership influences school climate.

Institutional Environment. The fourth component of school climate is institutional environment or the environmental-structural dimension. This dimension includes aspects of the physical environment such as cleanliness of the school and appropriate space and materials conducive to learning. In a mixed-methods study, one of the main contributing factors to students’ higher levels of satisfaction with school was the physical school environment. Students reported that cleanliness and spacious rooms were necessary for a comfortable physical school environment (Mok & Flynn, 1997). However, other environmental aspects that may be important could be classroom layout, curricular offerings, activity schedules (Conroy & Fox, 1994), and even smaller school size (McNeely et al., 2002). While downsizing schools is not feasible in many circumstances, the creation of smaller learning communities as an alternative has also been shown to enhance student learning environments (Cotton, 2001).

Relationship Between School Climate and PQOL

Perceived QOL indicators, such as school satisfaction, are usually differentiated from more objectively conceptualized indicators such as school climate. School-based subjective or perceived indicators involve measures of individuals’ *overall* evaluations of school experiences as determined by the students’ themselves. On the other hand, objective indicators refer to aggregated measures of observable, quantifiable, and external school domains (e.g., safe school location, positive student-teacher relationships, school curricula), which are generally determined by experts (e.g., educational professionals). Thus, school satisfaction measures, in effect, allow students to respond based on their own, unique criteria (e.g., allowing for individual differences with respect to the inclusion and/or weighting of various domains), whereas school climate measures require students to respond to items reflecting the predetermined domains of the (particular) scale developer(s).

Research examining environmental factors associated with adolescents’ satisfaction with their schooling experience has revealed that school climate indicators (e.g., perceived social support, a psychologically safe and caring classroom, and student-teacher relationships) are crucial correlates (Baker, 1998; Ito & Smith, 2006; Natvig, Albrektsen, & Qvarnstrom, 2003; Vieno, Santinello, Pastore, & Perkins, 2007; Zullig, Huebner, & Patton, 2011). Specifically, Zullig et al. (2011) found that most of the observed differences in school satisfaction reports were driven primarily by the domains of academic support, positive student-teacher relationships, school connectedness, order and discipline, and academic satisfaction, respectively. Feelings of safety are also related to children’s PQOL. For example, Valois, Zullig, Huebner, and Drane (2001) showed that students who felt unsafe at school reported lower levels of life satisfaction than students who felt safe. Further, a review of literature by Berthold and Hoover (2000) revealed that the sequelae of bullying (both verbal and physical) greatly affect students’ school satisfaction.

Noting similarities, Ito and Smith (2006) demonstrated that a positive school climate where students feel secure, respected, nurtured, and supported was the single best predictor of school satisfaction for both US and Japanese adolescents. Cohesive relationships in general, but especially among teachers and students, composed the second most important predictor of school satisfaction in this study. For US adolescents in particular, educational strategies that emphasized high expectations and support have been shown to lead to increased school satisfaction (Ito & Smith). When quality of instruction is high, student learning and satisfaction with school are increased (Baker, 1999). Huebner, Funk, and Gilman (2000) also found that high levels of life satisfaction were correlated with positive relationships with parents and positive interpersonal relationships. In contrast, a school's physical and social environment and perceived favoritism (perceived exclusion/privilege) appeared to account for less variance in school satisfaction reports (Zullig et al., 2010).

Discussion

While each of these, the previously noted areas, have been determined to explain much of the variance of school climate, valid arguments can be made to support the specific assessments of *student engagement* and *parental involvement* in future models. For instance, the moderate amount of total variance explained by the combination of the eight SCM domains (34 %) by Zullig et al. (2010) suggests that individual differences in students' school satisfaction levels are not completely captured by these school climate domains.

Student engagement, as proposed by Ladd, Buhs, and Seid (2000), encompasses school liking as the antecedent to cooperative participation and independent participation (student engagement), which leads to increased student achievement. In this longitudinal study of kindergarten students, Ladd et al. (2000) found that children who liked school, as a consequence of greater cooperative and independent participation, improved their academic achievement. Moreover, the relationships between school liking and academic

achievement that arise from student engagement are independent from other factors such as the child's family or maturity (Ladd et al.).

In addition to student engagement, it may also be important to measure parental involvement, which can be viewed as a subset of school connectedness (Cohen et al., 2009). That is, to say, in order to improve overall school climate, parents must be an integral component for the process of school improvement. As Cohen et al. state, "By definition, school climate...is necessarily a community-wide effort: students, *parents* (italicized for added emphasis), and school personnel learning and working together" (p. 205). Measures of school climate incorporate student perceptions as well as school personnel, but few have included parental involvement.

School climate reports appear to influence not only learning but also indicators of PQOL. In the USA, the No Child Left Behind Act of 2001 is aimed at decreasing known achievement gaps for disadvantaged students, increasing school safety, and replicating educational methods known to produce effective outcomes for students. Therefore, it is in the best interest of schools to ensure that students continue to achieve at a high level. However, student achievement is not only a product of classroom instruction. Rather, instruction is one factor in high achievement, along with other factors such as interpersonal relationships, order within the school, and students' willingness to learn (Hoy & Hannum, 1997). In many studies, these nonacademic factors have been lumped into a term commonly referred to as school climate. Although strides have been made in this area, it is clear that there is additional unaccounted for variance in current school climate measures. Because these nonacademic factors are important for students' overall learning and QOL, further research is needed.

Cross-References

- ▶ [Life Satisfaction](#)
- ▶ [Quality of Life](#)
- ▶ [School Connectedness/Bonding](#)

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School Connectedness/Bonding

► School and Student Engagement

School Dropout

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Synonyms

High school dropout; Incompleter; Non-completer

Definition

Dropout is a term that refers to the premature termination of an educational program. The term has primarily been applied to high school non-completers; however, the changing global economy has precipitated a shift upward to post-secondary education and those students who

commence but do not complete this level of education. There are number of statistics that are used to describe the dropout phenomenon, such as cohort (i.e., following the same population of students over time), status (e.g., the percent of students in a given age range who are dropouts or completers), and event (the number or percent of students who drop out in an academic year). Variation is also present across researchers and schools in definitions and methods for determining which students are, in fact, dropouts.

Description

Educators and policy makers have been concerned about adolescents leaving high schools prematurely for many years. The consequences for students who drop out are well articulated: higher rates of unemployment, a greater likelihood of living in poverty, being incarcerated, relying on government assistance programs, experiencing health problems, and so forth (Christenson, Sinclair, Lehr, & Hurley, 2000). Economists frequently calculate the costs of dropouts to society through lost taxes, incarceration, and government assistance programs. These statistics are sobering. For example, estimates suggest that each dropout costs the USA approximately \$260,000 over the course of their lifetime (Rouse, 2005) or that each individual who graduates from high school, rather than dropping out, could save states an average of \$13,706 in Medicaid for uninsured persons in his/her lifetime, a potential savings of 17 billion (Amos, 2008).

Recently high school dropout and post-secondary options have been imbued with increased urgency. The trend of high-stakes achievement testing and accountability includes tracking dropout and on-time completion rates, making dropout a high-stakes issue for educators, schools, and districts. This increased urgency is also due to the desire to have a skilled workforce in order to compete in an increasingly technological and global economy (Kirsh, Braun, Yamamoto, & Sum, 2007). Thus, current economic trends suggest that the employment opportunities for individuals without sufficient skills, such as

those presumed to be encapsulated with a high school diploma, will be scarce, making it even more difficult for dropouts to support themselves and their families. Hence, education relates significantly to the quality of life individuals are able to attain.

Research has identified dozens of predictors of dropout and completion and various developmental pathways to dropout. A predictor may be characterized as to whether it is primarily a student, family, school, or community variable and according to its amenability to intervention. These categorizations are useful for understanding the array of variables associated with this phenomenon, but it is recognized that there are complex interactions among individuals and their environments over time. Indeed, a comprehensive review of more than 200 predictive studies of dropout found that no single factor accounts for students' decisions to leave school prematurely (Rumberger & Lim, 2008). In general, students who are of low socioeconomic status, are members of minority racial/ethnic groups, have a high incidence disability, are recent immigrants or are learning the dominant language of the area in which they live as a second or third language, or have had a parent or sibling who dropped out of school are at greater risk for dropout themselves. Student alcohol or drug use, teen pregnancy, and the need to work to support families are also risk factors. Some variables are inherent to students and families (e.g., race/ethnicity) or are impractical targets of intervention services (e.g., socioeconomic status, parental levels of educational attainment). Demographic or status variables, such as race or parental education, may be useful for identifying groups of students who are at increased risk of dropout; however, many students who have these demographic risk factors successfully complete school. The alterable variables associated with dropout and completion, such as attendance, homework completion, parental monitoring, extracurricular participation, and behavior, among others, guide the identification of those who are most in need of interventions and provide ready links to appropriate targets for intervention (Reschly & Christenson, 2006). Examples of

alterable variables associated with dropout and completion may be found below:

- *Student*: educational expectations, grade retention, poor academic performance, locus of control, attendance, and behavior
- *Family*: educational expectations, support for learning and effort, and parental monitoring
- *School*: discipline policies, teacher-student ratio, school size, curricula, and relationship climate (Reschly & Christenson, 2006)

Several developmental pathways to dropout or completion have been described. Some of these originate in early childhood and family experiences, while others focus on student behavior, achievement, and school experiences. Developmental pathways include early school difficulties, childhood exposure to drug use, and family stress at a young age (Garnier, Stein, & Jacobs, 1997). Others have found that it is possible to predict soon after matriculation to formal schooling which students will later drop out based on things like academic achievement, attendance, and attachment to school (e.g., Alexander, Entwisle, & Horsey, 1997). The most prominent theory of dropout and completion, the Participation-Identification Model (Finn, 1989), also points to the importance of early school experiences. Finn postulated that when many students commence formal schooling, they have the skills, attitudes, and behaviors needed for successful participation. When students are successful, they identify with school and, in turn, continue to participate, thereby creating a cycle toward completion. Students who later drop out are different in that they may not have the skills and attitudes necessary to successfully participate. Over time, as the demands of schooling become more intense and there are increased opportunities for extracurricular participation, these students are less likely to participate or be successful and, relatedly, have reductions in their identification and belonging, eventually culminating in dropout (Finn, 1989). Thus, although dropout is an event that occurs in adolescence, the roots, or process, of dropping out are thought to begin early in students' lives or school experiences. Dropout is a process of disengaging from school over several years (Rumberger & Lim, 2008).

Dropout and completion are hot topics within the field of education, among legislating bodies, and mainstream press outlets. Despite this interest and the many articles that have been on this topic, until recently very little was known about effective intervention. Recent efforts to delineate evidence-based interventions have begun to shed light on this topic. Therefore, many intervention recommendations are tentative and warrant further evaluation. The most promising interventions are those that are individualized, comprehensive, and long term and address student engagement (comprised of investment, identification, behavior) at school and with learning (Christenson & Thurlow, 2004). In addition, although the most obvious symptoms of pending dropout (course failures, skipping classes, disciplinary exclusions from schooling) may become apparent in high school, precursors may be seen much earlier. It is generally thought that early interventions – in elementary and middle school – for attendance, academic, and behavioral difficulties are more effective than those that begin when problems are already severe and dropout is imminent (Reschly & Christenson, 2006). Other recommendations are drawn from research that showed, for example, that high-quality early education (prior to the commencement of formal public schooling) for students who are considered to be at risk for poor school outcomes has been found to be associated with increased rates of completion, as have intensive early reading interventions (see Reschly, 2010 for a review).

Discussion

Concern over the premature departure of adolescents from schools is not new. Dropping out of high school is associated with a host of negative outcomes for the dropouts and their families across a number of domains, including personal health, employment, and freedom. The importance of education for economic security appears to be increasing. Economic projections regarding the need for an increasingly skilled workforce have heightened concern and interest in promoting high school completion, as well as post-secondary attendance and persistence. Despite the popularity of this topic, definitive statements

regarding effective prevention and intervention practices and programs cannot yet be made. Rather, educators and others are encouraged to draw from promising practices and the recommendations of rigorous scientific review panels (such as the What Works Clearinghouse in the Institute for Education Sciences, US Department of Education) for selected programs but are further encouraged to evaluate implementation results within unique settings and populations.

Cross-References

- ▶ [At-Risk Children](#)
- ▶ [Education](#)
- ▶ [School Attendance](#)
- ▶ [School Climate](#)
- ▶ [School Readiness](#)
- ▶ [School and Student Engagement](#)

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School Engagement

- ▶ [School and Student Engagement](#)

School Enrollment

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Synonyms

[Mass education measures](#); [Mass schooling](#)

Definition

Access to schooling in a population can be measured as school enrollment, which is simply a count of the number of children who have registered with all schools in a nation. As a related statistical indicator, the *school enrollment rate* is defined as the ratio of children of official school age who are enrolled in school to the population of the corresponding official school age. Official school ages are defined by UNESCO in the International Standard Classification of Education (UNESCO, 1997).

National school enrollment rates are generally collected by the Ministry of Education in annual school censuses and compiled in education monitoring information systems. School enrollment rates form the basis for a variety of other educational indicators, such as the mean years of schooling and expected years of schooling, which measure the duration an individual is enrolled in school. In turn, these indicators are used to calculate the widely disseminated Human Development Index (HDI), an indicator combining indicators of life expectancy, educational attainment, and income used to judge social development of nations (UNDP, 1999).

The underlying phenomenon of expanding school enrollment is a result of the accumulated effects of a social revolution that over the past 150 years has generated worldwide mass education – the normative assumption that schooling is for all children and youth for increasingly more years of education. In turn, expanding mass education has been shown to have a number of positive effects on the quality of life of individuals and populations.

Description

Increasing School Enrollments as a Focus of International Initiatives

Improving school enrollment rates (and other educational indicators of access to schooling) has been the focus of the international Education for All (EFA) initiative (UNESCO, 2000). In 1990, representatives of the international community launched EFA in an effort to expand and improve learning opportunities, with a focus on gender equality. This initiative, and the subsequent 2000 forum, stressed education as a human right and advocated for increasing school enrollments as a major factor in poverty elimination and sustainable development. The 2000 report shows that primary school enrollments worldwide had increased by 82 million pupils since 1990, with 44 million more girls in school in 1998 than in 1990. At the end of the 1990s, developing countries on average had achieved net enrollment rates of around 80% ; and repetition and dropout rates had declined.

Gender equality in primary enrollment in many regions had improved, with the critical exception of sub-Saharan Africa. According to the 2011 EFA Global Monitoring Report, from 1999 to 2008, an additional 52 million children enrolled in primary school. The number of children out of school was halved in South and West Asia. In sub-Saharan Africa, enrollment ratios rose by one-third despite a large increase in the primary school age population. Gender parity in primary enrollment has improved significantly in the regions that started the decade with the greatest gender gaps (UNESCO, 2011). Currently, the UNESCO Institute for Statistics, established in 1999, is the leading source for school enrollment statistics.

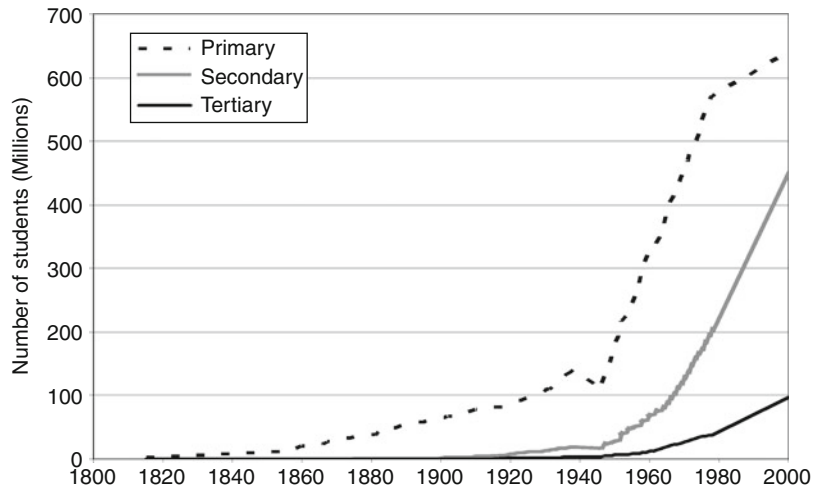
The Growth in School Enrollments and the Development of a Schooled Society

Enrollments in school grew in part because of an ideology embedded within the educational institution: all people should have access to formal education, and this in turn benefits society. This belief has supported significant growth in the participation in formal education in all parts of the world, and at all levels of education, from preprimary to tertiary to adult education. In premodern, traditional human society before the profound changes of industrialization, urbanization, and political consolidation into nations intensified in the nineteenth century, there was no mass education in a form that would be recognized today. As shown in Fig. 1, which graphs the total worldwide number of students enrolled in the primary, secondary, and tertiary, schooling over the past 200 years is a relatively recent social phenomenon that once started rapidly became significant and sustained. Demographically, going to school and attending for a considerable number of years is a relatively new and massive change in behavior of children and youth, and supporting this endeavor is a new role for their families, communities, and nations.

Note also in Fig. 1 that there were relatively small numbers of children attending primary schooling throughout the nineteenth century, but over the first few decades of the twentieth century, growth in primary enrollment takes off and

School Enrollment,

Fig. 1 Number of students enrolled in primary, secondary, and higher education worldwide



by 1940 bursts into a logarithmic climb. Then, as primary schooling reaches large numbers of children 20 years later, enrollment in secondary schooling turns sharply up in the 1960s. And in the early 1970s, enrollment in higher education begins to grow. New advanced sectors of education are spurred on by the growth of the subsequent sector, so much so that sociologists have named this phenomenon the “worldwide education revolution.”

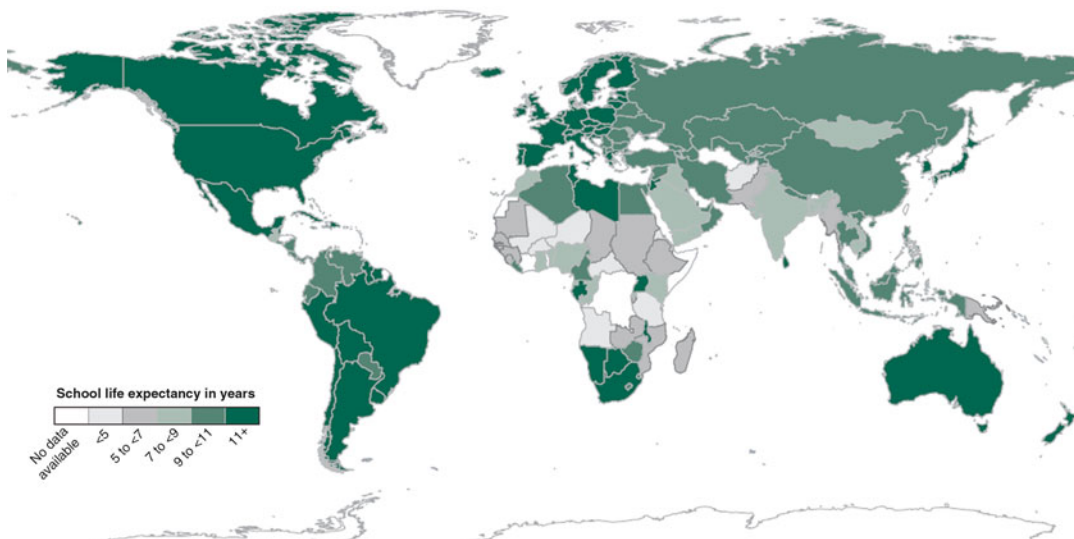
This is not just a function of population growth for the percent of school-aged children and youth attending schooling has grown steadily, with only the most extreme social and political events retarding growth at certain times in some nations (e.g., Baker, Koehler, & Stock, 2007). This step-wise growth in school enrollments, increasingly justified as preparing all children for the adult world, was first undertaken in wealthier nations, but since the middle of the twentieth century has spread globally (Benavot & Riddle, 1988; Fuller & Robinson, 1992).

Similarly, the average length of individuals’ school attainment continues to rise worldwide. In wealthy and middle-income nations, average educational attainment across the entire population is now slightly over 12 years of schooling, and tellingly a large group of lower middle- and low-income nations now have expected attainment of over 9 years (UNESCO, 2001). The multilateral campaign to bring basic schooling

to all children worldwide continues on with some major challenges to full implementation, but with wide political support nevertheless. As shown in the world map of average length of school careers in Fig. 2, the world is rapidly becoming a schooled society.

The education revolution did not happen overnight, but it did unfold at striking speed compared with how long most human institutions take to develop. It is a revolution that began with younger children in the middle of the nineteenth century in what are now referred to as “Western nations” – the nations of Western and Northern Europe and their wealthier former colonies. By the last two decades of the nineteenth century, nations in Western Europe, and Australia, Canada, and, of course, the United States were enrolling 50–70% of all children aged 5–14 (Benavot & Riddle, 1988). And although older forms of education centered on religion indoctrination of children of elite castes had been established in Asian, North African, Mayan, Aztec, and Incan societies well before the nineteenth century, as each of these regions were touched by Western nations, through peaceful contact and forcible colonialization alike, their earlier indigenous systems of education gave way to mass education (Craig, 1981).

The overarching idea propelling this sea change in people’s attitude and behavior toward



School Enrollment, Fig. 2 Average school life expectancy in years for primary to secondary education by country, 2001 (Source: UNESCO Institute for Statistics, *Global Education Digest* 2004)

formal education is that schooling is useful, appropriate, and valuable enough to require all children to attend. Ideas about education create the belief that it is good that one's own children are schooled, as well as the belief that it is also good if everyone else's children are schooled too.

The chief educational phenomenon produced by the education revolution is *mass education*, a form of schooling that sends almost all children and youth to school, where they learn very similar curricula and progress through a set of ordered grades to various level of attainment marked by the awarding of publicly acknowledged degrees. While thoroughly taken for granted now, at its inception, mass schooling was a major change in the thinking about children and their capabilities, a line of thought that has done nothing less than transform fundamental notions of what society is and what it can do. This new thinking about the function and role of education in society led to the building of school systems of massive proportions throughout the world. Where the education revolution started, how it spread, and the fact that it continues on today unabated illustrates the dimensions of its impact on most everyone's lives (Baker, in-print).

Sociological Research on Worldwide Historical Growth in School Enrollments

Comparisons and statistical modeling of school enrollment rates globally have enabled researchers to document and analyze educational expansion as a sociopolitical phenomenon. Meyer, Ramirez, Rubinson, and Boli-Bennett (1977) began to show that cross-national differences in levels of economic, political, and social development do not adequately explain the universal expansion of national educational systems. Building on this, Benavot and Riddle (1988) report comparable estimates of school enrollment rates in primary schools for the period 1870–1940 for 126 nations and colonies. At that time, reliable estimates of enrollment rates had not been systematically compiled. Using enrollment rates as a measure of the expansion of formal education, Benavot and Riddle found the expansion of primary education was much more uneven, tentative, and varied in the 1870–1940 period than in the years following World War II. Nevertheless, the fact that enrollment data have been codified and circulated at highly collective levels indicated that the beginnings of mass education systems were widespread in almost all world regions in the late nineteenth and early twentieth century (Boli, Ramirez, & Meyer, 1985). Between 1950

and 1970, education expanded everywhere independent of the constraints and stimuli that economic, political, and social structures provided in previous times. A related analysis of recent growing access to higher education worldwide attributes the universal increase in education to nations embracing cultural qualities (e.g., science, rational policy making, human capital model of society) of the contemporary world system (Schofer & Meyer, 2005).

Over the past 150 years, access to primary, secondary, and tertiary education has been so extensive that the aspiration to achieve universal educational enrollment up through higher education is a normative part of political and policy objectives across a spectrum of political parties in virtually all national societies and is often written into constitutions (Boli-Bennett & Meyer, 1978), national laws, and policies (Fiala & Audri, 1987, In Meyer, Ramirez, & Soysal, 1992).

Mass Education and the Quality of Life

With great inclusion of people into schooling, widespread education in postindustrial society creates central cultural ideas about new types of knowledge, new types of experts, new definitions of personal success and failure, a new workplace and conception of jobs, new ways to make profitable firms, new ways to structure formal organizations, new definitions of intelligence and human talent, new styles of parenting, widespread political mobilization, new dimensions of mass religion, and more (Baker, in-print). Some of these changes are thought of as positive and others as disconcerting, but all are major sociological transformations. At the same time, educational achievement and degree attainment have come to dominate the very essence of social stratification in society including social mobility of individuals, delegitimizing past forms of status attainment. The global impact of formal education on postindustrial society has been so extensive that it can be argued that mass education is a founding *social revolution of modernity with intensifying influence on the postmodern world*.

While there is intellectual debate over whether or not education revolution has been a general plus for society, there are some clear indications

that in many ways it has improved the quality of life for many people worldwide. For example, there is emerging evidence that mass education is responsible for considerable economic growth in national economies. Before human capital theory, education was not included in economics, and even after this theory brought education into the theoretical mix, it was mostly in a limited fashion. But much of economic development of the USA has been a spiraling interplay between rising human capital among workers, caused by mass education, and technological change (Goldin & Katz, 1998). Additionally, there is much evidence to indicate that the attainment of formal education, *ceteris paribus*, positively influences health risk assessment, healthy decision-making and behavior, better nutrition, effective microeconomic skills, lower and later fertility, and lower criminal activity.

Perhaps the clearest example is education's effect on the improvement in the quality of life through improved health and longevity. Extensive epidemiological and demographic research shows that there are significant associations between formal educational attainment and individual health outcomes and risks such as mortality, smoking, drug abuse, and accidents, as well as the contraction of many diseases. The vast majority of these reports conclude that more educated individuals are healthier and live longer. This association is so prevalent that after an extensive survey of the health literature, Mirowsky and Ross (2003) conclude that education has an enduring, consistent, and growing effect on health.

Increasingly new demographic research finds that the dimensions of the worldwide educational revolution have had positive influence on health transitions in developed and developing nations (e.g., Baker, Leon, & Collins, 2010; Baker, Leon, Greenaway, Collins, & Movit, 2011). Through a variety of research methodologies, new multidisciplinary research suggests that education enhances general cognitive skills that lead to better risk assessment, decision-making, and enactment of effective disease prevention strategies (e.g., Peters, Baker, Deickmann, Leon, & Collins, 2010).

Cross-References

► [Human Development Index](#)

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School Experiences

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Synonyms

[School activities](#); [School satisfaction](#)

Definition

School experiences refer to an individual’s perceived reactions to learning, social, and contextual situations, all of which shape their attitudes about their schooling and the learning process.

Description

School experiences can significantly affect the quality of life of children and youth. To a large

extent, the quality of life experienced by students in schools is dependent on the degree to which school personnel and peers interact with them in ways that are perceived as positive, warm, and welcoming. Psychologically healthy schools promote children's quality of life by creating school experiences in which students are enriched not only educationally but also behaviorally, socially, and emotionally (Baker & Maupin, 2009). Three interrelated variables of particular importance in promoting positive school experiences include school climate, school satisfaction, and school connectedness.

School climate refers to the environmental contexts in which students and school personnel interact. A positive school climate is one in which students feel safe and secure both physically and psychologically, where a strong emphasis is placed on the importance of student engagement, and where the relationships between students and school personnel are respectful and mutually reinforcing. A positive school climate is also highly correlated with students' satisfaction with school (Miller, 2011) and can make an important contribution to student quality of life.

School satisfaction refers to students' subjective, cognitive appraisal of the quality of their school life. School satisfaction has consistently been found to be associated with warm and emotionally supportive relationships between students and teachers as well as positive peer relationships among students. School environments that are perceived by students to be supportive, positive, and free of harassment and violence are strongly associated with higher levels of school satisfaction (Baker & Maupin, 2009). Consequently, such schools foster optimal conditions for learning in its broadest sense (i.e., academically, behaviorally, socially, and emotionally) and promote quality of life among students.

A concept that is closely related to school satisfaction is school connectedness, defined as the extent to which students perceive themselves to be personally accepted, included, respected, and supported by others in the school environment. Referred to by many other names as well

(e.g., school engagement, school bonding, school attachment), there is abundant evidence that school connectedness is an essential variable for promoting positive academic, behavioral, emotional, and social outcomes for students (Griffiths, Sharkey & Furlong, 2009) and their quality of life in school. School connectedness is also being increasingly recognized as an important contributor to student mental health (Christenson et al., 2008). For example, in a large sample of over 2,000 students, school connectedness was found to be a significant protective factor against the development of depression and other mental health problems (Shochet, Dadds, Ham, & Montague, 2006).

Using Positive School Experiences to Promote Quality of Life

There are a number of interventions designed to promote student quality of life through positive school experiences. For example, Check and Connect, which involves "checking in" and "connecting" with students through the use of a consistent and ongoing relationship with a trusted adult, has been shown to decrease student dropout rates in high school (Jimerson, Reschly, & Hess, 2008). Structured extracurricular activities, including student participation in team sports, school-sponsored plays, and school bands, can also produce greater connectedness and engagement with school and promote student quality of life (Gilman, Meyers, & Perez, 2004; Miller, Gilman, & Martens, 2008). The effective use of academic and behavioral interventions and supports can also be useful in this process. For example, antecedent strategies such as providing students with choices and making curricular modifications can prevent problems from occurring and promote student engagement (Kern & Clemens, 2007). Providing students with a strong foundation in basic academic skills while simultaneously providing a broader array of curricular options, instructional strategies, and evaluation procedures can also promote greater school satisfaction and quality of life (Suldo, Huebner, Friedrich, & Gilman, 2009).

Research has shown that there are numerous strategies for facilitating more positive school experiences and promoting students' quality of life. One simple and practical strategy is to increase the frequency of positive interactions students have with school personnel. Although there initially is a high ratio of positive-to-negative interactions between students and teachers during the early elementary years (e.g., at least 2:1), research indicates that this ratio decreases significantly over time, to the point where most students generally experience a high number of negative interactions with teachers and other school personnel, particularly during middle and high school (Jenson, Olympia, Farley, & Clark, 2004; Sawka-Miller & Miller, 2007). Many students also experience a decrease in their level of school satisfaction and school connectedness as they grow older, negatively impacting their quality of life in schools.

Studies have shown that teachers who were instructed and trained (through direct instruction and performance feedback) to implement and sustain a high ratio (e.g., 4:1) of positive to negative or neutral statements reported higher levels of school engagement and lower levels of disruptive behavior (Miller, George, & Fogt, 2005). Contrary to contentions that the use of praise may undermine students' self-discipline and student-teacher relations, studies have shown that the contingent use of student praise can improve relationships between students and school personnel (Sawka-Miller & Miller, 2007), promoting student quality of life in the process.

Increasing student praise is only one possible method for improving students' experiences in school. Other examples of school-based interventions that have been shown to promote student quality of life include (a) providing frequent and immediate feedback for student performance; (b) collaborating with family members and community agencies to support school-based interventions; and (c) providing student health and wellness programs (Gilman et al., 2004; Miller et al., 2008; Miller, Nickerson, & Jimerson, 2009).

Collectively, these and other interventions can potentially have a significant and highly positive effect on students in schools. School personnel

should recognize that they have the ability, through the relationships they create with students and the interventions they implement, to enhance and promote student quality of life through the quality of their school experiences. When schools are conceptualized and structured as more than simply educational facilities but as "caring communities" (Baker, Terry, Bridger, & Winsor, 1997, p. 586) designed to promote optimal student functioning across a variety of domains, the experiences students have in school can contribute significantly to their quality of life.

Cross-References

- ▶ [School Climate](#)
- ▶ [School Satisfaction](#)
- ▶ [School and Student Engagement](#)

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School Happiness

- ▶ [School Satisfaction](#)

School Life, Quality of

- ▶ [School Satisfaction](#)

School Nonattendance

- ▶ [School Attendance](#)

School Readiness

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Definition

School readiness is defined as a measurable outcome summarizing the child's development from conception to school entry age, influenced by a combination of factors. It is a state of the child's developmental health at school entry manifesting in his or her ability to take advantage of educational activities offered in the school environment in order to succeed in school and later in life (Janus & Offord, 2007). The level of school readiness exhibited by children is a reflection of the environment and experiences to which they have been exposed, generally in the span from birth to age 6, which enhances or hinders growth and learning. Early environments and quality and type of social relationships a child shares with siblings, peers, parents, teachers, and other adults contribute to the motivation, interest, and acquisition of competencies and behaviors associated with school readiness (Mashburn & Pianta, 2006).

Description

The level of school readiness exhibited by a child is the outcome of the child's own development, family history and influence, and the environment to which they are exposed. Early environmental influences can include physical neighborhoods, non-parental care experiences, peers, early schooling, and many other activities the child may have participated in.

This definition of school readiness is the most holistic and broad among many currently used both in research and practice. It reflects the systems or transactional model, which takes into account child's history of social interactions with parents, teachers, and other children

(Mashburn & Pianta, 2006). It also reflects Meisels' (1999) "social constructivist" approach, where school readiness is defined and characterized by the community and education culture. This approach refers to the child's community as an entity having a pivotal impact on shaping the child's development as well as forming the expectations which in turn define the successful transition into formal schooling.

Often, school readiness is considered to refer exclusively to the cognitive areas of development (language, communication); however, considerable evidence from longitudinal studies indicates that the social, emotional, and physical domains of child development also contribute strongly to future development and school achievement.

Disambiguation

"School readiness" should not be considered synonymous with "readiness to learn." *Readiness to learn* refers to the state of a child's neurosystem being ready to develop various skills and neuropathways based on the stimuli it will receive. A child is ready to learn immediately from birth and likely even in utero. Humans learn continuously throughout their lifetime (though the speed and ease of learning diminishes considerably with age); thus, this term has no temporal or situational framework. In contrast, *school readiness* refers very specifically to the readiness of young children to learn in a specific setting at a specific point in their lives. It refers to the ability of the young child to take advantage and to thrive in the schooling system. Moreover, the concept of *school and/or society's readiness* for children (Lewit & Baker, 1995) is an important and complementary concept to the one of children's school readiness but is not the subject of this entry.

History and Use

In its early history, school readiness was seen as an internal, within-child phenomenon, a narrow concept referring to the ability to perform specific, usually cognitive, language, or motor tasks, on demand (Janus & Offord, 2007; Meisels, 1999). Child's learning was considered

to progress through developmental stages unalterable by experience, and thus, readiness was understood as a set of particular behaviors, skills, and personality traits that were easily measured precursors to school achievement.

The concept of school readiness has been historically linked with its measurement, and thus, it is critical to consider them together. The early meaning of school readiness was restricted to the prediction of whether the child would cope with the first year of schooling (interestingly, only in cognitive terms), and therefore, the available tests were meant to measure this ability. An interviewer administered a test or assessment to a child prior to kindergarten entry, and depending on the results of that test, a child would either be permitted to enter school or the entry would be delayed. More recent investigations of the tests used widely in the 1960s and 1970s to judge whether children were "ready" to enter kindergarten or not; for example, a study of the Gesell School Readiness Test (GSRT) revealed that such a categorization was rarely reliable based on Grade 1 outcomes (Buntaine & Costenbader, 1997; Graue & Shepard, 1989).

Currently, "school readiness" assessments are utilized in many school districts. However, they are usually clearly defined as assessments of "academic readiness," diligently described in terms of their psychometric properties, and, rarely, if ever, used to screen children who are "not ready." In fact, even the proponents of these tests recommend that such screens of academic readiness be used in conjunction with other, more detailed psychoeducational evaluations of readiness (Costenbader, Rohrer, & DiFonzo, 2000; Duncan & Rafter, 2005).

In the 1990s, evidence emerging from neuroscience, as well as from comprehensive longitudinal studies, helped to emphasize the following: firstly, experiences in the early years have a major impact on brain development and thus on child's developmental status at school entry, and secondly, characteristics of the neighborhoods in which children live contribute strongly to these experiences. This understanding contributed to a fresh perspective, leading

to a consensus among educational and developmental experts that school readiness should be understood as not merely adequate cognitive skills but rather as a holistic concept involving several developmental areas such as cognitive, socio-emotional, and physical (Jimerson, Egeland, & Teo, 1999; Kagan, 1992; Love, Aber, & Brooks-Gunn, 1994; Meisels, 1999; Shonkoff, & Phillips, 2000). This new standpoint also suggested that school readiness be viewed in the context of children's environments and developmental history (Snow, 2006) and includes children as agents contributing to their own development (Rimm-Kaufman & Pianta, 2000). The holistic aspect of this view has been sanctioned for policy interpretation by the National Educational Goals Panel in the United States (1997).

In the early parts of the last decade, the view of "readiness as regulation" (Blair, 2002; Denham, 2006) has permeated developmental psychology. Numerous studies, largely based in the USA, demonstrated that healthy socio-emotional development, often measured as self-regulation, had a powerful impact on children's adjustment to school – sometimes more so than academic precursors. At the same time, a shift occurred in teachers' perception of skills relevant to success at school: the lack of regulatory aspects of readiness was of more concern to kindergarten teachers than the lack of academic skills (Rimm-Kaufman, Pianta, & Cox, 2000).

Interestingly, while healthy socio-emotional development has more recently risen to an equal level of importance as cognitive development in terms of contributing to children's school readiness, little attention has been paid to physical well-being, despite its inclusion in the National School Readiness Task Force definition of school readiness (1991). Yet there is strong evidence that suggests a child's physical well-being is an area of early development closely associated with neighborhood socioeconomic status (Cushon, Vu, Janzen, & Muhajarine, 2011), and there are renewed calls for recognition of the holistic nature of child development, which does include physical well-being (Diamond, 2010).

Thus, the concept of school readiness has expanded over time and is currently inclusive of cognitive, social, emotional, and physical domains of a child's development.

The concept of school readiness is also very closely tied with prevention and intervention. If there is a base set of competencies in several developmental areas that most experts agree contribute to school readiness, then it should be possible to identify children who are not "school ready" and help them to overcome the gaps. By the same token, since there is also a base set of risk and protective factors associated with being "school ready" or "not ready," there should be ways to prevent the gaps in school readiness from occurring in the first place. Teachers and educational systems expect research to provide practical recommendations upon which they can act to facilitate successful transition to school (Ray & Smith, 2010). As mentioned above, the intervention approach has not been entirely successful, largely due to a narrow focus on specific cognitive skills. It is the preventive approach that has a better chance of ensuring that more and more children enter the first grade with optimal developmental health.

Measurement of School Readiness

There are a number of psychometrically sound instruments available that focus on the measurement of "academic readiness"; however, few embrace the holistic nature of school readiness as defined here. Using psychiatric epidemiology as a springboard (Offord, Kraemer, Kazdin, Jensen, & Harrington, 1998), the preventive philosophy was applied in a Canadian take on the assessment of school readiness. By combining the holistic approach (inclusion of several domains of child development) with population-based measurement (inclusion of all children in kindergarten; Janus et al., 2007), the Early Development Instrument (EDI) was developed. The EDI, a checklist of items in several developmental domains, completed by the kindergarten teacher for each child in the classroom, represents a uniform methodology in assessing children's level of development in their first

year of schooling. Rather than providing a “ready or not” diagnostic judgment for each child assessed, the results are aggregated to various group levels (gender, neighborhood, first language) and interpreted in the context of other relevant variables (socioeconomic status, availability of early care, immigration, and employment patterns). As such, this approach offers advantages to whole populations of children, by allowing a matching of preventive programs to actual needs, regardless of risk of protective factors.

Cross-References

- ▶ [Early Childhood Development \(ECD\)](#)
- ▶ [Early Development Instrument](#)

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School Safety

► [School Violence](#)

School Satisfaction

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Synonyms

[Perceived quality of life at school](#); [School happiness](#); [School life, quality of](#)

Definition

School satisfaction refers to a student's subjective cognitive appraisal of the quality of his or her school life (Baker & Maupin, 2009). School satisfaction is perhaps best understood in the larger context of wellness indicators. In brief, global life satisfaction, a common indicator of happiness, refers to one's cognitive appraisal of the overall quality of his or her life. In youth, global life satisfaction appraisals are thought to be primarily influenced by the child's level of satisfaction with each of five core domains: family, friendships, living environment, self, and school (Huebner, 1994). Some research has indicated that school satisfaction is a particularly strong contributor of life satisfaction among some subgroups of youth, including Korean secondary students (Park & Huebner, 2005), gifted American middle school students (Ash & Huebner, 1998), and adolescent Norwegian girls (Danielsen, Samdal, Hetland, & Wold, 2009).

Description

Measurement of School Satisfaction

School satisfaction is commonly measured by the eight-item school satisfaction subscale of the Multidimensional Students' Life Satisfaction Scale (MSLSS; Huebner, 1994). Students rate the extent to which they agree with statements like "I enjoy school activities" and "I wish I didn't have to go to school." An earlier measure used in several studies was the Quality of School Life Scale (QSL; Epstein & McPartland, 1976). The QSL includes a 5-item satisfaction with school subscale (e.g., "I like school very much" and "Most of the time I do not want to go to school") in addition to two subscales tapping students' commitment to classwork and teacher-student relationship quality. The school satisfaction subscales of the MSLSS and QSL both have acceptable psychometric properties; most studies cited in this entry used the MSLSS or QSL. Some researchers have employed a one-item indicator of school satisfaction, for instance, by asking students how happy they are with their schooling experiences.

Student Demographic Characteristics and School Satisfaction

Large-scale studies suggest that most students report positive levels of school satisfaction, although a sizable minority of middle and high school students are dissatisfied with their schooling experiences (Huebner, Valois, Paxton, & Drane, 2005). School satisfaction tends to vary as a function of age, gender, educational placement, and culture. Studies of American students have found an inverse relationship between age and school satisfaction among first through eighth grade students (Okun, Braver, & Weir, 1990) and lower mean levels of school satisfaction among high school students as compared to middle school students (DeSantis King, Huebner, Suldo, & Valois, 2006; Elmore & Huebner, 2010). This trend for decreasing mean levels of school satisfaction has also been observed among Chinese students in third through sixth grade (Hui & Sun, 2010). Regarding gender differences, adolescent girls have

reported slightly higher mean levels of school satisfaction than their same-age male peers, including in large samples of youth from America (DeSantis King et al., 2006; Huebner et al., 2005), Norway (Danielsen et al., 2009), and Ireland (Gilman et al., 2008). Elevated school satisfaction has also been reported by students in unique academic programs tailored to their cognitive abilities, for instance, by academically gifted Korean students served in specialized science-oriented high schools (as compared to their gifted peers served in traditional high schools; Jin & Moon, 2006). A cross-national study of two collectivist and two individualist cultures indicated lower levels of school satisfaction among South Korean students and greater school satisfaction among Chinese students, with the school satisfaction means of Irish and American students in the middle (Gilman et al., 2008). Research to date has not supported differences in school satisfaction between students of different socioeconomic levels (Huebner, Ash, & Laughlin, 2001).

Predictors of School Satisfaction

Many factors contribute to how students appraise the quality of their school life. Correlates of school satisfaction include intrapersonal factors such as individual academic competence and psychological functioning and environmental contexts within and outside of school (Baker & Maupin, 2009). The most commonly identified internal variables that co-occur with greater school satisfaction include high self-esteem and an internal locus of control (Huebner et al., 2001; Karatzias, Power, Flemming, Lennan, & Swanson, 2002).

Students' emotional and social experiences at school are among the strongest correlates of their school satisfaction (Epstein & McPartland, 1976). Case in point, in a study of American students in seventh through tenth grade, the frequency with which students experienced positive emotions at school accounted for 19 % of the variance in their school satisfaction (in comparison to 5 % of the unique variance explained by frequency of negative affect at school;

Lewis, Huebner, Reschly, & Valois, 2009). Research findings from secondary students in Scotland also indicate that positive affect is a stronger predictor of school satisfaction than negative affect, although both types of emotional experiences significantly relate to students' school satisfaction (Karatzias et al., 2002).

With respect to the role of social relationships, greater perceptions of social support from people at school consistently relate to higher school satisfaction. In particular, social support from teachers typically yields the strongest relationships with school satisfaction (Hui & Sun, 2010). Among a large sample (3,300+) of students in Norway, higher perceptions of social support from classmates and particularly teachers co-occurred with greater school satisfaction (Danielsen et al., 2009). Similar findings were yielded from middle and high school American students, with social support from classmates and teachers correlating significantly with school satisfaction (DeSantis King et al., 2006). These supportive relationships likely engender a climate of care that is responsible for students' positive judgments of their schooling experiences. In a seminal study of within-child and environmental predictors of school satisfaction among 129 low-income, urban, African-American elementary school students, children's perceptions of the quality of the social climate of their classroom (i.e., the extent to which their classroom was perceived to be caring, respectful, encouraging, and accepting) emerged as the strongest correlate ($r = .59$) of their school satisfaction (Baker, 1998). Regarding the particular influence of peers, research finds that students who feel more attached to their peers report greater school satisfaction, even 1 year later (Elmore & Huebner, 2010). In contrast, peer victimization (i.e., name-calling and social exclusion) was linked to lower school satisfaction among a sample of over 1,000 students (ages 10–12) from 26 elementary schools in the Netherlands (Verkuyten & Thijs, 2002). Peer victimization influenced school satisfaction primarily indirectly through a negative relationship with children's perceptions of their social

competence. In this sample, variables associated with greater school satisfaction included (a) perceiving one's teachers as nice and friendly and (b) a more disciplined and academically oriented classroom environment.

Social relationships in the classroom represent some of the components of school climate, which are also linked to school satisfaction. Among a sample of over 2,000 American middle and high school students, the combined influence of students' perceptions of eight dimensions of school climate explained 34 % of the variance in students' school satisfaction (Zullig, Huebner, & Patton, 2011). Five school climate dimensions emerged as unique predictors of school satisfaction. These dimensions included academic support, positive student-teacher relationships, school connectedness, order and discipline, and academic satisfaction. In a separate sample of American high school students, an index of student-perceived school climate comprised of parent involvement and positive student-teacher relationships was a strong correlate ($r = .43$) of school satisfaction (Suldo, Shaffer, & Riley, 2008).

Greater school engagement by way of participation in structured extracurricular activities may also positively influence youth school satisfaction. Huebner and Gilman (2006) found a small but significant correlation ($r = .18$) between students' school satisfaction and the total number of extracurricular activities that students participated in since their enrollment in their middle school or high school.

Events and circumstances outside of school also contribute to youth perceptions of school satisfaction. In a larger study on the relationship between stressors (major and daily life events) and school satisfaction, Huebner and McCullough (2000) found that nonschool stressful events (experiences related to family, friends, recreation, and health) predicted school satisfaction. Other research on ecological stressors and resources confirmed significant links in expected directions between high school students' school satisfaction and their stressors and resources pertinent to friends and family

(Huebner et al., 2001). Family relationships are among the largest environmental predictors of school satisfaction. Elmore and Huebner's (2010) one-year longitudinal study of American adolescents yielded moderate concurrent and predictive correlations between parent attachment and school satisfaction. Parental support has also emerged as a moderate correlate of school satisfaction among samples of adolescents in America (DeSantis King et al., 2006) and Norway (Danielsen et al., 2009).

In contrast to the positive influence of parental support and attachment, multiple studies have found that students who experience more frequent stressors tend to report lower school satisfaction. In a sample of urban elementary school children, greater frequencies of school-related stressors co-occurred with reduced school satisfaction (Baker, 1998). In this study, stress emerged as a greater contributor (total indirect and direct effects) to students' school satisfaction than other known correlates (e.g., family satisfaction and social support at school). Correlational studies of American high school students yielded small to moderate, inverse relationships between school satisfaction and the frequency with which youth experienced negative major and chronic stressors (Huebner et al., 2001; Huebner & McCullough, 2000). Finally, secondary school students in Scotland (mean age 14) who reported less stress also reported greater satisfaction with the quality of their schooling experiences ($r = -.41$; Karatzias et al., 2002).

Outcomes Associated with School Satisfaction

Research confirms that students who are more satisfied with school have superior adjustment in multiple domains, including academic and psychological wellness. For example, a longitudinal study of 200 American kindergarten students found that children who reported liking school were observed to participate more in the classroom which, in turn, predicted better achievement (Ladd, Buhs, & Seid, 2000). Ladd and colleagues' path analyses further suggested that it was more likely that gains in achievement

were a consequence of high initial levels of school satisfaction rather than increases in school liking resulting from high initial participation and achievement.

Research with older youth has confirmed that students with greater school satisfaction tend to feel more confident about their abilities to achieve, earn better grades, and behave better in the classroom. Specifically, studies have yielded mostly moderate correlations between school satisfaction and students' perceived academic competence among samples of inner-city African-American children (Baker, 1998), Norwegian adolescents (Danielsen et al., 2009), Dutch children (Verkuyten & Thijs, 2002), and American students in elementary school (Huebner, 1994) and high school (Huebner & McCullough, 2000). Small but statistically significant, positive correlations between school satisfaction and students' grade point averages (GPA) have been identified in American adolescents in seventh through tenth grade (Lewis et al., 2009) and ninth through twelfth grade (Suldo et al., 2008). A cross-sectional study of American high school students indicated an inverse relationship ($r = -.28$) between school satisfaction and the frequency of students' school behavior problems (self-reported frequency of cheating, fighting, skipping class, and bringing illicit substances to school; Suldo et al., 2008). Last, longitudinal research indicates higher levels of initial school satisfaction predict fewer problems with behavioral engagement at school (specifically, less withdrawal in the classroom, academic resistance, and aggressive classroom behavior) among secondary students 1 year later (Elmore & Huebner, 2010).

Students with very high school satisfaction also evidence superior psychological functioning, as illustrated by Huebner and Gilman's (2006) examination of 341 American middle and high school students. This study compared the outcomes of three groups of students: (a) students with the lowest 20 % of school satisfaction scores (i.e., very low school satisfaction subgroup), (b) students with the highest 20 % of scores (i.e., very high school satisfaction), and

(c) a comparison sample of students in the average range of school satisfaction (middle 30 % of scores). Students with very high school satisfaction reported the highest mean levels of global life satisfaction, hope, and internal locus of control, as well as the lowest rates of clinical levels of psychopathology. In contrast, very low school satisfaction was a risk factor for greater rates of clinical problems (e.g., symptoms of anxiety and depression) as well as worse personal and social adjustment (e.g., low self-esteem, poor student-student, and student-parent relations). Huebner and Gilman concluded "youth who dislike school display pervasive adjustment problems, including in the interpersonal, intra-personal, and academic arenas" (p. 148).

Other research suggests that student school satisfaction links to students' psychological adjustment not only directly but also indirectly by serving as a partial mediator of the relationship between social support and psychopathology (DeSantis King et al., 2006). In particular, greater perceptions of social support are associated with higher school satisfaction which, in turn, predicts lower rates of internalizing and externalizing behavior problems. Whereas students who dislike school are more prone to experience psychopathology, recent studies have confirmed that adolescents who report greater school satisfaction are also happier with their lives (e.g., Salmela-Aro & Tynkkynen, 2010). Such findings are consistent with the theoretical link between school satisfaction and appraisals of global life satisfaction.

School satisfaction may even have a positive impact on physical health, as suggested by preliminary studies of Danish students' health choices and risky health behaviors. For instance, research with over 5,000 children and adolescents in Denmark found that students who reported liking their school were more likely to discuss health-related issues with their parents and to follow the health advice of their school nurse (Borup & Holstein, 2006). Also, 15-year-old Danish students with low school satisfaction were significantly more likely to have used marijuana on multiple occasions during the past year (Hoff, Anderson, & Holstein, 2010).

Taken together, the aforementioned bodies of research suggest that school satisfaction is linked to better physical health in addition to academic and psychological well-being.

Cross-References

- ▶ [Adolescents' Life Satisfaction](#)
- ▶ [Domain Satisfaction](#)
- ▶ [Education](#)
- ▶ [Life Satisfaction, Concept of](#)
- ▶ [School Climate](#)
- ▶ [School Experiences](#)
- ▶ [Student Achievement](#)
- ▶ [Student Quality of Life](#)

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School Sense of Community

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Definition

Can school be considered a community? Irwin and Farr (2004) would answer yes. Sergiovanni (1999) suggested that it is more appropriate to talk about school as a community than to talk about school as an organization, the latter being more similar to a *gemeinschaft* than to a *gesellschaft* (see also Strike, 2004). Other scholars (see also Hiatt, 2001) proposed to overcome the distinction between *gesellschaft* and *gemeinschaft*: they adopted a postmodern perspective, criticizing the idealistic vision of community proposed by Tonnies, and suggested that school should be considered a learning community, whose members are actively engaged in learning together from each other. Members of a learning community share the responsibility to build and maintain the organization and to construct knowledge in a collaborative way (Royal, De Angelis, & Rossi, 1997); they work together, develop ideas, understand each other, and tolerate their diversities. According to Bonk, Wisher, and Nigrelli (2004), members of a learning community feel some sense of belonging and connectedness to each other; because of these feelings they are willing to help each other and to work together. They adopted McMillan and Chavis (1986) sense of community definition and

suggested that members of a school or a learning community:

- Feel some sense of loyalty and belonging to their organization/group (membership).
- Feel some sense of influence: they have the feeling that what they do counts and affect what happens in the community.
- Derive some benefits from their membership because the community meets their needs (integration and fulfillment of needs).
- Share emotional experiences, common history, significant events, and the quality of social ties (shared emotional connection).

Royal and Rossi (1996) proposed to translate McMillan and Chavis (1996) four-dimension model of sense of community into a ten-dimension scale that included trust, teamwork, communication, shared vision, common sets of purpose, care, respect, recognition, and warm environment. Lounsbury and DeNeui (1995, 1996) proposed the Campus Atmosphere Scale to assess students' feelings about sense of community on campus, while Rovai (2002) developed the Classroom Community Scale (CCS), which evaluates sense of community in a classroom setting; the scale was revised further: Rovai, Wighting, and Lucking (2004), developed the Classroom and School Community Inventory, in order to assess if students have different feelings of connectedness to school and classroom settings (see also Rovai, Wighting & Liu, 2005). They suggested that SSoC has two underlying dimensions, namely, social community (nearer to the concept of geographical community) and learning community (coherent with the school learning environment), both relevant at classroom and school level. Perkins, Florin, Rich, Wandersman, and Chavis (1990) did not propose a specific instrument to measure SSoC; they applied instead the Sense of Community Index (SCI), probably the most popular scale to measure SoC. The SCI was heavily criticized by Cartland, Ruch-Ross, and Henry (2003) because according to them, the scale was not able to assess the sense of belonging at school of migrants and minorities because it measured homogeneity among students and not sense of belonging:

therefore, they proposed the Hospitality Scale that was supposed to measure levels of students' social capital.

There is not nowadays an instrument designed to measure SSoC accepted and recognized by the entire academic community; however, measurement problems do not undermine the heuristic value of the concept and the need to measure it in order to understand SSoC outcomes and antecedents (see also Bateman (2002)).

Effects of School Sense of Community on Students

Goodenow (1993) was one of the first scholars that demonstrated that student outcomes are strongly influenced by the characteristics of the school's setting.

Students who demonstrate high levels of SSoC have better academic results, higher school attendance rates, and more positive peer relationships (Furrer & Skinner, 2003; Goodenow & Grady, 1993; Osterman, 2000). Sanchez, Colon, and Esparza (2005) have found positive relations between academic performance, sense of belonging at school, and student motivation (see also Hagborg, 1998): according to their results, girls have higher SSoC compared to males, and Hispanic girls have shown higher SSoC compared to their peers. Battistich, Solomon, Kim, Watson, and Schaps (1995) found that students who belong to economic disadvantaged groups benefit more from higher levels of SSoC. Battistich, Schaps, and Wilson (2004) and Watson, Battistich, and Solomon (1997) demonstrated that sense of community, positive attitudes toward school, and happiness related to school attendance are connected. Royal and Rossi (1996, 1999) found that students with high levels of SSoC are less likely to feel burned out from school and to abandon studies.

Students' performance at school benefits from sense of community (see Wighting, Nisbet, & Spaulding, 2009). Different researchers came to this conclusion: Osterman (2000, 2002) believed that belonging to a community increases the quality of the learning process. According to her results, in order to augment students' sense

of community, it is important to work on peer relationships, improving their overall quality. Crosnoe, Kirkpatrick Johnson, and Elder (2004) found that students with high levels of sense of community perceive school as a safer place and participate more to in-class and out-of-class activities. The positive effects of sense of belonging were specifically observed among elementary school children (Anderman, 2003) probably because SSoC tend to decrease with age (see Battistich et al., 1995).

Many other scholars have found that SSoC has positive relations with students' well-being (Pretty, Andrewes, & Collett, 1994; Pretty, Conroy, Dugay, Fowler & Williams, 1996). Vieno, Santinello, Pastore, and Perkins (2007) found that school sense of community mediates the effects of social support on psychosocial adjustment: according to their results, support from friends is more important for boys than girls, while the relation between SSoC and parent's support is stable across sex and age.

In contrast, lack of belongingness or disengagement from school is usually related to anxiety, depression, loneliness, and poor psychological adjustment (Baumeister & Leary, 1995; Chipuer, 2001) Battistich and Hom (1997) found that higher SSoC reduced involvement in at-risk behaviors, like victimization, delinquency, violence, and drug abuse.

Which Variables Enhance Students' Sense of Community at School?

Teachers' behavior was found to be a significant predictor of class climate (Bryk & Driscoll, 1988; Van Petegem, Aelterman, Van Keer, & Rosseel, 2007). Ma (2003) has found that when teachers emphasize the importance of sense of community, rates of students' dropout of school decrease and students usually accept better the values proposed by their teachers.

Royal, De Angelis and Rossi (1996) have found that SSoC is higher among teachers of small-size schools compared to big-size schools and among teachers that work in private compared to public schools (see also Bryk & Driscoll, 1988; Flecknoe, 2003; Ferrari, Cowman, Milner,

Gutierrez, & Drake, 2009). Usually (see also Watt, 2003) differences between small schools and big ones have been explained according to different opportunities to establish significant relationships, while differences between public and private schools should depend on levels of homogeneity and shared values, the latter being higher in private schools. Lee, Dedrick, and Smith (1991), however, suggested that the difference levels of SSoC found between different types of school depend on specific organizational factors. Public schools do not share a clear consensus on the mission to follow and are more bureaucratic and less used to work in groups, while private schools would be a more suitable context in order to establish more communication and consensus. Promoting communication and common sharing among school staff, according to Lee et al. (1991), increases teachers' SSoC and professional satisfaction and their perception to be effective. Moreover it reduces teachers' perception to be effective and their level of victimization (Payne, Gottfredson & Gottfredson, 2003).

Newmann, Rutter, and Smith (1989) have found that the major predictors of SSoC among school staff were support and care provided by school principal, mutual (emotional) support among teachers, information sharing about curricula and content of class activities, and respect of norms and rules from students. Less important but still significant was a positive attitude toward innovation. Royal and Rossi (1996, 1999) examined many different organizational variables (teachers' tenure, position and responsibilities within the organization, school size, and staff status) in order to understand how to increase SSoC. They found that SSoC was significantly affected by teachers' job satisfaction and clear perception of the staff organizational roles and the use of teamwork on regular basis (see also Tobin, Muller, & Turner, 2006). More recently Vieno, Perkins, Smith, and Santinello (2005) found that individual and contextual measures of the perception of a democratic school climate were significant predictors of SSoC both at the

classroom and at the school level. They did not confirm some classical assumption on SSoC (e.g., small-size school increases it); however, it must be noticed that they studied the impact of organizational variables and school climate on students' SSoC and did not include teachers as participants. Keiser and Schulte (2009) emphasized the need to listen to all school actors in order to understand school culture and to define further variables that could be used to strengthen sense of community at school.

Cross-References

- ▶ [School Attendance](#)
- ▶ [School Climate](#)
- ▶ [School Dropout](#)
- ▶ [School Satisfaction](#)
- ▶ [Sense of Community](#)
- ▶ [Well-Being, Student](#)

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School Violence

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Synonyms

Bullying, School safety, Violence

Definition

School violence is conceptualized as a multifaceted construct that involves both criminal acts and aggression in schools, which inhibit development and learning, as well as harm the school's climate.

Description

School Violence

Violence is taking an increasing toll on American society and on children and adolescents specifically (Kaufman et al., 1998). When violence occurs on a school campus, action must be taken to ensure the safety of students and staff (Furlong & Morrison, 2000; Jimerson, Nickerson, Mayer, & Furlong, 2012). Over the past 10 years, the use and meaning of the term *school violence* have evolved. School violence is now conceptualized as a multifaceted construct that involves both criminal acts and aggression in schools, which inhibit development and learning, as well as harm the school's climate. ► [School climate](#) is important, as the role of schools as a culture and as an organization has not always received attention because of different disciplinary approaches to studying the problem.

Researchers have brought divergent orientations to their work, and these interests have not always been well coordinated with the primary educational mission of schools. An understanding of the multidisciplinary basis of school violence research is necessary in order to critically evaluate the potential use of programs that purport to reduce violence.

There are identifiable patterns of an individual's involvement in incidents of school violence. The patterns and trends described should be useful in helping school personnel to be particularly vigilant in their observations and to provide support of certain individuals, groups, and situations. Enough is now known about the correlates of violent and aggressive behavior on school campuses to implement meaningful intervention programs.

Bullying

Bullying is a common and recurring form of school violence that impacts the lives of children in school every day (Dupper & Meyer-Adams, 2002). There are three core components of bullying: unwanted and negative aggressive behavior, repetition of the behavior over time, and an imbalance of power between the students involved (Olweus, 2010). Bullying and victimization are phenomena that are reciprocally influenced by the individual, family, school, peer group, community, and society. The peer context is a powerful and salient force in contributing to bullying and victimization, and several theories pervade the literature, including dominance theory (Pellegrini, 2002), attraction theory (Bukowski, Sippola, & Newcomb, 2000), and the homophily hypothesis (Cairns & Cairns, 1994; Espelage, Holt, & Henkel, 2003). Research has also focused on the various participant roles that peer group members adopt and how the instrumentality of these participant roles contributes to the bully-victim phenomena (Craig & Pepler, 1995; Salmivalli, 2001). There is a temporary increase in bullying during early adolescence (National Center for Educational Statistics, 1995; Pellegrini, 2002;

Pellegrini & Bartini, 2001; Pellegrini & Long, 2002).

International

School violence has been a global phenomenon and concern for several decades (Astor, Benbenishty, Marachi, & Meyer, 2006). Given the current review of empirical data in many countries, we strongly support a global perspective on the phenomena of school violence. Currently, many societies are developing an awareness of the uniqueness of school violence as an independent form of context-oriented violence. Most international bullying researchers employ diverse meanings, measures, and the understandings of which behaviors should be included in the term bully (Benbenishty & Astor, 2003). School violence literature from around the world reveals that there are similarities across diverse cultures as well as many different patterns that reflect the unique characteristics of each cultural and national context.

Measurement

There is a scarcity of school safety and school violence measurement tools, especially measurements that are psychometrically sound. The most common way of measuring safety and violence-related concerns has been through self-report surveys with many programs using surveys developed by their local evaluation teams. These include large-scale surveillance surveys, such as the Youth Risk Behavior Surveillance Survey (Centers for Disease Control & Prevention, 2004a, b) and the California Healthy Kids Survey (WestEd, 2004). Other methods include mandated district-wide reporting and examining school discipline referral, but these methods do have limitations. For example, Morrison, Peterson, O'Farrell, and Redding (2004) note that although school discipline referrals are easily obtained, little is known about the reliability or validity for predicting future aggressive acts with either school-level or individual-level data. Furthermore, behavior referrals, suspensions, and other disciplinary actions reflect not only students' behavior but also teachers' tolerance

for disruptive behavior, teachers' skills in classroom management, administrative discipline policies, and other classroom, school, and community factors, although they often fail to document the contribution of these environmental influences. Thus, predicting disruptive and violent behavior from school discipline data is problematic because it must account for these multiple levels of influence.

Appropriate consideration of the measurement practices commonly applied to school safety and violence research is a vital and necessary aspect of moving this field of inquiry forward. In doing so, it should be acknowledged that pioneers of school safety research have already provided the impetus to many others in invaluable ways. However, no single national survey has been originally and specifically designed to assess school safety and violence conditions. In fact, the Centers for Disease Control is continuing its efforts to provide high-quality data as evidenced by a vigorous methodology research effort (e.g., Brener, Billy, & Grady, 2003; Brener, Grunbaum, Kann, McManus, & Ross, 2004; Brener, Kann, et al., 2004).

Current school violence and safety instruments are predominately based on a public health model that develops items to establish population trends (e.g., Youth Risk Behavior Surveillance Survey [YRBS]; Centers for Disease Control & Prevention, 2004a). This is due, in part, to their original intended purpose, which was to obtain population estimates of behaviors. Despite the fact that the YRBS was developed as a population surveillance instrument, researchers often use it to examine individual differences in youth behavior and the association among risk and health behaviors. Nonetheless, these instruments provide the best information available about school violence and safety, and there is overwhelming momentum to continue their use, raising them to the status of a "gold standard."

The Departments of Education, Health and Human Services and Justice created the Safe School/Healthy Students Initiative (SS/HS), the most extensive effort yet to address school safety and violence prevention/intervention

(Furlong, Paige, & Osher, 2003). SS/HS evaluation strategies are dependent on local research questions and focused on treatment integrity, systematic attitudes and knowledge, and academic, social, and behavioral change (Welsh, Domitrovich, Bierman, & Lang, 2003). Most of the items used in these surveys were developed specifically for the SS/HS national evaluation or were taken from other national surveys (e.g., the Youth Risk Behavior Surveillance Survey; Furlong, Sharkey, Bates, & Smith, 2004), which have not had extensive psychometric scrutiny.

Looking forward, the study of school violence needs to move beyond measuring the prevalence of the problem using large-scale surveys toward applying more advanced standards for multidisciplinary examination. Newly developed surveys should attend to both theoretical and psychometric principles before being used to evaluate programs or guide policy.

Intervention

There are many prevention and intervention efforts focused on school violence. Topics on school climate, school wide, positive behavioral support, and characteristics of effective programs are presented below.

Adolescents are often reluctant to seek help for bullying or threats of violence (Eliot, Cornell, Gregory, & Fan, 2010). Past research suggests that reported that students were especially reluctant to seek help when they regarded school staff as unconcerned with or tolerant of bullying. School climate is a complex construct used to describe the characteristic qualities of interactions among adults and students at school (Hoy, Smith, & Sweetland, 2002). School climate is often measured using student perceptions of how students get along with one another and are treated by school staff. One of the most frequently used markers of school climate is student perceptions of whether teachers (and other school staff) care about students and treat them fairly (Hoy, Smith, & Sweetland, 2002). In a study, Eliot, Cornell, Gregory, and Fan (2010) found that student perceptions of a supportive school climate are important to student

willingness to seek help from adults at school for bullying and threats of violence. Students who perceived their teachers as caring, respectful, and interested in them were more likely to assert that they would tell a teacher when they themselves or a classmate were being bullied, if a classmate brought a gun to school, or if a classmate threatened another student with violence. This study found that supportive school climate was associated with more positive help-seeking attitudes among students for bullying and threats of violence. These correlational findings suggest that support to students may be instrumental in increasing school safety, and future studies should investigate a causal relation between supportive school climate and help seeking.

To prevent minor, as well as serious, antisocial behavior, educators are turning to a comprehensive and proactive approach to discipline commonly referred to as School-Wide Positive Behavior Support (SWPBS; Gresham, Sugai, & Horner, 2001). SWPBS is based on the assumption that when faculty and staff in a school actively teach and acknowledge expected behavior, the proportion of students with serious behavior problems will be reduced, and the school's overall climate will improve (Sprague & Horner, 2006). The procedures that define SWPBS are organized around three main themes: prevention, multi-tiered support, and data-based decision making. The focus is on establishing a positive social climate in which behavioral expectations for students are highly predictable, directly taught, consistently acknowledged, and actively monitored. Evidence suggests that sustained use of SWPBS practices can alter the trajectory of at-risk children toward destructive outcomes and prevent the onset of risk behavior in typically developing children. It is expected that effective and sustained implementation of SWPBS will create a more responsive school climate that supports the twin goals of schooling for all children: academic achievement and social development. Implementing and sustaining an organized, school-wide system for behavior support and

teaching social behavior is the foundation for effective prevention. As of 2005, over 2,700 schools across the country are actively implementing SWPBS. These schools are reporting reductions in problem behavior, improved perceptions of school safety, and improved academic outcomes.

Activities such as bullying and harassment, once referred to primarily as child's play, are now recognized as important elements in problems of youth violence (Hazler & Carney, 2006). Prevention programs and published materials designed to reduce the increasing concern over problems of bullying and school violence have become numerous, while they were virtually nonexistent in the United States prior to 1990. The programs designed in the 1990s began focusing on strategies like teaching interpersonal skills and involving students in prevention efforts. These new models augmented or replaced the more traditional emphases on simplistic discipline enforcement and full school assemblies that had been the primary tactics in the past. Quality programs have evolved to recognize the critical nature of interactions between individual characteristics and ecological contexts. Peers, schools, families, and communities all interact with individual student characteristics to create the variety of individual behavioral, emotional, and cognitive reactions as well as the dynamics between individuals. This social-ecological perspective emphasizes that no one individual or pair of individuals alone creates a bullying situation. Instead, it is the combination of individuals plus the ecological situation that will foster or discourage bullying over time (Swearer & Doll, 2001). Program descriptions tend to focus on the specific techniques used to help change cognitions, behaviors, and overall school climate. Other bullying intervention themes include reducing isolation of people and ideas, raising awareness, policy development, skill development, and empathic involvement (Hazler & Carney, 2006).

Conclusion and Future Directions

Extreme acts of violence (e.g., shootings, stabbings, and bomb threats) in schools are rare;

however, when these events do occur, they affect the physical, emotional, and psychological well-being of students and staff worldwide (National Association of School Psychologists, 2000). More common acts of violence and aggression occurring at school include bullying and fighting. Preventing, preparing for, and responding to all of these events involve many different activities (Brock, Jimerson, & Hart, 2006). A comprehensive framework to conceptualize school violence is imperative to understand and help prevent and ameliorate school violence and consequently foster the positive psychosocial development of children and adolescents.

Cross-References

- ▶ [Bullying](#)
- ▶ [School Safety](#)
- ▶ [School Violence](#)

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School-Based Interventions

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Synonyms

Positive psychology in schools; Psychological well-being in schools; QOL; Subjective well-being

Definition

Interventions that are implemented within the school context, specifically targeting the promotion of students' quality of life and affective and cognitive evaluations of their own lives (i.e., subjective well-being).

Description

Positive Psychology

Positive psychology attempts to study the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions (Gable & Haidt, 2005). Positive psychology emphasizes that wellness is more than the absence of disease symptoms (Huebner & Gilman, 2003; Seligman & Csikszentmihalyi, 2000) and advocates a change from a preoccupation not only addressing deficits but also promoting mental health and well-being (Miller, Gilman, & Martens, 2008).

Subjective Well-Being and Quality of Life

Subjective well-being (SWB) refers to people's affective and cognitive evaluations of their own lives (Diener, 2000). SWB includes three central

tenets: (a) SWB resides within the experience of the individual and does not include objective conditions such as virtue or wealth, (b) SWB represents an interplay between the absence of negative factors and presence of positive factors, and (c) SWB emphasizes a global and integrated assessment of all aspects of a person's life. Fundamentally, the study of SWB focuses on when and why people are happy and on what the processes are that influence SWB. It is a broad concept that includes experiencing high levels of pleasant emotions, low levels of negative emotions, and high life satisfaction.

The term quality of life (QoL) refers to both objective and subjective dimensions of human existence (Cummins, 1997). Thus, it incorporates objective measures of well-being, such as health and socioeconomic status, with the above-mentioned notion of SWB.

Positive Psychology and Schools

The principles of positive psychology can be used to investigate factors that facilitate healthy psychosocial development for students (Gilman, Huebner, & Furlong, 2009). Schools can and should play a prominent role in promoting the tenets of positive psychology (Snyder & Lopez, 2005). Following the formal introduction of positive psychology (Seligman & Csikszentmihalyi, 2000), this topic has received increasing attention from a variety of applied psychological disciplines, including school psychology (e.g., Clonan, Chafouleas, McDougal, & Riley-Tillman, 2004; Huebner & Gilman, 2003; Jimerson, Sharkey, Nyborg, & Furlong, 2004; Miller & Nickerson, 2007). Additionally, promoting "developmental assets," which includes a focus on the strengths of youths, families, and communities, has been emphasized (Scales, Benson, Leffert, & Blyth, 2000). The "strength perspective" framework to view youths and families with greater emphasis on their assets and competencies has taken root and become a salient aspect in education research (Wieck, Rapp, Sullivan, & Kisthardt, 1989).

Interventions

Considering most youth participate in school activities on a daily basis, there is ample

opportunity for schools to facilitate students' healthy development and adjustment. Strein, Hoagwood, and Cohn (2003, p. 27) outline aspects of the public health model that pertain to schools, including (a) applying scientifically derived evidence to the delivery of psychological services, (b) strengthening positive behavior versus focusing only on decreasing problem behavior, (c) placing a strong focus on prevention as well as treatment, (d) accenting community collaboration and linked services, and (e) using research strategies that may improve the knowledge base of school psychology and provide an effective framework for evaluating school psychological services.

The US Public Health Service's three-tiered model of prevention is used as a framework to illustrate how schools can deliver interventions effectively and improve outcomes (Walker et al., 1996). This includes universal (primary) interventions for all students, selected (secondary) interventions for at-risk groups of students, and targeted (tertiary) interventions for students exhibiting emotional, behavioral, social, and/or academic problems. Interventions designed to address each of these levels are reviewed below.

Universal

Although there is increasing empirical support for the effectiveness of interventions derived from positive psychology (Seligman, Steen, Park, & Peterson, 2005), the literature on applications of positive psychology to school-based interventions is limited (Froh, Huebner, Youseff, & Conte, 2010; Miller & Nickerson, 2007), particularly at the universal level.

School-Wide Positive Behavior Support. School-Wide Positive Behavior Support (SWPBS) is one universal intervention that aims to create psychologically healthy educational environments (Baker et al., 2003; Doll et al., 2004) and facilitate the academic achievement and healthy prosocial development of children (Sprague & Horner, 2006).

Stemming from Positive Behavior Support (PBS), which uses behavioral science to increase positive behavior and decrease problem behavior

(Carr, 2007), SWPBS considers the larger contexts (e.g., schools) of children's environments (Sugai, 2007). SWPBS is a process through which schools improve services for all students by using data and intervention research to guide intervention and management systems (Ervin, Schaughency, Matthews, Goodman, & McGlinchey, 2007). SWPBS is a proactive program that emphasizes direct intervention approaches (e.g., teaching expectations, monitoring student performance, providing specific and immediate feedback) in multiple settings (e.g., classrooms, cafeteria, buses, hallways) throughout an entire school (Sugai & Horner, 2002). SWPBS has four key features: (a) a focus on student outcomes, (b) the use of research-validated practices, (c) an emphasis on the systems needed to sustain effective practices, and (d) the active collection and use of data for purposes of decision-making (Horner, Sugai, Todd, & Lewis-Palmer, 2005).

Research suggests that SWPBS has led to reduction in student's office discipline referrals (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004) and decreased antisocial behavior in suburban (Metzler, Biglan, Rusby, & Sprague, 2001), urban (McCurdy, Mannella, & Norris, 2003), and alternative schools (Miller, George, & Fogt, 2005) as well as in nonclassroom settings, such as during bus rides (Putnam, Handler, Ramirez-Platt, & Luiselli, 2003), recess, (Todd, Haugen, Anderson, & Spriggs, 2002), and hallway transitions (Lewis, Sugai, & Colvin, 1998). The use of SWPBS also has led to reductions in student vandalism, aggression, and delinquency, as well as alcohol, tobacco, and other drug use (Sprague & Horner, 2006). Furthermore, SWPBS has elicited positive change in academic achievement and school engagement. When used in conjunction with effective antecedent strategies and evidence-based academic interventions, such as instructional matching (e.g., flow theory; Shernoff & Csikszentmihalyi, 2009), modifying curriculum by making it more relevant and meaningful, utilizing different teaching modalities (e.g., visual, auditory, tactile), and rewarding success while setting high but reasonable goals, SWPBS can lead to

a variety of positive outcomes (Kern & Clemens, 2007).

Social and Emotional Learning. Social and Emotional Learning (SEL) is a universal intervention that helps individuals develop fundamental skills for life effectiveness by teaching intrapersonal and interpersonal skills (e.g., recognizing and managing emotions, developing positive relationships, responsible decision-making; [Collaborative for Academic, Social, & Emotional Learning] CASEL, 2007). One example is Promoting Alternative Thinking Strategies (PATHS), a prevention program that teaches children to identify emotions. PATHS has been shown to reduce aggression, improve peer relationships, and contribute to an improved classroom atmosphere (Conduct Problems Prevention Research Group, 1999; Kam, Greenberg, & Kusché, 2004). In addition, a review of more than 200 school-based research studies on the impact of interventions to promote social and emotional skills revealed an 11 % improvement in achievement test scores (Payton et al., 2008).

Gratitude. Gratitude is an emotional response where individuals are aware of and thankful for the good things that happen to them, particularly if that thanks is expressed to those responsible (Emmons, 2004). It is associated with a variety of positive psychological outcomes, including greater happiness, hope, pride, positive mood, optimism, and satisfaction with life (Bono & Froh, 2009). Furthermore, people who experience and exhibit gratitude also tend to report less depression and envy. Froh, Sefick, and Emmons (2008) investigated the impact of gratitude on positive outcomes among early adolescents through "counting blessings." While one group of students was asked to count up to five things for which they were grateful and log it in a journal, another group was asked to focus on irritants. Results suggested that counting blessings was related to higher levels of optimism, more life satisfaction, and less negative affect, as well as more prosocial behavior toward others. Developing gratitude applications in schools can be created separately or can be implemented through existing programs and services (e.g., counseling).

Exercise and Nutrition. Positive human functioning should consider the well-being of both the mind and body (Petosa & Hertz, 2009). Physical fitness is a critical component of positive human wellness. Aside from reducing the risk of chronic disease, physical activity has been found to be associated with many mental/emotional benefits (Miller et al., 2008). For example, the Planning to be Active Program (P2BA) is designed to empower young people to develop self-regulation skills and personal agency. P2BA is a 10-week program designed to encourage exercise among adolescents. Lessons involve self-assessment, behavioral goal setting, self-monitoring, evaluation, and reflection. Not only did P2BA increase exercise among adolescents, but it increased scores on self-regulation and self-efficacy.

Alongside exercise, nutrition is a key concern for children and schools (Pyle, Hyder, Haddock, & Poston, 2009). Both undernutrition and overnutrition can negatively impact development, including adverse effects on psychological, psychosocial, and academic domains. Considering schools have consistent access to children, they are the ideal environment for a focus on nutrition. There are several ways that schools can positively impact the health of their students through nutrition interventions. Primary prevention efforts are geared toward improving overall nutrition and increasing physical activity for the entire student population, while secondary prevention efforts focus more on inducing change for students deemed at risk. Comprehensive programs typically include a focus on nutrition education, behavioral techniques to alter nutrition intake (e.g., self-monitoring, stimulus control, operant conditioning), and increasing physical activity.

Selected and Targeted

A public health framework recognizes that even with universal interventions, selected interventions are needed for the 5–15 % of students at risk for emotional and behavioral problems, and targeted interventions are indicated for the additional 1–7 % of students who experience chronic emotional and behavioral problems (Sprague & Walker, 2005).

Externalizing Behaviors. Externalizing behaviors are acting-out behaviors that are aggressive, argumentative, and noncompliant (Gresham, Lane, MacMillan, & Bocian, 1999). Although the typical response to these behaviors is the application of sanctions (e.g., reprimands, suspensions, expulsions; Maag, 2001), there has been increased interest in positive, as opposed to punitive, behavior management strategies, such as the Good Behavior Game (Sprague & Walker, 2005). The Good Behavior Game involves having the teacher elicit from students' descriptions of behaviors that lead to an effective learning environment as well as those that would interfere with desirable outcomes (i.e., "fouls"). The teacher divides the class into two teams that play the game for a specified interval of instruction. The team that has the fewest fouls or, alternatively, each team that has less than a predetermined numbers of fouls during the interval, wins a brief activity prize. The Good Behavior Game may be used in general or special education classrooms as well as with particular groups of students and has been shown to be effective with children exhibiting externalizing behavior problems (Embry, 2002).

Because many students with emotional and behavioral disorders become disengaged from school and eventually drop out, interventions have been developed to enhance the connection that children and adolescents have with school (Jimerson, Reschly, & Hess, 2008; Sinclair, Christenson, Lehr, & Anderson, 2003). For instance, Check & Connect is a comprehensive intervention designed to promote school engagement through relationship building, problem solving, and persistence (Anderson, Christenson, Sinclair, & Lehr, 2004; Sinclair et al., 2003). In this program, school "monitors" work with a caseload of 40–48 students at risk for dropping out due to poor attendance and behavioral concerns. The core elements of the program include having the monitors (a) build a relationship with the student, family, and school staff; (b) teach problem-solving skills to the student; (c) increase the student's affiliation with the school through extracurricular activities; and (d) routinely monitor and use data to guide

the intervention (Sinclair et al.). Persistence is an essential element of the program, and monitors are involved with students for a minimum of 2 years, even if the student changes schools within the district or county (Sinclair et al.). Students assigned to Check & Connect have been found to be more likely to attend school, stay on track to graduate, and be rated as more competent by teachers than students in control groups (Anderson et al., 2004; Sinclair et al.).

Another evidence-based intervention for children and adolescents with externalizing problems that is highly consistent with positive psychology principles is multisystemic therapy (MST; Henggeler, Schoenwald, Rowland, & Cunningham, 2002). MST works with the systems in a child's life, such as the family and peer group, to develop the relationships that potentially serve as protective factors. A critical factor in achieving long-term outcomes is empowering caregivers to serve as change agents for their children by identifying factors that interfere with their ability to provide the necessary nurturance, monitoring, and discipline for their child. The MST team then draws on the strengths of the caregiver (e.g., supportive extended family, social skills) to address these factors and facilitate the implementation of planned interventions (Henggeler et al., 2002).

Internalizing Behaviors. Internalizing behavior problems are characterized by subjective distress and typically inhibited responses to stimuli that may reflect social withdrawal, depression, or anxiety (Gresham et al., 1999). Although there are a number of positive psychology constructs that are applicable for school-based psychotherapy for such problems (see Miller & Nickerson, 2007), the following discusses the constructs of hope, optimism, and mindfulness, due to their particular relevance for the treatment of internalizing problems in children and youth.

Hope therapy attempts to help individuals conceptualize clear goals, see numerous paths to these goals, and garner the necessary energy and commitment to reach them (Snyder, Lopez, Shorey, Rand, & Feldman, 2003). Similar to hope, optimism can be learned, modified, and strengthened (Seligman, 1998). People who

attribute negative events to external, unstable, and specific causes are generally optimistic, whereas those who exhibit internal, stable, and global causes are generally pessimistic (Peterson & Seligman, 2004). Research has suggested that building optimism by recognizing and disputing pessimistic, irrational thoughts can reduce stress and increase satisfaction with work and play as well as overall subjective well-being (Seligman, 2002).

Seligman (1998) have developed an approach for teaching optimism to children that has been shown to prevent depression and increase optimism, with impressive long-term outcomes. The Penn Optimism Program (POP; Shatté, Gillham, & Reivich, 2000) is a 12-week school-based group intervention curriculum that is an outgrowth of Seligman's work. The cognitive component of POP introduces participants to the relationships between underlying beliefs and inaccurate ways of thinking. It also teaches children to dispute irrational beliefs and generate worst case, best case, and most likely scenarios to situations, thereby expanding the arena of possible solutions for the purpose of maximizing hopefulness. The skill training component of POP involves teaching assertiveness and negotiation, countering procrastination, decision-making skills, and combining these skills with more hopeful thinking in a comprehensive problem-solving model (Shatté et al.).

Another positive psychology construct that has direct relevance for children and adolescents with internalizing problems is mindfulness, or being consciously aware of and experiencing the present moment. Psychotherapists have increasingly begun teaching mindfulness exercises to their clients in therapy. Mindfulness exercises have three key and interdependent elements: (a) awareness, (b) of present experience, (c) with acceptance (Germer, 2005). One method they used was the "Three-Minute Breathing Space," which involves (a) acknowledging and registering one's experience, even if it is unwelcome, (b) gently redirecting one's full attention to breathing as a method for focusing on the present moment, and (c) expanding the field of awareness around one's breathing so

that it includes a sense of the body as a whole. Psychosocial interventions that include a mindfulness component, such as dialectical behavior therapy, can be beneficial for reducing students' emotional distress (Miller, 2011).

Social Skills. Considering the importance of peer relations in fostering positive social, emotional, and cognitive functioning during adolescence, social skills interventions targeting various populations, ages, and skill sets have been of interest (Harrell, Mercer, & DeRosier, 2009). Social competence promotion programs have been shown to decrease violence, aggression, and other problem behaviors (Holsen, Smith, & Frey, 2008). One of the most widely used school-based programs for social-emotional competence promotion is *Second Step*, which is a prepackaged curriculum with sequenced lesson plans. Making extensive use of social learning theory (Bandura, 1986) and social-informational processing models of children's social behavior (Crick & Dodge, 1994), *Second Step* attempts to improve social and emotional competence in children by developing skills in the area of empathy, perspective taking, problem solving, impulse control, and anger management (Holsen et al., 2008).

Conclusion and Future Directions

Conceptual and empirical literature addressing school-based interventions to promote subjective well-being and quality of life has emerged during the past decade (Froh et al., 2010). It is postulated that the use of positive psychological constructs in a school setting can lead to enhanced levels of academic, emotional, and behavioral functioning for all students. Although some school-based interventions were highlighted above, research investigating the relationship between positive psychology and school-based interventions needs to continue across universal, selected, and targeted levels. Moreover, research is needed to identify and evaluate interventions for specific problems and populations. Education professionals should be mindful that positive psychology can potentially influence academic outcomes, as well as subjective well-being and quality of life for youth. With a focus on

promoting student success, developing positive school-based interventions to meet unique needs will require ongoing efforts.

Cross-References

- ▶ Exercise
- ▶ Gratitude
- ▶ Positive Psychology
- ▶ Quality of Life

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Schooling

► Level of Education

Schwartz Human Values Scale

► Human Value Scale

Scientific Culture

► Public Understanding of Science

Scientific Literacy

- ▶ [Public Understanding of Science](#)
-

Scientific Survey

- ▶ [Sample Survey](#)
-

Scientific Theory, Quality of Life

- ▶ [Systemic Quality of Life Model \(SQOL\)](#)
-

Scoring Weights

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Synonyms

[Importance weighting](#)

Definition

Scoring weights are values reflecting the importance of different life domains in quality of life research. Scoring weights are used to adjust the contribution of different life domains in an importance weighting procedure to calculate an overall quality of life index.

Description

Importance weighting is a scoring procedure that has been used in quality of life (QOL) research (Cummins, 1997; Ferrans & Powers,

1985; Frisch, 1992). The basic idea is that life domains contained in a QOL measurement have different importance across individuals or populations Hsieh (2012, 2013). In capturing participants' evaluations in these domains, information on domain importance should be incorporated into the scoring procedure and reflected in the final score. It is proposed that importance weighting will serve this purpose, and the common procedure is to weight the satisfaction scores by the importance score for each domain using ratings from respondents. Although several statistical weighting approaches have also been proposed (e.g., Ki & Chow, 1995; Olschewski & Schumacher, 1990; Perloff & Persons, 1988), the subjective weighting approach is mostly used in literature. This review is mainly based on findings on the subjective weighting approach with satisfaction and importance ratings in particular.

Although importance weighting is intuitively reasonable, investigations in general suggest that importance weighting did not have a psychological basis and did not improve predictive effect (Wu, 2009). At the theoretical level, Locke (1969, 1976) proposed the range-of-affect hypothesis to suggest that an affective evaluation (e.g., satisfaction) reflects a dual value judgment: (1) the discrepancy between what the individual wants and what he/she has and (2) the importance of what the individual wants. Locke further indicated that the level of evaluation is influenced by the interaction of the have-want discrepancy and importance. The relationship between domain have-want discrepancy and domain satisfaction was expected to be stronger among people attaching high importance to the said domain than to people attaching low importance to that domain. As such, satisfaction with a certain life domain has incorporated the information of importance of that domain, which rendered weighting domain satisfaction with domain importance redundant. This hypothesis has been widely supported in studies in an interindividual (McFarlin, Coster, Rice, & Cooper-Alison, 1995; McFarlin & Rice, 1992; Mobley & Locke, 1970; Rice, Gentile, & McFarlin, 1991; Wu & Yao, 2006a) or intraindividual context (Locke, 1969;

Mobley & Locke, 1970; Wu, 2008a, 2008b; Wu & Yao, 2007).

Empirically, results of various studies examining the utility of importance weighting in predicting criterion outcomes reveal that importance weighting did not meet its expected function. First, several studies have indicated that the weighted satisfaction score did not have a higher correlation with criterion variables than the unweighted satisfaction score (e.g., Hsieh, 2003; Russell, Hubley, Palepu, & Zumbo, 2006; Wu, 2008a; Wu & Yao, 2006b), although some supportive findings were also obtained (Hsieh, 2004). In a formative model using partial least squares analysis, Wu, Chen, and Tsai (2009) also found that the correlation between a latent factor of weighted satisfaction score and the latent factor of criterion measures was not higher than the correlation between a latent factor of unweighted satisfaction score and the latent factor of criterion measures. Studies adopting regression analysis (Russell et al., 2006; Wu & Yao, 2006a, 2006b) also showed that domain importance did not moderate the relationship between domain satisfaction and global life satisfaction, which is inconsistent with the expected function of importance weighting. The same findings were also obtained in job satisfaction literature (Caston & Briato, 1983; Ewen, 1967; McFarlin & Rice, 1992; Rice et al., 1991; Staples & Higgins, 1998; Waters, 1969).

Cross-References

- ▶ [Data Analysis](#)
- ▶ [Item Analysis](#)
- ▶ [Item Response Theory](#)
- ▶ [Psychometric Analysis](#)

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SCP Life Situation Index

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Synonyms

[Dutch life situation index](#); [Life situation index](#);
[Netherlands living conditions index](#)

Definition

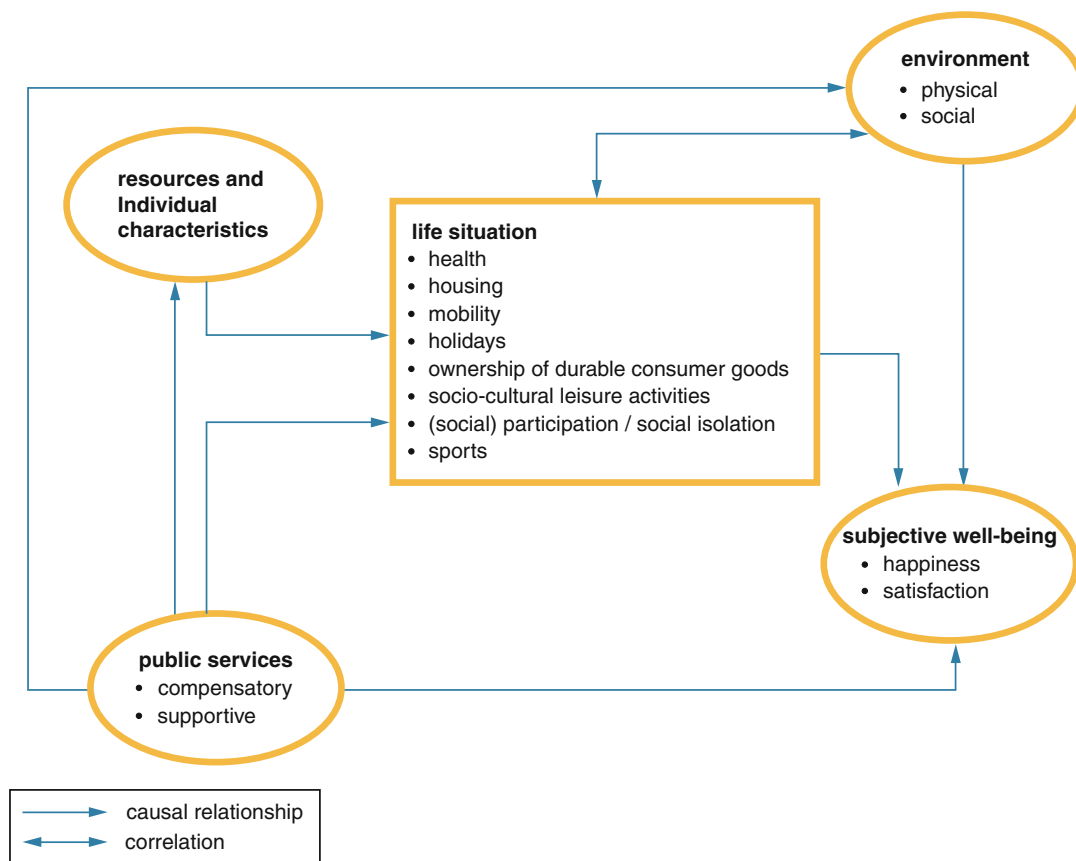
The SCP life situation index is a multi-item index of overall quality of life measuring individual prosperity and well-being in an integrated way.

Description

Background

For more than 30 years now, the Netherlands Institute for Social Research (SCP) has been using the “life situation index” to present an overview of the life situation of the Dutch population. The overriding goal of the life situation index is to identify and describe social developments for the purpose of (social) policy. The index consists of a combination of indicators in eight social domains: housing, health, participation in sports, social participation, sociocultural leisure activities, ownership of durable consumer goods, holidays, and mobility. In each domain, indicators are chosen which relate to the actual situation (and not to the evaluation of the situation). The indicators describe an outcome, not an input (e.g., the focus is on a person's health, not on the number of doctors nor on how the person evaluates his or her health). Boelhouwer and Stoop (1999) provide a more detailed overview of the backgrounds.

In the 1970s, there were a lot of initiatives in the field of social indicators, resulting in what is now known as the “social indicators movement.” Since the year 2000, again there are a lot of initiatives in measuring quality of life. A common feature of the initiatives is that they want to describe the social situation in countries or municipalities on the basis of social indicators. The actual indicators deployed differ, however. There is no comprehensive and widely supported theory from which the choice of indicators follows logically and uniquely (see also Hagerty et al., 2001). Moreover, there is no general consensus on the definition of the terms used. There is no agreement on what precisely is meant by “quality of life,” “well-being,” or “social exclusion.” Nor is there a good definition of the “life situation.” But there is agreement that the concepts are wide-ranging and that they consist of several domains. The actual choice of domains and indicators then seems to be informed (at least in part) by the choice of concept. Different indicators are used for social cohesion and social capital, although these do overlap to some extent. In Boelhouwer (2010), the following definition



SCP Life Situation Index, Fig. 1 Conceptual framework used for the description of the life situation (Boelhouwer, 2010)

for the “life situation” is used: “the life situation is the whole of individual living conditions which relate to prosperity and well-being.” With this definition, the life situation relates to a state of affairs and to both material and nonmaterial aspects.

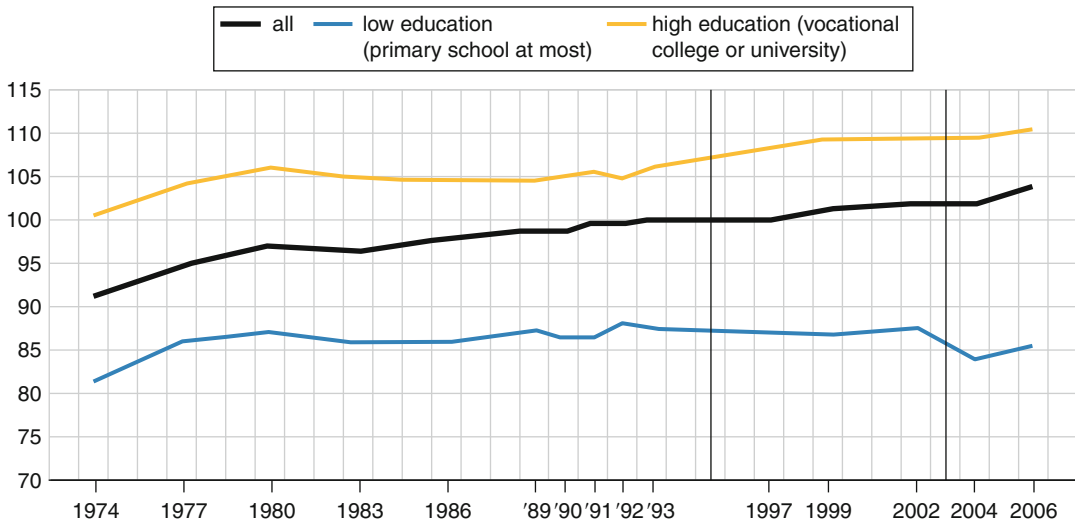
The perspective of the life situation index is clear: The index must be policy relevant, describe the life situation as a whole, have a broad content, and measure the life situation in such a way that progress or deterioration is visible. Moreover, with the index it must be possible to show the trends not only for the Netherlands as a whole but also for various social groups in Dutch society.

Conceptual Framework

Another basic principle is that the description of the life situation is placed in a broader framework

of background information. To that end, a conceptual framework is used, in which the life situation takes center stage, as is shown in Fig. 1 (see Boelhouwer and Roes (2004) for a more detailed description). The conceptual framework also includes determinants of the life situation: in addition to personal characteristics (such as age and household composition), also education, work, health, and income (which in this context are called “resources”). The government plays an important role in the distribution of these resources and thereby in the distribution of prosperity and well-being of the population.

Another part of the model is designated to the environment, which also plays a role in the life situation of citizens. This includes both a physical component (in what city and



SCP Life Situation Index, Fig. 2 Development of the life situation based on level of education, 1974–2006 (Boelhouwer, 2010)

neighborhood does a person live?) and a social component (what is the demographic composition of the neighborhood?).

The life situation index itself includes indicators which relate to the actual state of affairs, not to an (individual) evaluation of it. In the broader conceptual framework, we look at both. We assume that people’s life situation will affect their happiness and satisfaction. However, it appears that the explanatory power of other evaluative indicators on happiness is greater (Boelhouwer, 2010).

And finally, the conceptual framework includes the use of public services. The idea here is that the government helps to prevent social disadvantages from developing, and where these do develop, to compensate them as much as possible. This is especially so in societies with a relative large welfare program, as in the Netherlands.

Because we can use the index to track the life situation over time, we gain valuable insights into social developments: Is the life situation improving or deteriorating? Are there groups who are being left behind? Further, the index provides an insight into developments in a broad range of domains simultaneously because prosperity and well-being are linked in the index. This is

relevant for government policy as existing policies might have to be altered or new policies have to be developed in order to overcome this cumulation of disadvantages.

How Has the Dutch Life Situation Developed Since 1974?

Over the past 30 years, the life situation of the Dutch population, as measured by the life situation index, has improved. This improvement has occurred among all social groups, but not for all groups to the same extent. For example, the life situation of people aged between 55 and 74 years, higher-educated people, single people, and couples without children improved by more than the average, while it improved by less than the average for the lowest-educated and lone-parent families.

Looking at the resources, the life situation of people in work, with a higher education qualification or on a high income, has improved more than the average (see, e.g., Fig. 2 on education).

The determinants (income, education, work, health, age, and household composition) explain differences in the life situation to a large extent: 54 % in 2006 and 45 % in 1974.

There is a positive correlation between the actual life situation and the evaluation of the

SCP Life Situation Index, Table 1 Opinions on several aspects of people's life situation and Dutch society, according to the quality of the life situation,^a 1997 and 2006 (in marks out of 10)

	Poor life situation		Average life situation		Good life situation	
	1997	2006	1997	2006	1997	2006
Home	7.6	7.5	7.9	8.0	8.2	8.3*
Friends and acquaintances	7.3	7.2	7.8	8.0*	7.9	8.3*
Residential environment	7.5	7.3	7.7	7.6*	7.9	7.9
Social position	6.8	6.4**	7.4	7.4*	7.8	7.9*
Household finances	6.6	5.9*	7.4	7.0*	7.9	7.9
Education	6.2	6.3	7.0	7.4*	7.5	7.8*
Life at present		6.7		7.7		8.1
Dutch society	6.3	6.1	6.7	6.5*	6.9	6.6*

Source: Statistics Netherlands (POLS-SLI'97) SCP edition; SCP (CV'06) (Boelhouwer, 2010)

Significance: * $p < .01$ ** $p < .05$ (difference between 1997 and 2006, for each group on each aspect). All differences between people with a poor life situation and people with a good life situation are significant ($p < .01$)

^aPoor life situation: score < 85 ; average life situation: score 85–115; good life situation: score > 115

situation. People with a good life situation are happier and more satisfied than people with a bad life situation (see Table 1). The correlation with the life situation is stronger for personal aspects (such as satisfaction with one's circle of friends and education) than for political aspects (such as satisfaction with Dutch society).

The life situation index is based on a series of data files: surveys which ask detailed questions on all elements of the index, background information, and other aspects of the conceptual framework. Each survey has between 2,000 and 3,000 respondents (see also Boelhouwer, 2002). Between 1974 and 2010, there have been 17 of these surveys carried out. The time series we now have is one of the major advantages of the research: After all, developments can only be outlined with a time series.

Choice of Domains

For one part, the choice of the domains is based on their policy relevance (with the Dutch constitution and political and public debate providing the starting point). And for another part, the choice is based on discussions in the international social indicators movement. The "face validity" of the eight domains also plays a role: In a welfare state, these are the core domains of what is generally understood by the life situation.

In order to construct the life situation index, a relevant selection of core indicators must be made within each domain. The indicators of the life situation must fulfill five criteria, in addition, of course, to the usual criteria applying for indicators in general (such as measurability and reliability). The indicators must:

1. Be interpretable in terms of positive and negative
2. Apply to everyone
3. Be measured at the individual level
4. Be descriptive
5. Be focused on output and realized well-being

A more detailed discussion on the choice of domains and indicators can be found in Boelhouwer (2010).

Combining the Indicators into One Index

Once the domains and indicators have been decided, there are several ways of consolidating the indicators. However, all the ways of constructing an index have their downside, which makes it difficult to choose the "best" way. A major decision is whether or not to weigh the indicators when they are added up together (with different weights for each indicator).

In the construction of the life situation index, different weights for the indicators are used. The weights are decided by statistical means, on the

assumption that the indicators must correlate with each other and with the eventual index (i.e., the life situation). Nonlinear canonical correlation analysis is well suited for this. This method (called ‘Overals’ within the SPSS package) has a number of other advantages, such as the possibility of including (theoretically distinctive) domains in the analysis. Another advantage is that the response categories are rescaled so that, for instance, the difference between engaging in sports and not doing so may not be same as the difference between engaging in one sport or two sports. Another advantage is the possibility to include nominal variables.

Does it actually matter for the measurement of the life situation precisely which domains and indicators are included in the index? The stability analyses conducted in Boelhouwer (2010) and the history of the index show that the choice of domains is more important than the choice of the precise indicators within a domain. In the operationalization of the concept, it is important that the different domains have a shared basis and are connected in such a way that they refer back to the same underlying concept. Boelhouwer’s analyses also show that the combination of random, unconnected domains will lead to an uninterpretable whole.

Using the Five-Situation Index to Measure Quality of Life in Dutch Cities

The life situation index is not only used by the SCP to monitor the life situation of the Dutch population. The index is also used by a number of Dutch cities to monitor their quality of life and to compare it with the national average: Amsterdam, Lelystad, Eindhoven, Haarlemmermeer, Dordrecht, and Purmerend (see Schyns & Boelhouwer, 2004, for a comparison of some of these cities).

Cross-References

- ▶ [Happiness](#)
- ▶ [Life Satisfaction](#)
- ▶ [Subjective Well-being](#)

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SCR

- ▶ [Netherlands Social and Cultural Report](#)

Sculpture

- ▶ [Arts and Quality of Life](#)
- ▶ [Arts in British Columbia, Canada](#)

SDB

- ▶ [Social Desirability Bias](#)
- ▶ [Social Desirability Bias and Context in Sensitive Surveys](#)

SDI

- ▶ [Social Development Index \(SDI\)](#)

SDI-21

- ▶ [Social Difficulties Inventory, Urdu, Punjabi, and Hindi Versions](#)

SDS

- ▶ [Self-Rating Depression Scale \(SDS\)](#)

Secondary Labor Market

- ▶ [Dead-End Jobs](#)

Secondary Prevention Programs, Cardiac Care

- ▶ [Cardiac Rehabilitation](#)

Secondary Research

- ▶ [Meta-Data-Analysis](#)

Second-Hand Recycling

- ▶ [Waste Recycling](#)

Section 8 Public Housing

- ▶ [Public Housing](#)

Security

- ▶ [Attachment](#)

Security and Flexibility at Work

- ▶ [Flexicurity](#)

Segregation

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Description

Generally interpreted as the separation of part of a population from the remainder, segregation as a concept has been widely employed in the social sciences in discussions of inequality between groups defined on a range of characteristics – such as race, ethnicity, religion, sex, gender, and socioeconomic class – and in a variety of contexts. Of those contexts, the most commonly studied is spatial, notably residential, segregation, although other forms – such as segregation in schools and workplaces – are also widely investigated.

One of the clearest examples of spatial segregation, at a variety of scales, was that practised under the South African *apartheid* regime between the 1940s and the 1990s, although the system's roots spread back several centuries. At the largest scale, segregation was by home territory. All individuals classified as a black were allocated to one of a series of “homelands” according to their ethnic group; they had to reside within that territory unless they had a permit allowing them to work and live in the remainder of the country (where other races had the right of residence). Outside the homelands, each settlement was zoned into exclusive zones for

individual races (white, black, Indian, and Cape Coloured), with virtually no racial mixing in residential neighborhoods. Various public facilities were also zoned for exclusive use by one or more of the races – such as parks – and where there was shared use – as with public transport and facilities such as post offices – the races were segregated (blacks were confined to certain seats within a bus, for example, and there were separate entrances to public buildings for blacks and whites).

The *apartheid* regime illustrates one of the three main causes of segregation – *discrimination*; particular areas are scheduled for members of a group (such as the ghettos into which Jews were confined in many European cities), who are not allowed to live elsewhere. There are two others. *Disadvantage* applies when because of certain characteristics, members of a group have a restricted choice of areas in which to live. If, as is normally the case, residential areas vary by the cost of housing, then there will be areas of a city that those with low incomes cannot afford to live in; if members of a defined group – such as Bangladeshis in British cities – tend to be concentrated in low-income occupations, then they are in effect excluded from some neighborhoods and as a consequence constrained to live in those where housing costs are affordable. Finally, there is *choice*. Although they may be able to afford homes in a range of neighborhood types, members of a group may choose to concentrate in particular areas to be close to other group members, for social and cultural reasons (to maintain family and friendship ties, for example, or to use specific facilities, such as churches, schools, and cultural centers), or because they wish to distance themselves from other groups, perhaps through fear (as when members of the Roman Catholic and Protestant religions “withdrew” into separate parts of Belfast during the “troubles” that beset Northern Ireland from the 1960s on, exacerbating the levels of segregation that had long been present there as a result of discrimination and disadvantage experienced by Roman Catholics).

Whereas discrimination can create extremes of segregation – especially when it is legally

instituted – disadvantage and choice are generally associated with some sharing of residential spaces creating different types of mixed neighborhoods and associated other spaces, such as local schools. As this is the usual situation, the extent of segregation then becomes an important research topic, since it is usually associated with economic and social inequalities. Measuring segregation has been a major issue in social science research (much of it with clear policy-relevance), notably in the United States where a burgeoning multicultural society has seen members of a range of ethnic and other sociocultural backgrounds – as well as those of different economic status – experiencing discrimination in some cases, and disadvantage (at least for a period) in almost all, along with varying levels of segregation-preference choice.

Much attention in this literature has focused on single-index measures of segregation, individual numbers (usually on an interval or ratio scale) which depict the degree to which different population groups occupy separate residential spaces, usually within an urban setting. Many such indices have been (and are still being) proposed, with various characteristics, which in a classic paper Douglas Massey and Nancy Denton (1988) grouped into five main types:

1. *Unevenness*. These measures (such as indices of dissimilarity and segregation, some of the most commonly deployed) assess the degree to which two groups live apart from each other across a set of neighborhoods or similar areas into which a city is divided. Most vary between values of 0 (no segregation) and 100 (total segregation). With no segregation between, say, blacks and whites, each area’s population has the same proportion of each group’s total; as the index increases, so those proportions increasingly vary, moving toward the extreme where each neighborhood is either virtually all-black or all-white.
2. *Separateness*. These measures (such as the indices of isolation and exposure) assess the degree of mixture as the average situation across all residential areas. They normally vary between 0.0 (no segregation) and 1.0 (total segregation). If the index of exposure

of blacks to whites is 0.4, for example, then for every black person in the city, the probability of another person chosen at random from the population of the same neighborhood being white is 0.4. The average black in that city is more likely to encounter another black in her/his neighborhood than a white.

3. *Clustering*. These measures assess the degree – usually on a scale of 0–100 or 0.0–1.0 – to which the neighborhoods in which members of a group are most numerous are adjacent to each other: A high index indicates that they are clustered in major blocks within the residential fabric; a low one indicates that there are several clusters in separate parts of the city.
4. *Concentration*. These measure the degree to which the areas where members of a group are most numerous are concentrated in the higher density parts of the urban fabric (a high index indicates living in the highest density areas).
5. *Centralization*. These measure (again on a ratio scale) the degree to which the areas where members of a group are most numerous are concentrated in the central parts of an urban area.

Many variants of these indices have been suggested, including some which also take into account the spatial scale of the pattern, using data for areas of different average size, and a range of statistics such as those specifically developed for spatial analysis (Johnston, Poulsen, & Forrest, 2009; Poulsen, Johnston, & Forrest, 2011; Reardon, 2006). Others have argued for a model-based approach (e.g., Goldstein & Noden, 2003).

A common rationale for using such measures is for the comparative analysis of the situations of different groups, within the same city, across a set of cities, and over time. In the United States, for example, analyses over time have been the basis for, and test of, theories of assimilation and integration associated with the multicultural character of the country's immigration streams. In general, it is argued that most groups experience some discrimination at first (reflecting ignorance and/or fear of the newcomers among

the established residents) and a great deal of disadvantage – notably in schooling and in the labor market, which strongly impacts on their housing market experience. Over time, the discrimination should disappear and much of the disadvantage be removed as the migrants and, especially, their descendants become assimilated within society and economy – they no longer have lower average incomes, for example, and can access most parts of the housing market; any residual segregation then reflects choice rather than constraint (Clark, 2003); their segregation, however, not only allows them to sustain their cultural and social ties during a period of transition but also provides a context within which ethnic businesses can be founded and flourish, providing employment opportunities for individuals who experience difficulties in the wider labor market. This model has been applied successfully to the experience of most European migrants to US cities, but blacks remain heavily segregated (hyper-segregated, according to Massey and Denton (1993)), as are the more recent Hispanic arrivals. Some Asian groups are also substantially segregated, but others – notably the more affluent recent arrivals – are much less segregated, preferring to live in low density ethnoburbs where they form only relatively small proportions of their total population (Li, 2006).

International comparative studies suggest that the US situation – especially that of blacks there – is not replicated elsewhere; segregation levels are much lower in Australia and New Zealand, which have also received substantial streams of migrants from varying cultural backgrounds in recent decades, and are between the two extremes in Canada and the UK (other than Northern Ireland, where segregation of religious groups is very high; Johnston, Poulsen, & Forrest, 2007).

Segregation is of interest not just as a feature of the spatial organization of a country's settlements but also because of its links to several forms of inequality. Many studies of relationships between individual characteristics and behavior on the one hand and local context on the other (often termed neighborhood effects) have shown

that people living in segregated areas where disadvantaged groups are concentrated tend to have lower life chances than anticipated from their individual characteristics alone – whether it be in physical or mental health, educational opportunities and achievement, or criminal behavior. It is also argued that segregation can exacerbate tensions between groups within society, based on relative ignorance and myths that contact could dispel (Hewstone, 2009). As a consequence, public policies have been designed to reduce the levels of segregation in certain circumstances by, for example, insisting that new housing developments be designed to allow for “population mixing,” usually by having dwellings of different sizes and costs in the same neighborhood.

Cross-References

► [Social Inequalities](#)

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SEIQoL

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Synonyms

[SEIQoL: Schedule for the Evaluation of Individual Quality of Life](#); [SEIQoL-DW: Schedule for the Evaluation of Individual Quality of Life-Direct Weighting](#)

Definition

The Schedule for the Evaluation of Individual Quality of Life (SEIQoL) is an interview-based instrument to assess quality of life from the individual’s perspective. It evaluates quality of life on the basis of the areas of life that the individual considers to be most important, their current level of satisfaction in each of these areas, and the relative importance of each area to them at that particular time. There are two forms of the instrument: the full version and an abbreviated version, the SEIQoL-DW (SEIQoL-Direct Weighting).

Description

Background

The SEIQoL was developed by investigators at the Royal College of Surgeons in Ireland in the early 1990s. It originated from the premise that quality of life is subjective in nature: the domains

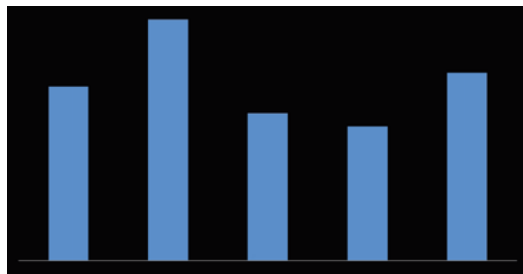
that contribute to quality of life differ according to the individual concerned, as does the importance the individual places on each domain (McGee, O'Boyle, Hickey, O'Malley, & Joyce, 1991). Most quality of life measures impose an external value system on individuals, using standardized questionnaires representing components of quality of life derived from grouped data, which may exclude areas of life that are relevant to the individual while including areas that are not. In addition, the components of quality of life are assumed to have the same significance for each individual and to remain constant with the passage of time. The SEIQoL, in contrast, takes a phenomenological approach to the measurement of quality of life, in which the terms of reference are determined entirely by the individual.

The SEIQoL is based on judgment analysis, a decision analysis technique derived from social judgment theory (Hammond, Stewart, Bremer, & Steinman, 1975), which enables individual judgments to be modeled mathematically and allows quantification of the relative importance of a set of factors to a particular judgment.

Procedure

The SEIQoL is administered to respondents in the form of a semi-structured interview (O'Boyle et al., 1993). There are three stages to the procedure:

1. Domain nomination: The respondent nominates the five areas of life or domains (also referred to as "cues") that they consider most important to their quality of life. Respondents who nominate fewer than five domains are prompted to identify more by the interviewer using a predetermined list of domains.
2. Domain status rating: The respondent is then asked to rate their status in relation to each domain on a vertical visual analogue scale (VAS), labeled "best possible" at the upper extreme and "worst possible" at the lower extreme. The score range for each domain level is 0–100.
3. Judgment analysis: To determine relative importance or weight the respondent attributes to each domain, 30 hypothetical quality of



SEIQoL, Fig. 1 Example of a hypothetical scenario used in SEIQoL judgment analysis

life scenarios are presented, each using the five domains chosen by the respondent. Each scenario consists of five vertical bars representing the domains anchored from "best possible" to "worst possible" at the extremes (Fig. 1). The bar levels vary according to scenario. The respondent is required to estimate on a horizontal VAS overall quality of life for each hypothetical case, from "best life imaginable" to "worst life imaginable." These judgments are then modeled using multiple regression analysis to produce weights summing to 1.0, which represent the relative importance of each domain to the individual's quality of life.

An overall SEIQoL index score can be obtained by multiplying each domain weight by the rating on that particular domain and summing the values of the domains. The index score may range from 0 to 100.

Application

The SEIQoL has been specifically devised as an individual measure and is most suitable for single-subject and within-subject study designs in which respondents act as their own controls. The index score may be used for the purpose of group comparisons, but the individual nature of the SEIQoL is necessarily compromised when data is grouped or summarized.

Feasibility

A median of 40 minutes (range of 24–94 minutes) has been reported as the time taken to administer the SEIQoL (Waldron, O'Boyle, Kearney, Moriarty, & Carney, 1999). The measure has

been used in a variety of populations of both healthy individuals and patients, including severely ill patients. It may impose too high a cognitive demand for use with patients with a heavy disease burden (Waldron et al., 1999) or patients with impairments in cognitive function (Browne et al., 1994).

Internal Validity and Reliability

Internal validity is measured using R^2 , which represents the proportion of the variance in quality of life judgments explained by the nominated domains. R^2 varies with the consistency of the judge so that the value will be low if the respondent weights domains inconsistently or makes judgments independently of bar levels.

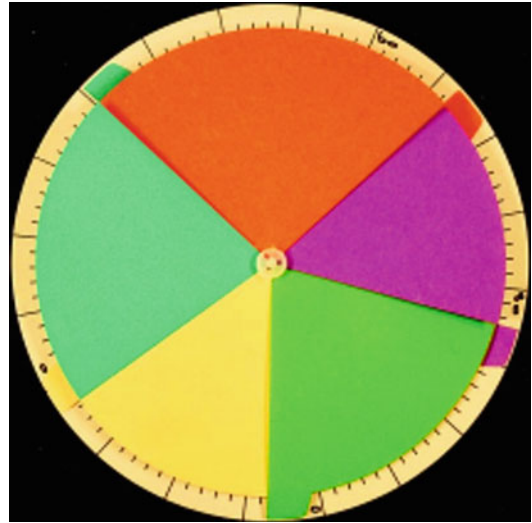
Reliability in judgment analysis is the stability of judgments within a task measured. To determine judgment reliability, the set of 30 hypothetical cases presented to respondents includes ten randomly interspersed replicate profiles. The ten pairs of judgments are then correlated to provide a reliability coefficient, Pearson r .

Values of r and R^2 larger than 0.70–0.75 are generally taken as satisfactory. If both r and R^2 are low, the reliability of the judge may be questioned. A low R^2 with a high r suggests that the domains being used in the judgment analysis are insufficient to predict the judgments obtained.

In a comparison of seven published studies, mean R^2 was found to range from 0.62 to 0.86, with mean r ranging from 0.62 to 0.87 (Waldron et al., 1999). Test-retest reliability of SEIQoL scores among control subjects has been reported as $r = 0.88$ (O'Boyle, McGee, Hickey, O'Malley, & Joyce, 1992).

SEIQoL-DW

The SEIQoL is a complex measure and has been found to be impractical in some contexts. A shorter form, the SEIQoL-Direct Weighting (SEIQoL-DW), replaces the demanding judgment analysis task with a simpler procedure – direct weighting – for weighting the respondent's nominated domains. Direct weighting is achieved using a disk divided into five differently colored, adjustable segments which represent the respondent's nominated domains (see



SEIQoL, Fig. 2 The disk used in direct weighting

Fig. 2). Respondents are asked to indicate the relative importance they attach to each domain by adjusting the segment size.

Direct weighting reduces administration time considerably. Median time to complete the procedure has been reported as 15 min (range 7–40 min) (Waldron et al., 1999). However, comparisons of the weights produced by the different procedures have found that the weighting procedures are not interchangeable and the disparity has been explained as a possible indication of fundamental differences between explicit or conscious thought processes used in the SEIQoL-DW and implicit or unconscious thought processes in the full version (Browne, O'Boyle, McGee, McDonald, & Joyce, 1997; Waldron et al., 1999).

Use of the full form of the SEIQoL has been found to be decreasing, while the shorter version is increasingly being used both in research and clinical practice (Wettergren, Kettis-Lindblad, Sprangers, & Ring, 2009).

Validity and Reliability

Moons, Marquet, Budts, and De Geest (2004) reported a test-retest in the same study among patients who experienced no medical or psychosocial changes over 1 year found no change in index scores.

A systematic review retrieved 25 studies that tested the measure's convergent validity by

examining correlations between the index score and other self-reported measures of QoL, mental health, and social function (Wettergren et al., 2009). Of these, four reported correlation coefficients that were weak (<0.29), 13 moderate (0.30 – 0.49), and eight strong (>0.49). This indicates some convergent validity with existing measures, but indicates also the SEIQoL-DW is measuring something unique not captured in existing measures.

Eight studies in the same review measured discriminant validity using correlations between the index score and self-reported measures of health and functional status. Four of the coefficients were moderate (0.30 – 0.49), while eight were weak (<0.30), suggesting patients' ability to appreciate aspects of life despite illness.

Discussion

Calman (1984) and others have argued for the personal and dynamic nature of quality of life and have recommended an approach to its measurement where individuals create their own definition. The SEIQoL and SEIQoL-DW provide a means to scientifically assess quality of life when defined by the individual. By eliciting the criteria from the individuals being investigated, these measures may be more sensitive to change than standardized measures. The SEIQoL-DW is one of the most widely used individualized quality of life measures. It requires little translation and is applicable across cultures; it is appropriate for use with both patient groups and healthy individuals.

Disadvantages of the full SEIQoL include the time-consuming and labor-intensive interview procedure, which make it a more costly and less practical instrument for use in large-scale studies. However, the development of the SEIQoL-DW has enhanced the feasibility of using this approach in quality of life measurement.

Cross-References

- ▶ [Individual Quality of Life](#)
- ▶ [Individualized Quality of Life Measures](#)
- ▶ [Quality of Life, Conceptualization](#)

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SEIQoL: Schedule for the Evaluation of Individual Quality of Life

- ▶ [SEIQoL](#)

SEIQoL-DW: Schedule for the Evaluation of Individual Quality of Life-Direct Weighting

- ▶ [SEIQoL](#)

Selection

- ▶ [Choice](#)

Selection Framework of Indicators

- ▶ [Indicator Selection Criteria](#)

Selective Democracy

- ▶ [Conceptualizing Democracy and Nondemocracy](#)

Self-Acceptance

- ▶ [Self-Esteem](#)

Self-Actualization

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Synonyms

[Actualizing tendency](#); [Self-fulfillment](#);
[Self-realization](#)

Definition

Self-actualization is variously considered a motive, striving, need, or goal involving behaviors directed toward the fulfillment of personal

potentials. Its meaning is captured in the phrase “becoming the best you can be.”

Description

The roots of the concept of self-actualization can be traced to classic Hellenic philosophy where it received its most notable treatment by Aristotle (Fourth century B.C.E./1985) in his discussion of eudaimonia in the *Nicomachean Ethics*. The question addressed was the nature of a life that could be considered as most worthwhile or most desirable. For Aristotle, eudaimonia was viewed as “activity expressing virtue” (p. 284) where virtue may be thought to be the best within us or excellence. This philosophical perspective is essentialist in that it posits both a generic human nature characteristic of membership in the species *homo sapiens* and an individual nature embodying the particular unique potentials that represent each person’s greatest strengths and which simultaneously differentiate that person from all others. The daimon or “true self” is constituted by one’s capacities, aptitudes, latent talents, and potential excellences. Self-actualization involves our strivings for the realization and fulfillment of those potentials (Haybron, 2008; Norton, 1976).

Within psychology, the concept of self-actualization originated with Kurt Goldstein (1939/1995) as the central motive within the holistic, organismic theory he developed. It was viewed as the driving force underlying the development of personal abilities and was primarily responsible for determining the direction one’s life would take. The concept, under varying terms, was incorporated into a variety of neo-analytic and humanistic theories of personality. For Karen Horney (1950), the key to psychological health involved recognition of one’s real self and efforts toward the realization of its capacities. Carl Rogers (1959) wrote of the actualizing tendency as a natural inclination on the part of “fully functioning” individuals to engage in activities based upon their true nature. He drew a distinction between “actualization of the organism” (or total person) and “actualization of

the self,” a subset of experiences based in part of reflected appraisals of others, and which could therefore be in error. Whereas actualization of the organism was synonymous with psychological health, actualization of the self could be problematic to the extent that the self-concept was not an accurate reflection of a person’s actual capacities, emotions, and experiences.

The most extensive theoretical discussion of self-actualization is found in the writings of Abraham Maslow (1964, 1968, 1970). He defined self-actualization as the “ongoing actualization of potentials, capacities, and talents, as fulfillment of mission (or call, fate, destiny, or vocation), as a fuller knowledge of, and acceptance of, the person’s intrinsic nature, as an increasing trend toward unity, integration, or synergy within the person” (Maslow, 1968, p. 25). (This definition makes self-actualization akin to Rogers’ actualization of the organism). Maslow placed self-actualization at the top of the hierarchy of needs, representing the nature of motivation when individuals were functioning at their best. He posited a prepotency of needs lower in the hierarchy, such that the satisfaction of physiological, safety, security, love/belonging, and esteem needs was seen as necessary before people would begin functioning in terms of self-actualization.

Maslow conducted a study of the personal characteristics of historical and contemporary individuals he considered likely to be self-actualizing. Exemplars included Abraham Lincoln, Jane Addams, William James, Albert Einstein, and Eleanor Roosevelt. The characteristics expressive of self-actualizers were identified as (a) a more efficient perception of reality; (b) acceptance of oneself, others, and nature; (c) a preference for spontaneity, simplicity, and naturalness; (d) being problem-centered rather than self-centered; (e) a quality of detachment and need for privacy; (f) being autonomous, involving the capacity to be independent of culture and environment; (g) showing a continued freshness of appreciation; (h) having peak experiences; (i) showing social interest, that is, a feeling for all mankind; (j) having

deeper, more profound interpersonal relationships; (k) a democratic character structure, that is, seeing all people as of equal worth; (l) a moral sense able to discriminate between means and ends; (m) expressing a philosophic, unhostile sense of humor; (n) highly innovative and creative; (o) showing resistance to enculturation, that is, the ability to rise above narrow cultural interests; and (p) a recognition of one’s weaknesses and imperfections as well as one’s strengths.

Assessing Self-Actualization

The construct of self-actualization has been studied using a variety of instruments. The most widely used of these has been the Personal Orientation Inventory (POI, 150 items, Shostrom, 1963; reviewed by Tosi & Lindamood, 1975). A revision and expansion of the POI was developed under the title of the Personal Orientation Dimensions (POD, 260 items, Shostrom et al., 1976). Other instruments used to assess self-actualization are the Short Index of Self-Actualization (SISA, 15 items, Jones & Crandall, 1986, the Personal Attitude Survey (PAS, 65 items, Sumerlin, 1995), the Brief Index of Self-Actualization (BISA, 40 items, Sumerlin & Bundrick, 1996), and the Measure of Actualization Potential (MAP, 27 items, Lefrançois et al., 1997).

Research on Self-Actualization

There is an extensive body of empirical research linking self-actualization to various aspects of psychosocial functioning. For example, self-actualization has been shown to be positively related to successful identity formation (Beaumont, 2009; Olczak & Goldman, 1975), an internal locus of control (Barling & Fincham, 1979; Warehime & Foulds, 1971), high self-esteem (Leak, 1984; Robertson, 1978). Self-actualization has also been demonstrated to be positively associated with variables involving social interdependence including social interest (Hjelle, 1975), empathy (Fischer & Knapp, 1977;

Leak, 1984), volunteering (Tapp & Spanier, 1973), and intimacy-related self-disclosure (Hekmat & Theiss, 1971; Lombardo & Fantasia, 1976). Correspondingly, self-actualization has been shown to be negatively related to feelings of insecurity (Mathes & Edwards, 1978), neuroticism (Doyle, 1976; Osborne & Steeves, 1981), and authoritarianism and dogmatism (Dandes, 1966; Robertson, 1978).

Critiques of the Self-Actualization Construct

Self-actualization has been labeled an elitist concept in that it is believed to be available to only a small percentage of the population and then only in countries with sufficient wealth as to allow the reliable satisfaction of more basic needs. The exemplars of self-actualization Maslow used in his analysis were so outstanding that it appeared such attainments are unavailable to most people. Indeed, Maslow believed that less than 1 % of the population acted on the basis of self-actualization on any regular basis. In contrast, Rogers saw evidence of actualization of the organism in virtually all children, though this tended to diminish over time as they come to care increasingly about conditions of worth applied by parents, friends, and other representatives of the society. Evidence that self-actualization is a widespread experience can be found in the work of Csikszentmihalyi (1990) in that most people can identify times when they experience flow while engaged in activities entailing a balance of the challenges presented and the skills brought to it.

A critique addressed to humanistic psychology broadly, and to self-actualization specifically, was that it promoted an egoist, individualist, atomistic, self-focused orientation at the expense of caring for others, whether in direct interpersonal relationships or in feelings about one's wider social community. This criticism fails to take into account that among the potentials an individual may possess are one's involving support, care, and love of others, both as individuals and in communities. Strivings for

self-actualization involve efforts to realize those potentials as much as ones that do not have a direct impact on others. Further, when a person sees others striving for self-actualization, there are opportunities for modeling that may make it more likely that observers will be encouraged to strive for their own self-actualization.

Another criticism is focused on the link between self-actualization and the distinctive subjective experiences that accompany striving toward that goal. For some people acquainted with the concepts of self-actualization and peak experiences, such experiences became the primary signifier of a desirable life, however attained, including through the use of psychoactive substances. However, for proponents of self-actualization within both philosophy and psychology, the defining element of a good life is striving for the fulfillment of the person's best potentials, not the subjective experiences that may accompany such strivings.

Cross-References

- ▶ [Eudaimonia](#)
- ▶ [Eudaimonic Well-Being](#)
- ▶ [Flow](#)
- ▶ [Individualism, an Overview](#)
- ▶ [Maslow's Hierarchy of Needs](#)
- ▶ [Motivation](#)
- ▶ [Personal Growth](#)
- ▶ [Self-Acceptance](#)
- ▶ [Self-Esteem](#)

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Self-Anchored Rating Scale

- ▶ [Self-Anchoring Rating Scale](#)

Self-Anchored Scale

- ▶ [Self-Anchoring Rating Scale](#)

Self-Anchoring Rating Scale

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Synonyms

Cantril's ladder; Self-anchored rating scale; Self-anchored scale

Definition

A self-anchoring rating scale is a rating scale with a distinctive feature in that participants are required to define the exact meaning of the extremes of the scale themselves. This process of defining the scale extremes is called "scale anchoring." Following the scale anchoring – as is the case with any other type of rating scale – participants indicate their choice of response on the scale. The self-anchoring rating scale can be presented as an ordered series of bullets or boxes (e.g., an itemized rating scale) or as a line (e.g., a visual analogue scale).

Description

Historically, the self-anchoring scale is a direct outgrowth of the transactional theory of human behavior (Cantril 1965; Kilpatrick and Cantril 1960). According to this theory, the "reality world" is always unique up to some degree because everyone has unique past experiences and purposes (Kilpatrick and Cantril 1960). This notion contrasts with the use of the traditional rating scale, which by defining the anchors of the scale implicitly assumes the existence of some kind of objectively definable reality (the so-called third-person point of view, Kilpatrick and Cantril 1960). Self-anchoring is then "an attempt to apply the first-person approach to

the measurement of psychological variables" (Kilpatrick and Cantril 1960, p. 158). In practice this is achieved by a combination of open-ended probing interviewing, content analysis, and non-verbal scaling (Kilpatrick and Cantril 1960).

The methodology of the self-anchoring scale was originally developed in connection with research on buying behavior (Lefcowitz and Wallston 1973). Nowadays, self-anchoring scales are used for measuring a multitude of constructs such as depression (Nugent 2004), self-esteem (Nugent 2004), perceived social status (Grier and Deshpandé 2001), work values (Lefcowitz and Wallston 1973), and subjective quality of life (Atkinson 1982; Bernheim and Buyse 1984; McIntosh 2001).

In Quality of Life Research, one such self-anchoring rating scale is the ► [Anamnestic Comparative Self-Assessment \(ACSA\)](#) (Bernheim and Buyse 1984). In ACSA, the participant is asked to use their own best and worst periods in life as scale anchors. As participants define the scale anchors according to their own experiences, it can be expected that they consider the entire range of the scale as "plausible" and will use it to assess their current quality of life. Consequently, the resulting scale can be expected to be more sensitive than conventional formats (Möller et al. 2008). Moreover, these scales could be valuable for cross-cultural comparison as they explicitly take the respondent's frame of reference into account when asking them to compare a given situation with their personal situation (Bernheim et al. 2006; Cantril 1965). Apart from improved cross-cultural comparability, self-anchoring scales have other advantages compared to rating scales with fixed anchors. Since the anchors on the self-anchoring scale are defined by the respondents themselves, the projection of the researchers' values on to the participants is minimized (Lefcowitz and Wallston 1973). Another advantage is that by using the frame of reference of the respondent, instead of that of the researcher, the measure has high face validity (Bloom et al. 1999). Furthermore, self-anchoring rating scales are found to yield linear data, that is, interval level of measurement (Hofmans and Theuns 2008; 2010; Hofmans et al. 2007), and

are very useful for repeated measurements (Bemheim and Buyse 1984; Bernheim et al. 2006; Bloom et al. 1999; Nugent 2004). For example, Bernheim et al. (2006) found that the ACSA was more sensitive to objective changes in the respondents' situation than a rating scale with fixed anchors. Finally, a major advantage of the self-anchoring scale is the additional qualitative information provided by analyzing the content of the end anchors.

On the downside, it has been found that for general purposes self-anchoring scales may be overly demanding, resulting in significant nonparticipation and data loss (Hofmans et al. 2009; Van Acker and Theuns 2010). Recent formats in which the self-anchoring procedure was made less demanding by using a multiple choice format instead of the open ended "describe the worst and best periods of your life" have demonstrated that lessening the demand characteristics of the scale can be achieved without losing the improved sensitivity of the self-anchoring scale (Vandercammen and Theuns 2010).

Cross-References

- ▶ [Anamnestic Comparative Self-Assessment \(ACSA\)](#)
- ▶ [Cantril's Ladder](#)
- ▶ [Content Analysis](#)
- ▶ [Repeated Measures Analysis](#)
- ▶ [Sensitivity](#)

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Self-Anchoring Scales in Internet Surveys

- ▶ [Self-Anchoring Scales in Web Surveys](#)

Self-Anchoring Scales in Online Surveys

► [Self-Anchoring Scales in Web Surveys](#)

Self-Anchoring Scales in Web Surveys

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Synonyms

[Self-anchoring scales in Internet surveys](#);
[Self-anchoring scales in online surveys](#)

Definition

Self-anchoring scales in Web surveys are applications of self-anchoring rating scales in Web-based questionnaires.

Description

Although Web-based surveys may have serious drawbacks in specific research situations, like issues related to coverage and nonresponse (Dillman, 2007), they also enable researchers to include participants from remote populations, depending only on the availability of Internet access. Moreover, particularly in experimental psychological studies where equivalence of groups participating in different conditions is considered most important, it is deemed unnecessary to collect data from a representative sample of a population. In these situations, Web-based surveys and survey experiments provide a cost-effective and relatively quick alternative to mail or face-to-face surveys.

Self-anchoring rating scales have been used in a wide variety of research settings, among which ► [quality of life](#) research (e.g., Atkinson, 1982; Bernheim & Buyse, 1984; Cantril, 1965; McIntosh, 2001). Self-anchoring rating scales are conjectured to yield results that are comparable across cultures (Bernheim et al., 2006; Cantril, 1965), which is a major advantage when conducting international studies. International studies, in turn, become more feasible when the Internet is used as a medium for data collection. International mail may be inefficient and cumbersome and may cause delays in the data collection process. Personal interviews are often even less feasible because of coordination issues and travel and personnel costs. Therefore, in some situations, a Web-based survey can be an attractive alternative to traditional survey methods, especially in cross-national studies. In such studies, self-anchoring scales may perform better than regular rating scales because of their deemed cross-cultural comparability (Bernheim et al., 2006; Möller et al., 2008). Research on the use of self-anchoring scales has however raised some concerns regarding the applicability of self-anchoring scales in Web-based studies.

Typically, a self-anchoring rating scale requires participants to go through two successive steps in order to obtain the rating that is inquired for: first comes the “anchoring procedure” where participants define their personal scale extremes and second comes the actual rating. This procedure may be perceived as “demanding” by participants, especially in case the extreme anchors refer to personal extremely negative and extremely positive life experiences. Moreover, while traditional rating scales require a single rating to yield a measure, self-anchoring rating scales require at least three assessments: at least two for the anchoring procedure and consecutively the actual rating (see ► [Anamnestic Comparative Self-Assessment \(ACSA\)](#) in this encyclopedia).

Probably the requirements imposed by the anchoring procedure are related to issues of nonresponse, or early survey break-off. Reports of high nonresponse were made in an earlier study with self-anchoring scales

(Hofmans, Theuns, & Van Acker, 2009). However, the process of scale anchoring, which is quite demanding for participants, is considered crucial to self-anchoring rating scales, as it provides a frame of reference according to which questions are to be answered (Cantril, 1965). One example of a self-anchoring rating scale is the ACSA, where the anchoring procedure requires respondents to provide a detailed description of their best and worst periods in life. In early studies, ACSA was used in personal interviews. It seems evident that a personal interview format is more appropriate when participants need to think of and share personal, often intimate extreme (cfr., scale extremes) life experiences. The casual, impersonal format of Web surveys does not seem suitable to inquire on such sensitive information. Talking about very intimate things to an interviewer in a situation where there is a good personal contact seems less tedious than writing it all down, which is required when using self-anchoring rating scales in a Web-based survey.

The consequences of the extra burden of self-anchoring scales in surveys were studied by Van Acker and Theuns (2010) with an experimental Web survey in which two parallel versions of the same questionnaire comprised of either self-anchoring rating scales or classical rating scales with fixed anchors. It was found that even a relatively short questionnaire, which took less than 5 min on average to complete with fixed anchors, took about three times as long with the self-anchoring variant. Compared to the fixed anchor version, about 20 % more dropout (participants who had consented to participate and yet quit before finalizing the entire questionnaire) was observed in the self-anchoring version of the survey. The additional burden of describing the anchoring procedure was also reflected in the more negative subjective ratings of the questionnaire itself (Van Acker & Theuns, 2010).

In the same study, it was tested if self-anchoring scales would be less affected by contextual bias. This study was inspired by

earlier experiments with Web-based surveys (Couper, Tourangeau, & Kenyon, 2004; Couper, Conrad, & Tourangeau, 2007) where it was found that pictures with a dimensional overlap with the topic under study (e.g., a picture of a healthy person vs. a sick person in a survey on ► [health-related quality of life](#)) may cause response bias. In a replication of the studies by Couper and colleagues, Van Acker and Theuns (2010) expected that self-anchoring scales would be less affected by such context effects than rating scales with fixed anchors (because the self-defined scale anchors would be the main frame of reference rather than the picture). However, there was no evidence for a reduction of the visual context effect found by Couper and his colleagues (Van Acker & Theuns, 2010). An unexpected finding in this latter study was that a main effect of rating scale type was found, indicating that quality of life ratings obtained with self-anchoring scales were on average more positive than ratings obtained with fixed anchor scales (Van Acker & Theuns, 2010). Probably this latter finding can be explained by the fact that in general, quality of life scores are rather positive in Western European countries, combined with the self-anchoring which may make the extremes of the scale be perceived as more realistic (self-defined) than the scale ends of a fixed anchor scale. This finding certainly raises concerns about the comparability of responses obtained by these two different ratings scales. This far, no studies have investigated this finding further, although it seems interesting to find out which of the two scale types yields more accurate and valid responses.

In conclusion, it seems that the additional burden posed by the scale anchoring procedure causes important problems in Web-based surveys, unless, for example, a less demanding format with multiple choice answers could be utilized as proposed in this current encyclopedia for the ACSA. It therefore seems inadvisable to use self-anchoring scales in Web-based surveys. A recent adaptation of the scale anchoring procedure by Vandercammen and Theuns (2010) and

Bernheim, Hofmans, and Theuns (2013, this volume) may reduce completion time and solve the issue partially. By providing a fixed set of predefined situations which describe the end anchors (e.g., the positive extreme in a quality of life context being: graduation, marriage, birth of a child, etc.), the extra effort required to define these end anchors (i.e., to provide a written description) is possibly reduced.

Cross-References

- ▶ [Anamnestic Comparative Self-Assessment \(ACSA\)](#)
- ▶ [Self-Anchoring Rating Scale](#)

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Self-Assessed Health

- ▶ [Subjective Health and Subjective Well-Being](#)

Self-Assessed Overall Health

- ▶ [SF-8™ Health Survey](#)

Self-Assessment, Quality of Life

- ▶ [Quality of Life Self-Assessment](#)

Self-Competence

- ▶ [Perceived Competence](#)

Self-Concept

- ▶ [Independent/Interdependent Self](#)
- ▶ [Self-Esteem](#)

Self-Confidence

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Synonyms

[Brunswikian model](#); [Error models of self-confidence](#)

Definition

Self-confidence refers to “people’s sense of competence and skill, their perceived capability to deal effectively with various situations” (Shrauger & Schohn, 1995, p. 256).

Description

In confidence research, two trends can be distinguished. Within one trend confidence is viewed as “certainty in being able to handle something” (Stajkovic, 2006, p. 1208). The other trend focuses on the accuracy of judgments about a perception or an outcome.

Confidence as “Certainty in Being Able to Handle Something”

Being defined as “people’s sense of competence and skill, their perceived capability to deal effectively with various situations” (Shrauger & Schohn, 1995, p. 256), self-confidence appears to be an evaluative component of self-concept, a person’s *cognitive representation* of herself or himself. Even though the cognitive nature of self-confidence is emphasized, some literature, nonetheless, suggest that self-confidence encompasses affective and behavioral components as well (Cramer, Neal, & Brodsky, 2009; Shrauger & Schohn, 1995). Feeling of control is an affective manifestation of self-confidence (Shrauger & Schohn, 1995). Readiness to engage in activities is a behavioral correlate of self-confidence

(Shrauger & Schohn, 1995); however, it has been suggested that a self-confident judgment is a by-product of behavior rather than an agent of action (Cramer et al., 2009).

Confidence judgments may be of a global character (i.e., representing general self-appraisal that is consistent across numerous areas of functioning) or domain specific, that is, self-appraisal is limited to one specific domain (Shrauger & Schohn, 1995). Some evidence suggests that these two types of confidence judgments may have different behavioral correlates: for example, domain-specific confidence is related to actual performance stronger than the general confidence (Shrauger, 1972), whereas general confidence is stronger related to self-esteem (Shrauger & Schohn, 1995).

Antecedents of confidence judgments include perceived capabilities (the greater the perceived ability to handle something, the higher the confidence) and perceived previous experience (i.e., the more positive previous experience is, the higher confidence) (Stajkovic, 2006). Besides, confidence judgments are influenced by selective appraisal (systematic biases in people’s appraisals of their capabilities), self-presentational influences (deliberate distortions in their self-descriptions), and temporal variations (Shrauger & Schohn, 1995).

The interrelationship between self-confidence and other facets of self-concept is a matter of discussion. When defined in terms of certainty in being able to handle something, self-confidence is not clearly differentiated from other components of self-evaluation, such as self-efficacy (Cramer et al., 2009) or self-worth (Shrauger & Schohn, 1995). Indeed, the definition of self-confidence, given by Shrauger and Schohn (1995) is conceptually very similar to the definition of self-efficacy as one’s perceived ability to effectively accomplish something (Bandura, 1997). In attempts to differentiate between self-confidence and self-efficacy, the concept of confidence was criticized as “a nondescript term that refers to strength of belief but does not necessarily specify what the certainty is about” (Bandura, 1997, p. 382). Self-efficacy, on the other hand, reflects strength of

certainty *and* affirmation of capability (Bandura, 1997). In other words, one can be confident about succeeding or failing in a task, whereas self-efficacy implies belief in ability to handle the task. It has been also suggested that a confidence judgment results from an action, being a by-product of behavior, whereas self-efficacy acts as agent of change (Cramer et al.). As regards distinction between self-confidence and self-worth, it has been argued that self-worth is less contingent upon the appraisal of one's abilities (Shrauger & Schohn, 1995). There have also been attempts to build hierarchical models, where confidence is viewed as a higher-order construct, manifested by other variables, such as hope (knowing what to do and how to do it), self-efficacy (believing that one can do the task), optimism, and resilience (Stajkovic, 2006).

Confidence and Accuracy of Judgments

The literature on accuracy of judgments greatly focuses on the phenomenon of *overconfidence*, due to its high applied importance. The literature distinguishes three types of overconfidence (see Moore & Healy, 2008, for review): (a) overestimation of one's performance (ability, chance of success), (b) believing themselves to be better than others (overplacement), and (c) excessive certainty regarding the accuracy of one's beliefs (overprecision). In studies on overprecision (so-called calibration studies), participants usually face a series of questions (e.g., "Which city has more inhabitants? (a) Hyderabad or (b) Islamabad?"; Gigerenzer, Hoffrage, & Kleinbölting, 1991, p. 506). Participants give their answer and indicate their confidence in the answer on a 50–100 % scale. The proportion of correct answers is compared to the respondent's confidence judgments. The overconfidence effect refers to situations "when the confidence judgments are larger than the relative frequencies of the correct judgments" (Gigerenzer et al., 1991, p. 506). Sources of overconfidence are addressed by several models, such as Brunswikian (or, ecological) model (e.g., Gigerenzer et al.) and error models (e.g., Erev, Wallsten, & Budescu, 1994).

According to the Brunswikian model, overconfidence is an artifact of experimental tasks, which usually ignore ecological relevance of experimental questions for the participants (see Gigerenzer et al., for details). Error models suggest that overconfidence occurs due to random error. Interestingly, overestimation, overplacement, and overprecision are not necessarily at congruence with each other. For example, a person can overestimate the risk of being a victim of a terrorist attack yet believe he or she is at lower risk than others (Lerner, Gonzalez, Small, & Fischhoff, 2003). A number of moderators of overconfidence are identified, such as task difficulty, personal experience, controllability, observability, item selection, and cognitive vs. perceptual judgments (see Moore & Healy, 2008, for review).

Self-Confidence, Performance, and Subjective Well-Being

Higher self-confidence is associated with expressing positive emotions more frequently and positively viewing one's future (Shrauger & Schohn, 1995). Being more optimistic about the future, in turn, leads to better coping with stressful situations and having less adverse impact of such situations on physical well-being (see Sheier & Carver, 1992, for review). Self-confidence can also be connected to subjective well-being indirectly, by enhancing other components of self-concept, such as self-esteem (on the interrelation between self-confidence and self-esteem, see Shrauger & Schohn, 1995), or self-efficacy, which is a predictor of work-related performance (Judge & Bono, 2001; Stajkovic & Luthans, 1998) and job satisfaction (Judge & Bono, 2001).

Realistic confidence judgments are important in everyday functioning. For example, overconfidence may affect people's performance by miscalculating a probability of a certain outcome. Extensive work has been conducted in domains of health risky behavior, financial decisions (e.g., Glazer & Weber, 2007; Koellinger, Minniti, & Schade, 2007; Malmendier & Tate, 2005; Slovic, 2001), and accuracy of eyewitness judgments (see Sporer et al., 1995, for a review).

Cross-References

- ▶ [Optimism](#)
- ▶ [Positive Affect](#)
- ▶ [Self-Concept](#)
- ▶ [Self-Efficacy](#)
- ▶ [Self-Esteem](#)
- ▶ [Self-Evaluation](#)
- ▶ [Subjective Well-Being](#)

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Self-Construal

- ▶ [Independent/Interdependent Self](#)

Self-Control

- ▶ [Choice](#)
- ▶ [Feeling Safe](#)

Self-Control Theory and Violence

- ▶ [Family Features and Violent Behavior](#)

Self-Culture Fit

- ▶ [Independent/Interdependent Self](#)

Self-Deception

- ▶ [Self-Enhancement](#)

Self-Definition

- ▶ [Independent/Interdependent Self](#)

Self-Determination

- ▶ Empowerment
 - ▶ Individual Autonomy
-

Self-Determination Theory

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Definition

Self-determination theory (SDT) is a broad, motivational theory of development, personality, and wellness in social contexts. Most historical and contemporary motivation theories have treated motivation as a unitary concept that differs in amount but not type, but SDT has focused on differentiating types of motivation to make predictions about performance and psychological-health outcomes. The theory in particular distinguishes between *autonomous* and *controlled motivations*. To be autonomous involves acting with a full sense of volition, endorsement, and choice, whereas to be controlled involves feeling externally pressured or compelled to behave. Autonomous motivation encompasses [intrinsic motivation](#) and well-internalized extrinsic motivation, whereas controlled motivation encompasses regulation by external factors such as externally administered rewards and punishments or by partially internalized (i.e., introjected) contingencies such as ego-involvement, contingent self-esteem, and avoidance of shame and guilt.

SDT also postulates that there are three basic psychological needs – needs for ▶ [competence](#), autonomy, and relatedness – that universally must be satisfied for people to be autonomously motivated, to perform effectively on heuristic tasks, and to evidence high psychological well-being. Accordingly, social contexts that

support satisfaction of these psychological needs promote autonomous motivation and the important outcomes associated with it, whereas social contexts that thwart satisfaction of the needs decrease autonomous motivation and lead to more impoverished individual and interpersonal outcomes.

Description

SDT begins with an organismic metatheory, which refers to a set of philosophical assumptions about the nature of people. The theory assumes that human beings are inherently active, with liberally evolved tendencies toward assimilation, seeking and mastering of challenges, and the integration of new experiences. Within SDT, the basic psychological process through which this occurs is referred to as *organismic integration*, which is a manifestation of people's proactive, synthetic nature to become more differentiated and coherent in functioning.

The theory recognizes that, although these organizational processes are inherent to human nature, they do not develop fully or operate effectively without certain psychological nutrients. As such, the SDT metatheory involves a dialectic relation between the *active organism* and *social contextual supports*. Specifically, effective functioning of organismic integration requires the ongoing satisfaction of basic psychological needs for competence, autonomy, and relatedness. Supports for need satisfaction in the social context (both developmentally and contemporaneously) will facilitate growth, engagement, effectiveness, and well-being, whereas thwarts from the social context will catalyze defense, rigidity, various forms of psychopathology, and need substitutes that motivate behavior but do not promote the most effective functioning and wellness.

Although self-determination theory (SDT) is a macro-theory, it is comprised of six mini-theories that have been developed at different times to explain a circumscribed set of motivational phenomena that have emerged from programs of research in laboratory and

applied settings. Although the six mini-theories together do not constitute the whole of SDT, most phenomena elucidated within this theoretical tradition can be located within one of these mini-theories. The first of the mini-theories is cognitive evaluation theory, which was formulated to explain the effects of social contexts on intrinsic motivation. The second, organismic integration theory, explains phenomena concerned with the internalization and integration of extrinsic motivation. The third is causality orientations theory, a theory of general individual differences in motivational orientations. The fourth, basic psychological needs theory, addresses the issue of psychological well-being and serves to tie together the first three mini-theories. The fifth is goal content theory, which is concerned with the *what* or content of people's goals and the processes through which the goals developed. Finally, the sixth is relationships motivation theory, which concerns the processes that promote high-quality close relationships. We now address these in turn.

Cognitive evaluation theory (CET) explains a set of phenomena related to *intrinsic motivation* and the social contextual conditions that undermine, maintain, or enhance it. Intrinsic motivation refers to the inherent motivation that energizes people to do things they find interesting and enjoyable. A prototypical example of intrinsic motivation is the play of young children; play is spontaneous, and although it spawns competencies, it is done *for its own sake*. When people are intrinsically motivated for an activity, they find it interesting, they derive personal rewards directly from doing it, and they are fully willing to do it even if they receive no other reward or consequence.

Intrinsic motivation is the prototype of self-determination, which is why the SDT research began with the study of intrinsic motivation. Such research has found, for example, that extrinsic rewards – the so-called “carrot and stick” approach to motivation – as well as deadlines, evaluations, and close supervision tend to diminish people's intrinsic motivation for the activity they are doing (e.g., Deci, Koestner, & Ryan, 1999), whereas providing choice and

acknowledging people's feelings tend to enhance their intrinsic motivation. SDT explains this in terms of external events such as rewards, punishments, and evaluations tending to thwart people's feelings of autonomy, whereas choice and acknowledgments tend to support their autonomy satisfaction, thus affecting their intrinsic motivation accordingly. Other research has revealed that positive feedback typically enhances intrinsic motivation, whereas negative feedback tends to undermine it. This is explained in terms of the basic psychological need for competence: positive feedback satisfies the competence need, whereas negative feedback thwarts it, thus having, respectively, the positive and negative effects on intrinsic motivation. Still other research has shown that the more intrinsically motivated people are, the better they learn conceptual material, the more effective they are in solving problems, the more creative their work, and the more well-being they display. Together, this research highlights the critical roles played by supports for competence and autonomy in fostering intrinsic motivation, which is critical in education, arts, sport, and many other domains. For a review of this CET research, see Deci and Ryan (1985).

Organismic integration theory (OIT) is a theory about the various types of extrinsic motivation that result from different degrees of internalization and transformation of the value and regulation of a behavior. OIT suggests that extrinsic motivations can be more or less autonomous, with distinct advantages being associated with the more autonomous extrinsic motivation.

The classic type of extrinsic motivation, based in the *carrot and stick* view of motivation, is *external regulation*, which involves a clear contingency between a behavior and some external consequence that is contingent upon it. External regulation is the least autonomous type of extrinsic motivation; indeed, it is the type that has frequently been found to undermine autonomy and intrinsic motivation. At times, extrinsic motivation is partially internalized – it is *taken in* by people but not really accepted as their own – and in such cases, the behavior is

regulated through *introjected regulation*. When acting from introjects, a person is engaged in behavior either to avoid guilt or disapproval or to gain esteem or approval. Introjected actions are thus relatively low in autonomy, because, even though the motivation is internal, it is still pressuring or controlling in nature. Still more autonomous is *identified regulation*, which is the motivation that results when a person has internalized and personally identified with the value of an action. Here actions are consciously endorsed as worthwhile and important. Further, identifications can remain relatively isolated from other aspects of oneself, or they can be well assimilated with other values, needs, feelings, beliefs, and regulations. The regulation in this later case is called *integrated regulation*, and it represents the most autonomous form of extrinsic motivation. It is important to note that when extrinsic motivation has been fully internalized and integrated, it does not necessarily become intrinsic motivation but remains an autonomous form of extrinsic motivation. These two types of motivation do share many characteristics and qualities, but intrinsic motivation is based in being interested in the activity, whereas integrated regulation is based in believing that the activity is personally important for one's own values and goals. OIT also addresses the development of more autonomous forms of regulation of people's emotions, with the most autonomous types involving awareness of the feelings and choice about whether and how to express or withhold emotions and emotion energized behaviors (Roth, Assor, Niemiec, Ryan, & Deci, 2009).

An abundance of research has confirmed (1) that social contexts that are more supportive of satisfaction of the psychological needs for autonomy, competence, and relatedness will conduce toward deeper internalization and more autonomous regulation and (2) that the more autonomous types of extrinsic motivation are associated with more positive performance and wellness outcomes than are the less autonomous types (see Ryan & Deci, 2000).

Causality orientations theory (COT) describes individual differences in people's tendencies to orient toward environments and regulate their

behaviors based on their general orientations toward the three loci of causality associated with the three causality orientations (Deci & Ryan, 1985). The *autonomy orientation* involves persons acting out of interest in and valuing of what they are doing, has an internal perceived locus of causality, and is associated with people generally acting in an autonomous way across domains and contexts. The *controlled orientation* indexes people orienting toward external or introjected cues; behaving to attain rewards, feelings of self-worth, or approval from others; perceiving the locus of causality to be external; and being generally controlled across situations. The *impersonal orientation* is characterized by anxiety concerning incompetence or unlovability, often involves orienting toward cues that seem to confirm their fears, entails a high degree of *amotivation*, and has an impersonal perceived locus of causality associated with feeling like they have no control over outcomes that seem important to them.

COT maintains that all people have each orientation to some degree, so predictions can be made based on people's level of each orientation. Different contexts may tend to prime one or another of these orientations for people, thus making it more salient to them, but in general, COT is concerned with the enduring and relatively stable individual differences that people *carry with them* and that influence how they feel and behave. Research indicates that the autonomy orientation is strongly related to effective performance, especially on heuristic activities, and to a strong sense of psychological well-being and health; that the controlled orientation is related to more rigidity and defensiveness and to a lower level of wellness; and that the impersonal orientation is associated with the poorest performance and with significant ill-being.

The orientations are viewed as social-developmental outcomes, as the orientations are generally considered to develop over time as people experience different qualities of social environments. Nonetheless, other individual differences bear on or have been associated with the strength of each individual orientation. To the

degree that individuals have been in environments that provide support for the satisfaction of autonomy, competence, and relatedness needs, they are likely to have a high level of the autonomy orientation; to the degree that they have been in environments that provide some support for competence and relatedness but tend to thwart satisfaction of the autonomy need, they are likely to have a high level of the controlled orientation; and to the degree that they have been in environments that tend to thwart all of their needs, they are likely to develop a high degree of the impersonal orientation.

Basic psychological needs theory (BPNT) highlights and elaborates the nature of evolved psychological needs and their relations to psychological health and well-being. BPNT formalized the propositions that (1) there are three basic psychological needs – the needs for competence, autonomy, and relatedness, which are universal and essential for the psychological well-being and optimal functioning of all people – and (2) satisfaction versus thwarting of these needs will impact wellness invariantly, so (3) social contexts that support the three needs will promote well-being and effectiveness, whereas those that interfere with the needs will promote ill-being and less effective functioning. The theory further argues that all three needs are essential for wellness such that if any is thwarted, there will be discernible negative consequences. Because basic needs are universal aspects of functioning, BPNT has prompted research across developmental epochs and across many cultural settings (see Deci & Ryan, 2000).

The specification of BPNT also completed the functional specification of what need satisfaction ultimately supports, when combined with CET, OIT, and COT. Need satisfaction (as opposed to thwarting) predicts intrinsic motivation and perceived competence (CET), internalization and integration of regulatory processes for the development and functioning of autonomous extrinsic motivation and emotional expression (OIT), and development of the autonomous motivational orientations (COT). As well, BPTN shows how these motivations, regulations,

and orientations would in turn lead to and predict greater wellness and healthier functioning.

Goal contents theory (GCT) began with a distinction between two categories of aspirations or goals that were empirically derived: intrinsic goals such as personal growth, close relationships, and community involvement that are gratifying in their own right and also satisfy the basic psychological needs and extrinsic goals such as accumulation of wealth, attractive appearance, and popularity or fame that are less directly satisfying of basic needs and seem to gain their importance from an underlying anxiety resulting from developmental thwarting of the basic needs. The theory was first formulated in terms of people's individual differences in the degree to which they place importance on the goals in each of these two categories (Kasser & Ryan, 1996) and the relations of these variables to types of motivation and to psychological health and well-being. It was then extended to encompass the prompting of the different goals in specific situations (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004), with intrinsic goal framing being more positively related to learning and performance than was extrinsic goal framing because of the goals differentially affording basic need satisfactions.

Relationships motivation theory (RMT) concerns interactions with others and the degree to which they represent supports for our needs and enhance our sense of self (Ryan, La Guardia, Solky-Butzel, Chirkov, & Kim, 2005). That is, the theory addresses the qualities that differentiate interactions that provide true supports from those that are simply social contacts. One of the interesting aspects of close relationships is that they tend to be mutual, with each partner both giving and receiving, unlike the relationships with authority differentials. In the close relationships, two people negotiate ways for getting their relatedness and autonomy needs satisfied without having to sacrifice either for the other. Research has shown that the need for relatedness inclines people to develop satisfying relationships but that close attachments and relationship satisfaction also require satisfaction of the autonomy need

within the relationship (La Guardia, Ryan, Couchman, & Deci, 2000). SDT distinguishes autonomy from independence, such that people could easily be autonomously dependent on their partners. Further, studies have shown that there tends to be mutuality of autonomy and autonomy support within close relationships such that giving autonomy support to one's partner provides need satisfaction to the giver as well as to the receiver (Deci, La Guardia, Moller, Scheiner, & Ryan, 2006). RMT also addresses the phenomena of altruism, by highlighting the evolved satisfactions that volitional helping behaviors can engender in both helper and recipient (Weinstein & Ryan, 2010).

Other topics of interest have emerged as SDT has expanded both theoretically and empirically in its examination of personality integration, effective functioning, and wellness. For example, exploration of the role of [mindfulness](#) as a foundation for being autonomously motivated has led to refinement in both measurement and theorizing about awareness. Study of the social environmental factors that facilitate intrinsic motivation led to a theory and measurement strategy regarding *vitality*, which is an indicator of both mental and physical wellness. Work on vitality in turn uncovered the remarkably positive impact on well-being of *experiencing nature* and of the *weekend effect*, which indicates that most people are psychologically healthier on weekends because they experience diminished satisfaction of psychological needs in work environments. Research within the SDT tradition has also examined two different types of personal *passions*, with individuals being obsessively or harmoniously passionate as a function of internalization processes (Vallerand, 2008). And cross-cultural tests of SDT have confirmed the importance of the basic psychological needs across many diverse cultures and have led to an increased understanding of how economic, political, and cultural forms impact autonomy and thereby psychological wellness (e.g., Chirkov, Ryan, Kim, & Kaplan, 2003). Research on well-being has also led to a clearer understanding of *hedonic and* [eudaimonic well-being](#) and forms of living (Ryan, Huta, & Deci, 2008).

These are just a few examples of how the generative framework of SDT has enhanced research on a variety of processes that interest scholars in psychology and other disciplines.

Applications of SDT can be found across a wide range of domains such as education, work and organizations, religion, sport and physical activity, health care and medicine, parenting, virtual environments and media, environmental sustainability, psychopathology, and psychotherapy (e.g., Deci & Ryan, 2008; Ryan & Deci, 2008; Ryan, Patrick, Deci, & Williams, 2008). Across these domains, research has looked at how controlling versus autonomy-supportive environments impact persistence, performance, social functioning, and wellness. Further, relational and competence supports are seen as interactive with supports for volition in fostering engagement and value within specific settings and within domains of activity. This body of research in applied areas has led to a greater understanding of how to promote maintained, volitional motivation, active engagement, high-quality performance, and psychological wellness in people's lives while also highlighting the costs of social-regulation techniques that interfere with the optimal motivation and wellness that reflects full human functioning.

Cross-References

- ▶ [Competence](#)
- ▶ [Eudaimonic Well-being](#)
- ▶ [Intrinsic Motivation](#)
- ▶ [Mindfulness](#)

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Self-Efficacy

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Definition

Self-efficacy “refers to beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997).

Description

Self-efficacy, a major component of Bandura’s social cognitive theory, is the belief in one’s capacity to complete a task, rather than the relevant skills possessed (Bandura, 1997). Both are needed to function effectively, with belief affecting the course of action, effort applied, perseverance in the face of adversity, strengths of negative affects experienced, and level of accomplishment (Bandura, 1995). Self-efficacy (judgment of capability) is distinct from ► [self-esteem](#) (judgment of self-worth), ► [locus of control](#) (belief in how outcomes are determined), and outcome expectancies (judgment of likely outcomes from performance) (Bandura, 2006).

Perceived self-efficacy affects thought processes, the level and persistence of ► [motivation](#), and affective states (Bandura, 1997). Low self-efficacy is likely to result in avoidance, poor ► [motivation](#), tendency to give up quickly, low aspiration, and weak commitment to goals

(Bandura, 1997). In contrast, high self-efficacy promotes interest, involvement, setting of challenging goals, and high levels of effort to attain them (Bandura, 1997). Consequently, recovery of sense of self-efficacy following failures is rapid in those with high self-efficacy and problematic in those without (Bandura, 1997).

Self-efficacy is a situational set of beliefs, rather than a general trait (Bandura, 1997). It “is conceptualized and assessed in terms of particularized judgments of capability that vary across realms of activity, different levels of task demands within a given activity domain, and under different situational circumstances” (Bandura, 1995). Efficacy beliefs vary with level of performance demands, in generality and strength (Bandura, 1997). They also vary across different behaviors (Bandura, 1997). A mathematician is unlikely to have the same level of self-efficacy for solving mathematical problems and playing professional sport. People act on their domain-related efficacy beliefs, and domain-related scales of self-efficacy predict behavior better than a general self-efficacy scale (Bandura, 1997). However, some degree of self-efficacy transfer may occur in domains with similar subskills, with generic self-management strategies or in situations of codevelopment of competencies (Bandura, 2006). While its use has been considered problematic by some (Bandura, 1997), the concept of generalized self-efficacy is popular in the literature. General self-efficacy has been defined as one’s perceived efficacy to perform across a range of situations (Judge, Erez, & Bono 1998). Task-specific self-efficacy has been shown to discriminate performance, whereas general self-efficacy did not (Stanley & Murphy, 1997). General self-efficacy scales have also been found to measure ► [self-esteem](#) (Stanley & Murphy, 1997).

Determinants of Self-Efficacy

Sources of information for increasing self-efficacy are enactive mastery experiences (performance accomplishments), vicarious learning, verbal persuasion, and self-appraisal of affective

and physiological responses (Bandura, 1977, 1997). Mastery experiences are successful performances of the target behavior and the most effective means of increasing self-efficacy (Bandura, 1997). Vicarious learning refers to social modeling by way of seeing similar others succeed via perseverance (Bandura, 1997). Verbal persuasion involves realistic positive appraisals (Bandura, 1997). Positive self-appraisal of physiological indicators and reduction of stress levels and negative emotions also affect self-efficacy (Bandura, 1997).

Self-Efficacy and Health

Three stages in the process of ► [health behavior change](#) (intention, planning, and behavior) are all moderated by self-efficacy (Reuter et al., 2010). As each stage is a different task, it has been posited that three different types of self-efficacy are involved: action self-efficacy (belief in one’s ability to successfully undertake a behavior) acting on intention, maintenance (coping) self-efficacy (belief in one’s ability to maintain a behavior) acting on planning and behavior, and recovery self-efficacy (belief in one’s ability to recover from lapses in behavior) on behavior (Schwarzer, 2008).

The adoption and maintenance of health-enhancing behaviors and the elimination of health-compromising behaviors enhance ► [quality of life](#). Self-efficacy has been shown to be associated with intentions and actions related to positive behavior. These include abstinence from addictive behaviors, physical exercise adherence in ► [cardiac rehabilitation](#), breast self-examination, dental flossing, ► [physical activity](#), seat belt use of adolescent car passengers, waist circumference reduction, ► [weight loss](#), condom use, skin-cancer prevention, diabetes management, arthritis management, and chronic pain management. Radio soap operas using an educational strategy based on Bandura’s social learning theory have led to increases in self-efficacy, affected ► [family planning](#) adoption (Rogers et al., 1999) and adoption of HIV/AIDS prevention behaviors (Vaughan, Rogers, Singhal, & Swalehe, 2000).

Self-Efficacy, Affective States, and Subjective Well-Being

Quality of life comprises people's objective circumstances and ► [subjective well-being](#) (Diener & Suh, 1997). Furthermore, along with life satisfaction, positive affect and negative affect are components of subjective well-being (Diener, Suh, Lucas, & Smith, 1999). Evidence suggests that self-efficacy influences positive and negative affects and subjective well-being. Bandura et al. (Bandura, Pastorelli, Barbaranelli, & Caprara, 1999) found perceived social and academic inefficacy contributed directly and indirectly to depression in children. Also, in adolescents self-efficacy was negatively related to anxiety disorder symptoms and depressive symptoms (Muris, 2002). Both social and affective state self-regulatory self-efficacy beliefs influenced subjective well-being (Caprara & Steca, 2005).

For more detail on self-efficacy, see *Self-Efficacy: The Exercise of Control* (Bandura, 1997) and <http://des.emory.edu/mfp/self-efficacy.html#bandura>.

Cross-References

- [Addiction, An Overview](#)
- [Anxiety Disorders](#)
- [Breast Cancer](#)
- [Cardiac Rehabilitation](#)
- [Family Planning](#)
- [Health Behavior](#)
- [Locus of Control](#)
- [Motivation](#)
- [Negative Affect](#)
- [Physical Activity](#)
- [Positive Affect](#)
- [Quality of Life](#)
- [Self-Esteem](#)
- [Subjective Well-Being](#)
- [Weight Loss](#)

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Self-Employed Disabled Older Workers

- [Self-Employment and Job Satisfaction Among Older, Disabled Europeans](#)

Self-Employment

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Synonyms

[Entrepreneurship](#); [Freelancing](#)

Definition

Despite a large amount of research, there is still little agreement about how to define self-employment. In broadest term, self-employment means working for one's self. Often self-employment is understood as the simplest form of entrepreneurial activity.

Description

Self-employment remains an important way for many people to make a living. After a prolonged decline of self-employment in agriculture, nonagricultural self-employment has been increasing in many Western industrialized countries, which is attributed partly to new communication technologies and more favorable business conditions for the services sector. Statistics on the self-employed are imprecise, but according to Eurostat, there are over 32 million self-employed, including employers, in the EU-27 countries in 2009, accounting for nearly 15 % of total employment or more than one job in seven (European Commission, 2010). According to the Bureau of Labor Statistics in the USA, the corresponding figures are 11 % or one American worker in nine (Hipple, 2010).

Policymakers often view self-employment as an important driver of entrepreneurship, innovation, and job creation and thus a factor that combats ► [unemployment](#) and contributes to the goals of more ► [growth](#) and creation of

competitive businesses. Also, there is a growing body of research on self-employment in which it is understood as the simplest form of entrepreneurial activity (Blanchflower & Oswald, 1998). Nevertheless, research focuses primarily on a narrow segment of genuine entrepreneurship, and the “success” of businesses is measured in terms of economic growth, profit levels, and new jobs. This picture of a successful entrepreneur often clashes with the working reality of the self-employed men and women. Most self-employment takes place in small and family firms, and a large majority of workers whose primary income derives from self-employment are engaged in small-scale entrepreneurial activities, often on part-time basis. Conventional economic indicators can hardly be used for this segment of small businesses. Rather, the fulfillment of personal goals and satisfaction with work often play a decisive role for the self-employed (Cholotta & Drobnič, 2009). This group of workers is disproportionately affected by in-work poverty and suffers—along with various forms of nonstandard employment, such as temporary, on-call, and contract company work—the loss of benefits and job security on the one hand but also enjoys more work autonomy on the other.

Job Satisfaction and Self-Employment

Employment and working conditions differ greatly according to the forms of self-employment but also in accordance with the institutional, economic, and social contexts in which such work is performed. Nevertheless, with a few exceptions, the positive link between self-employment and job satisfaction has been reported repeatedly. Comparisons of the self-employed with wage and salary earners yield the paradox finding that although on average the self-employed work longer hours, work harder, experience more work-related stress, and earn less money, they report greater overall job satisfaction than the waged employees (Benz & Frey, 2008; Blanchflower & Oswald, 1998; Blanchflower et al., 2001; Lange, 2012).

Explanations have been sought in different directions. Some research suggests that

entrepreneurial satisfaction may depend on specific values and personality traits that are associated with self-employment and the likelihood of becoming self-employed (e.g., Bradley & Roberts, 2004). Other researchers focus on working conditions (Cholotta & Drobnič, 2011) and stress that the self-employed value autonomy, flexible schedules, opportunity to work in a small organization, and be one's own boss. Benz and Frey (2008) contend that the high job satisfaction of the self-employed can be attributed to autonomy at work and procedural freedom: people value not only outcomes but also processes and conditions leading to outcomes. In a study investigating the relative contribution of both greater freedom/autonomy and workers' psychological traits/values, to the higher job satisfaction levels of the self-employed, Lange (2012) adds further strength to the argument that—net of values and personality traits—autonomy and independence are the mechanisms by which self-employment leads to higher levels of job satisfaction.

Life Satisfaction and Self-Employment

The self-employed consistently report higher satisfaction with their jobs than employees. But are self-employed individuals also happier, more satisfied with their lives as a whole? High job satisfaction might be an indicator of job centrality in people's lives which causes them to neglect other important domains of life. Addressing this question, Blanchflower and Oswald (1998) not only found an association between self-employment and job satisfaction but also a robust positive association between self-employment and overall life satisfaction in a number of countries. In survey research, the self-employed are especially likely to say they have control over their lives as well as being highly satisfied with their lives.

Although it cannot be ruled out that self-employed may feel psychologically compelled to report high satisfaction because business and work as an important life domain is in their own hands, a straightforward interpretation of the factors leading to the high satisfaction of the self-employed is also plausible: greater autonomy,

independence, and control over important life domains.

Cross-References

- ▶ [Economic Growth](#)
- ▶ [Entrepreneurship](#)
- ▶ [Eurostat Social Indicators for the European Community](#)
- ▶ [Job Satisfaction](#)
- ▶ [Part-Time Work](#)
- ▶ [Stress](#)
- ▶ [Unemployment](#)
- ▶ [Working Poor](#)

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Self-Employment and Job Satisfaction Among Older, Disabled Europeans

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Synonyms

Handicapped older workers' job satisfaction in Europe; Self-employed disabled older workers

Definition

► **Disability** is defined as a physical or mental impairment which has a substantial and long-term adverse effect on a person's ability to carry out normal day-to-day activities. This definition covers physical and mental impairments. These include physical impairments affecting the senses such as sight and hearing, heart disease, diabetes, epilepsy, and mental impairments including learning disabilities and mental ill health. ► **Job satisfaction** is defined as "the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs" (Spector, 1997). This definition suggests job satisfaction is a general or global affective reaction that individuals hold about their job. An alternative approach is that proposed by A. Sousa-Poza and A. Sousa-Poza (2000) who postulate that job satisfaction depends on the balance between work-role inputs such as education, working time, and effort and work-role outputs – wages, fringe benefits, status, working conditions, and intrinsic aspects of the job. If work-role outputs ("pleasures") increase relative to work-role inputs ("pains"), then job satisfaction will increase. Finally, self-employed persons are defined as persons who work in their own business, professional practice, or farm for the purpose of earning a profit.

Description

► **People with disabilities** represent more than 650 million people all over the world. Furthermore, this number is expected to increase in the coming years, mainly as a result of the growing proportion of older citizens in the population. In the European Union (EU), there are approximately 80 million people who suffer some kind of ► **disability** (ranging from mild to severe), who are often prevented from fully taking part in society and the economy because of environmental and attitudinal barriers (European Commission, 2010). The inevitable aging process of the European population will have a substantial effect on disability ► **prevalence** in the working-age population and on their labor market participation. Although there is a growing concern in OECD countries about the exclusion of people with disabilities from the labor market and about the costs of disability income support programs, the labor market participation of this group is still unsatisfactory as is illustrated by the higher nonemployment rates and lower labor earnings of disabled people (OECD, 2003). In addition, when they do work, disabled persons are more likely to be underemployed, to earn less money, to experience less ► **job security**, and to have fewer chances for advancement. It is essential to understand the current employment options for disabled people, which include supported employment, early-return-to-work strategies, and self-employment (McFarlane, 1998). Within this context, self-employment has become a source of economic growth in industrialized and less-developed countries (OECD, 2000). The promotion of entrepreneurship constitutes a fundamental pillar of the European Employment Strategy. For the European Union (EU) as a whole, self-employment's share of total employment was 14.5 % in 2010, down slightly (by 0.5 percentage points) from the year before (European Commission, 2011).

Although there is a wide array of international studies on ► **self-employment** (e.g., Blanchflower, 2000; Brown, Farrel, & Sessions, 2006), the relationship between disability and

self-employment has not been a major focus of study (due to the fact most studies on disability and employment have excluded self-employment from their analysis). Nevertheless, some authors have pointed out that self-employment can be used as a viable employment outcome for disabled people, especially for those severe disabilities. For example, Boylan and Burchardt (2002) point out that self-employment for disabled people contributes to promoting entrepreneurship among disadvantaged groups, narrowing the gap in employment rates between disabled people and the rest of the population and preventing ► [social exclusion](#). Self-employment may provide greater flexibility of work patterns and accommodate individuals' disability by choosing, for example, working hours, type of work, and working conditions or environment. Accommodations can be modified over time with changes in the business and changes in disability status of the individual and will help the whole company work more effectively (Doyel, 2002). Self-employment can be very attractive for disabled individuals because it may present a unique opportunity to create employment circumstances specifically tailored to their personal situation, degree of mobility, speed of production, stamina, health, and accommodation needs (Griffin & Hammis, 2002). In the same line, authors as Boylan and Burchardt (2002), Piggott, Sapey, & Wilenius (2005), and Pagán (2009) have found that disabled people are more likely to be self-employed than nondisabled people in almost all European countries. However, disabled people have more difficulty in accessing start-up capital, interaction with the benefit system, and finding out about accessing appropriate ► [training](#) and advice.

Within the existing literature, we can find a few studies have focused on the particular relationship between disability and job satisfaction (e.g., Renaud, 2002; Uppal, 2005; Pagán & Malo, 2009; Pagán, 2011a, 2012). For example, Uppal (2005) finds, using a sample of 4,474 Canadian individuals aged 15–64 (of which 443 are disabled) for the year 1991, that when certain workplace characteristics are introduced into the ► [job satisfaction](#) equation, individuals with

a mobility disability are no longer likely to be less satisfied as compared to individuals without disabilities. Pagán and Malo (2009) obtain, using the Spanish data of the European Community Household Panel during the period 1995–2001, that disabled individuals are more likely to be more satisfied in their jobs than nondisabled ones, which they attribute to lower expectations about jobs on the part of disabled workers. In the same line, Pagan (2011a), using the Survey of Health, Ageing and Retirement in Europe (SHARE) for the years 2004 and 2007, concludes that older workers with limiting disabilities have greater returns in terms of job satisfaction from their job characteristics (such as wages, tenure, and working in the private sector) as compared to nondisabled individuals, which again supports the hypothesis of lower expectations about jobs for disadvantaged groups. Finally, Pagán (2012), using again the SHARE, concludes that it is necessary to consider the indicator overall job satisfaction as an aggregate of various domain satisfactions (in his case, nine domains) which can be combined in different ways to produce a different level of overall satisfaction. He shows that the levels of satisfaction with the recognition of the work, support in difficult situations, and physical effort have a significant effect on the overall job satisfaction reported by limited disabled workers. For this group, the trade-offs between the domain recognition with work and support and satisfaction with salary are especially high.

With regard to the levels of job satisfaction reported by self-employed individuals, we also find that the literature is scarce. Overall, the existing literature finds that even though the self-employed make less money, work more hours, and experience more work-related stress than the wage employed, they are more satisfied with their jobs because they want to be their own boss and enjoy the ► [freedom](#), flexibility, and work environment that self-employment provides (e.g., Blanchflower, 2000; Hundley, 2001; Benz & Frey, 2008a, 2008b; Lange, 2009). For example, Hundley (2001) confirms that the self-employed are more satisfied with their jobs

because their work provides more autonomy, flexibility, and skill utilization and greater ► [job security](#). However, the self-employed-job satisfaction advantage is relatively small or nonexistent among managers and members of the established professions-occupations where organizational workers have relatively high autonomy and skill utilization. Benz and Frey (2008a) analyze the relationship between self-employment and job satisfaction for 23 countries and show that the higher job satisfaction can directly be attributed to the greater autonomy that self-employed persons enjoy. In this sense, being your own boss seems to provide nonpecuniary benefits from work that point to the existence of procedural utility: autonomy is valued beyond outcomes as a good decision-making procedure. Once again, Benz and Frey (2008b) introduce the concept of procedural utility to explain the premium that the self-employed enjoy in terms of job satisfaction as compared to salaried workers. Procedural utility refers to the value that individuals place not only on outcomes, as usually assumed in economics, but also on the processes and conditions leading to outcomes. People care not only about the “what” but also about the “how,” or they value the “means” beyond the “ends.” This study is especially interesting because he uses panel data from three European countries: Germany (the German Socio-Economic Panel), Great Britain (the British Household Panel Survey), and Switzerland (the Swiss Household Panel). Using job satisfaction as a proxy measure for utility from work, it is shown that the self-employed enjoy considerably higher job satisfaction than employees in all three countries considered. His results confirms the “procedural utility”; furthermore, they show that the existence of procedural utility also explains a considerable part of the related finding that people working in large organizations are less satisfied with their work than people working in small firms. According to Lange (2009), personal values and personality traits are also the mechanisms by which self-employment leads to higher levels of job satisfaction. Individuals derive procedural utility from being self-employed

because it gives them a higher measure of self-determination and freedom.

To our knowledge, the unique study that has analyzed the relationship between self-employment and job satisfaction with reference to disabled people is the work of Pagán (2011b). Pagán uses data taken from the SHARE (2004 and 2007) to test two different hypotheses: (a) the self-employed are more likely to have greater levels of job satisfaction than their salaried counterparts, and (b) the effect of self-employment on job satisfaction is different for nondisabled and disabled individuals. After estimating job satisfaction models (based on random-effects linear models) initially for all older workers and later for the nondisabled and disabled individuals, he finds that self-employed older individuals exhibit higher job satisfaction scores than those in salaried employment, after controlling for a set of personal and job characteristics. He obtains a positive result in both samples for the first hypothesis. Being self-employed increases the level of job satisfaction of older ► [people with disabilities](#) by 0.097 points. The magnitude of the coefficient of this dummy variable is statistically the same in the nondisabled and disabled sample which rejects the second hypothesis. Finally, Pagán concludes that policy makers should continue to find ways to reduce the labor market disadvantage of disabled people and promote self-employment among them as being a positive choice and source of job satisfaction rather than a last resort. Many of the barriers to self-employment are faced by disabled and nondisabled people alike, but for disabled people, they may be more acute or more difficult to overcome, including access to start-up capital, interaction with the benefit system, and finding out about and accessing appropriate training and advice (Boylan & Burchard, 2002). With respect to employment services, many work advisors tend to discourage disabled people from starting up a company because it is very stressful and full of difficulties. Disabled people report a lack of understanding and even active discrimination on the part of financial institutions, business advisers, and the employment services. Furthermore, a better

combination of benefits and self-employment could make it possible and more attractive for disabled people to be entrepreneurs and still feel economically safe. Flexibility and security (i.e., *flexicurity*) are two important questions for this collective. ► *Flexicurity* can also help provide an answer to the EU's dilemma on how to maintain and improve competitiveness while reinforcing the European social model (European Commission 2007).

Concerning future research on the level of job satisfaction reported by self-employed disabled individuals, it is necessary to have access to larger longitudinal dataset of persons. For example, a limitation of the work of Pagán (2011b) is that we have to take into account the past life course of the individual, namely, it is possible that more satisfied people chose self-employment earlier in life before becoming disabled. To do this, we need larger datasets that allow us to analyze and examine these kinds of facts. Furthermore, it is necessary to have information on the types of disabilities that people have. We expected different levels of job satisfaction depending on the grade and type of disability. Following Boylan and Burchardt (2002), it would be interesting to analyze the following: (a) the factors that contribute to explaining the regional variations in self-employment rates among disabled people, (b) What explains the lower earnings reported by disabled self-employed people, even after controlling for occupation and hours of work? (c) Do disabled self-employed people manage to sustain their businesses for similar durations to nondisabled people? What helps to make a disabled entrepreneur's business viable? and (d) Can examples of good practice in supporting disabled entrepreneurs be replicated nationally? Finally and similar to Pagán (2012), it would be of interest to analyze the effects of nonpecuniary job aspects (e.g., opportunity for skill use, job demands, personal control, variety, job security, physical safety, level of supervision, and personal contacts) on the levels of job satisfaction reported by self-employed disabled workers, identifying the differences of these effects by disability status.

Cross-References

- [Disadvantaged Populations](#)
- [Happiness](#)
- [Health](#)
- [Social Exclusion](#)

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Self-Endorsement of One's Action

► Choice

Self-Enhancement

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Synonyms

Positive illusions; Self-deception; Self-serving bias

Definition

Self-enhancement is a term encompassing a range of psychological phenomena whose common denominator is the possession or pursuit of a **tendentiously positive view of self** – in terms of what the self can do, currently is, or will be in future (Taylor & Brown, 1988).

Description

For the purposes of exposition, the phenomena comprising self-enhancement can be divided into one of three classes: ostensible signs, dynamic processes, and personality traits (Sedikides & Gregg, 2008).

Ostensible signs provide prima facie evidence of self-enhancement. A well-known ostensible sign is the better-than-average effect, whereby most people rate themselves above most of their peers in terms of desirable abilities or characteristics (Alicke & Govorun, 2005). Other examples include people's tendency to make self-serving attributions (i.e., claim credit for success but disavow blame for failure; Sedikides & Alicke, 2012), succumb to self-serving memory distortions (i.e., selectively forget negative feedback; Sedikides & Green, 2009), and show special fondness for what is theirs (i.e., prefer letters in their own name; Hodson & Olson, 2005).

Ostensible signs may or may not reflect an underlying motive to self-enhance, and a lively debate persists over the relative importance of motivational and cognitive factors as explanations (Chambers & Windschitl, 2004; Guenther & Alicke, 2010). For example, people may rate themselves as above average because they want to be superior to others. However, they may also rate themselves as above average simply because they focus more on themselves when answering the question or because their ratings reflect the general tendency to prefer individual things over collections of things. The evidence typically implicates a combination of explanations but also points to motivational factors (i.e., self-enhancement) as sufficient for the production of ostensible signs (Sedikides & Alicke, 2012).

Dynamic processes provide more direct evidence of self-enhancement strivings. For example, people evaluate uncongenial information more critically than they do congenial information (e.g., spend more time and energy scrutinizing and refuting information implying that their health is at risk; Ditto & Lopez, 1992). Yet, if people first bolster their egos via self-affirmation (e.g., by reminding themselves of value that are important to them), they no longer engage in such biased processing (Cohen, Aronson, & Steele, 2000). Even more tellingly, people sometimes engage in behavioral self-handicapping, where they act to preemptively sabotage their performance in order to forestall the shame of performing poorly (e.g., binge drinking the night before an examination to excuse flunking it; Rhodewalt & Tragakis, 2002). Such reversible ego-defensive tendencies, and overt behavioral self-deceptions, are difficult to account for in terms of cognition alone.

Personality trait entails the final form of self-enhancement. It refers to possessing a chronically positive ► *self-concept* and is equivalent to having high levels of trait ► *self-esteem* (or ► *self-worth*). This is a component both of lower *depression* and of higher ► *self-efficacy*. In such cases, people show themselves to be not only willing but also able to self-enhance.

Thus, a range of phenomena testify to the prevalence self-enhancement and collectively point to a potent motive underlying them. That said, the inferred motive to self-enhance, albeit powerful, is perpetually held in check by the antagonistic motive to self-assess, for which ample evidence also exists (Gregg, Sedikides, & Gebauer, 2011). For example, people will often select test feedback more on the basis of its diagnosticity (i.e., how informative it is) than on the basis of its positivity (i.e., how flattering it is) (Trope, 1986). In addition, making people accountable for judgments of their own work (thereby increasing their incentive to self-assess accurately) prompts less egotistically inflated judgments (Sedikides, Herbst, Hardin, & Dardis, 2002). To paraphrase Hume, the passion of self-enhancement is partly a slave to reason.

Culture has also been alleged to moderate self-enhancement, with East Asians and Westerners

differing on underlying ► *cultural values*. Specifically, East Asians show less evidence of some (Hamamura & Heine, 2007), though not all (Sedikides, Gaertner, & Toguchi, 2003), of the ostensible signs of self-enhancement, prompting some researchers to infer that the underlying motive affects them less urgently. However, it could be that East Asians simply engage more in tactical than in candid self-enhancement (Sedikides & Strube, 1997), focusing relatively more on their failings so that they can remedy them. East Asians, then, may prioritize self-enhancing their future, as opposed to present, qualities.

Perhaps the greatest challenge is to explain why any propensity to self-enhance exists in the first place. Why would dodging reality by self-enhancing ever be more advantageous than deferring to it by self-assessing, given that dodging reality is liable to prompt less wise decisions? A voluminous research literature addresses the question empirically, mostly with respect to ► *wellness*, in terms of *psychological health* and ► *quality of life*. Although findings are complex and methodological complications abound, the following summary is defensible: self-enhancement predicts the relevant positive outcomes better than an advocate of impartial realism would expect (Taylor & Brown, 1988; Gregg et al., 2011). One explanation may be that, although self-enhancement has the potential to lead people objectively astray, it also provides them with the subjective energy and certainty they require to pursue various goals, thereby enabling them to take advantage of benefits and opportunities they would otherwise miss (Alicke & Sedikides, 2009). For example, a self-enhancer, by optimizing her *self-presentation*, may unwisely discount the perils of suntanning, and so raise her risk of skin *cancer* via greater solar exposure (Leary, Tchividjian, & Kraxberger, 1994); yet her tanned appearance, and positive life orientation, may also increase her chances of attracting a high-status mate, thus offsetting her cancer risk via greater material wealth. It may also be that only a touch of self-enhancement is adaptive; too much and it spills over into maladaptive *narcissism* (Morf, Horvath, & Torchetti, 2011).

Ultimately, self-enhancement may be interpreted as an adaptive product of evolution (Sedikides & Skowronski, 2000), one that underlies and regulates a variety of adaptive behaviors (Kirkpatrick & Ellis, 2001).

Cross-References

- ▶ Cultural Values
- ▶ Physical Quality of Life
- ▶ Self-Acceptance
- ▶ Self-Concept
- ▶ Self-Esteem
- ▶ Self-Worth
- ▶ Wellness

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Self-Esteem

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Synonyms

[Self-acceptance](#); [Self-concept](#); [Self-confidence](#);
[Self-image](#); [Self-integrity](#); [Self-worth](#)

Definition

Self-esteem is an important and also a very popular construct in social psychology, and it is widely used in everyday life: It is the evaluative aspect of the ► [self-concept](#) that corresponds with an overall view of the self as worthy or unworthy (Leary & Baumeister, 2000). Those that possess high self-esteem are presumably psychologically healthy and happy (Branden, 1994). On the contrary, those that possess low self-esteem are presumably psychologically distressed and even depressed (Tennen & Afleck, 1993). Its potential relationship with ► [subjective well-being \(SWB\)](#) derives from research results that correlate low self-esteem with depression and loneliness (Peplau & Perlman, 1982).

Self-esteem refers to the self or to specific areas of the self, such as how people feel in relation to their social standing, their belongingness to a specific ethnic group, their physical appearance, their job or school performance, and so on.

Baumeister, Campbell, Krueger, and Vohs (2003) define self-esteem as “how much value one places on themselves, their self-worth and their capabilities.”

Self-esteem has been variously considered as a trait or an attitude. Rosenberg (1965) and Harter (1999) have proposed self-esteem as a dispositional construct, a stable trait that is constructed during the life of an individual. On the other

hand, Coopersmith (1967) defines self-esteem as a positive or negative attitude a person has about him-/herself.

In his definition of self-esteem as a disposition, Harter (1999) used William James’ work about the self. James (1890) stated three separated but interrelated facets of the self: (1) the material self, (2) the relational self, and (3) the spiritual self. The complete self is the total sum of what a person can say about himself or herself. James (1890) also distinguished between the self-concept and self-worth of an individual. Self -concept corresponds to the description that a person makes about himself or herself. Self-esteem refers to the respect and consideration a person feels for herself or himself. For Rosenberg (1965), self-esteem is the global feeling of worth, dignity, and importance a person has about himself or herself. A person has a need to protect and enhance a positive self-evaluation. Rosenberg’s global measure of self-esteem is the most widely used scale in the research of self-esteem.

There are numerous instruments for measuring self-esteem, some of them conceptually very different. Rosenberg Self-Esteem Scale (RSES) (1965) and Coopersmith’s Self-Esteem Inventory (1958) are two of the most widely used measures. The RSES is a global unidimensional measure of self-esteem composed of ten judgments.

As can be seen throughout the history of the research on self-esteem, there have been many and different definitions of the concept which have led to the idea that the construct is poorly defined with numerous instruments for its measure that do not correlate high between them. This has led to other conceptualizations of the construct such as implicit self-esteem (Schimmack & Diener, 2003) that attempts to measure the automatic, more unconscious parts of the self.

Description

There is an interesting academic debate about the importance of self-esteem for ► [life satisfaction](#),

► **subjective well-being**, and ► **happiness**. On the one hand, in individualistic countries self-esteem has been considered as a fundamental antecedent for personal success and thus on life satisfaction and happiness. In these cultures, researchers have assumed that high levels of self-esteem may influence positive outcomes such as higher personal performance and higher levels of subjective well-being. But self-esteem is a heterogeneous category which includes good qualities of people, but at the same time, it can be seen as a quality of narcissistic, defensive, and conceited individuals (Baumeister et al., 2003).

At the same time, the influence of self-esteem on life satisfaction and happiness in collectivistic countries is not as strong as in individualistic countries.

Among psychological variables, self-esteem has been consistently found to strongly predict subjective well-being. Nevertheless, this effect is strongly influenced by culture (Oishi, Diener, Lucas, & Suh, 1999). This effect has been consistently found in individualistic cultures but has also been found in collectivistic cultures like Hong Kong (Kwan, Bond, & Singelis, 1997), but its effect is relatively weaker. This is so because belongingness to one's group is emphasized as compared to the worth of self. This is because in collectivistic cultures, self-esteem is not an important motivator for success as in individualistic Western countries (Heine & Lehman, 1997).

Self-esteem is a subjective perception by the self. Perceptions influence actions and actions shape the social reality of the individual and the social reality of other relevant persons. Therefore, it is an important construct to consider in the study of happiness.

Self-esteem has been proposed as both an independent variable to explain ► **life satisfaction** and mediator variable between different facets of personality traits and ► **subjective well-being** (Joshani & Afshari, 2011). It has been also proposed as a mediator variable between self-beliefs and life satisfaction (Lai, Bond, & Hui, 2007). Other scholars (Schimmack & Diener, 2003) have noted the

importance of distinguishing explicit from implicit measures of self-esteem as predictors of subjective well-being. Implicit measures of personality do not rely on the participant's willingness or ability to report the trait that is asked.

Explicit measures of self-esteem are such as the scale developed by Rosenberg (1965). The explicit measure of self-esteem was a better predictor of subjective well-being as compared to implicit measures such as the preferences for initials of the name of the individual. Self-esteem has been found to be a strong correlate of subjective well-being in different studies. For instance, Campbell (1981) found a correlation of 0.55 between self-esteem and life satisfaction in an American sample. Diener and Diener (1995) found a correlation of 0.47 between self-esteem and life satisfaction in a sample of college students across 31 countries. However, Heine, Lehman, Markus, and Kitayama (1999) have questioned the universal validity of self-esteem. They point out that in Western cultures, it is taken for granted that individuals are motivated to feel good about themselves, whereas in collectivistic countries, the main function of self is to fit in, to engage to become part of important social relationships. Diener and Diener (1995) predicted that self-esteem would be a best predictor of subjective well-being in individualistic countries, whereas satisfaction with family or friendship would be the best predictor of subjective well-being in collectivistic societies.

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Self-Esteem, Satisfaction with

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Definition

Satisfaction with self-esteem is the satisfaction with perceived self-evaluation (the positive or negative evaluation of the self, how one feel about it) (Smith & Mackie, 2007).

There have been differentiated at least 12 domains of life involved in contributing to life satisfaction: self-esteem, health, finances, family relations, paid employment, friendships, housing, living partner, recreational activity, religion, transportation, and education (Campbell, 1981; Michalos, 2005). Self-esteem appears to be one of the strongest predictors of overall life satisfaction; satisfaction with self-esteem is one of the most important domain satisfactions. Though the satisfaction with self-esteem differs from overall life satisfaction, aggregated with other important domain satisfactions, it can explain or predict an overall life satisfaction.

Description

Self-esteem can be defined as a person's evaluation of his or her own worth. Psychological health is not possible unless the essential core of the person is fundamentally accepted, loved, and respected by others and by her or his self (Maslow, 1987).

Current research has identified satisfaction with self-esteem as an important part of overall life satisfaction, happiness, or well-being (Campbell, 1981; Michalos, 1986; Diener, Diener, & Diener, 1995; Kwan, Bond, & Singelis, 1997; DeNeve & Cooper, 1998; Oishi, Diener, Lucas, & Suh, 1999; Lyubomirsky & Lepper, 2002; Baumeister, Campbell, Krueger, & Vohs, 2003; Pyszczynski, Greenberg, Solomon,

Arndt, & Schimel, 2004; Westaway & Maluka, 2005; Michalos, 2006; Yamaguchi, Lin, Morio, & Okumura, 2008; Orth, Robins, & Widaman, 2011; Kim, Schimmack, & Oishi, 2012).

Based on multiple discrepancy theory (MDT), life satisfaction is a function of perceived discrepancies or consistencies between what one has and wants, relevant others have, the best one has had in the past, expected to have 3 years ago, expects to have after 5 years, deserves, and needs (Michalos, 1985, 2005). Other researchers also see life satisfaction as a process of subjective assessment or cognitive evaluation of one's quality of life, in which individuals assess the quality of their lives on the basis of their own unique criteria (Diener, 1984; Diener, Sandvik, Seidlitz, & Diener, 1993; Ojeda, Flores, & Navarro, 2011). Overall, satisfaction with self-esteem can be considered as an important part of subjective evaluation of quality of life.

Research found that self-esteem is a strong predictor of life satisfaction.

Satisfaction with self-esteem is strongly associated with overall life satisfaction and the important life domains such as job satisfaction and relationship satisfaction (Baumeister et al., 2003; Campbell, 1981; DeNeve & Cooper, 1998; Diener et al., 1995; Kim et al., 2012; Kwan et al., 1997; Lyubomirsky & Lepper, 2002; Michalos, 1982, 1983, 1986, 1993; Michalos, 2005; Michalos & Orlando, 2006; Oishi et al., 1999; Orth et al., 2011; Pyszczynski et al., 2004).

Data from 3,407 students from the University of Northern Columbia, by Michalos and Orlando (Michalos & Orlando, 2006), showed that the correlation of the satisfaction with self-esteem and overall life satisfaction, happiness, quality of life, or subjective well-being was very high (from 0.64 to 0.75). Moreover, the most influential explanatory variable for satisfaction with the overall quality of life, for overall happiness, and for subjective well-being is satisfaction with one's self-esteem ($b = 0.35$, $b = 0.57$, and $b = 0.49$ respectively). (Michalos and Orlando) concluded that satisfaction with one's self-esteem is a much more influential predictor of overall life satisfaction, happiness, and quality

of life than all the other significant predictors (family relationships, friendships, etc.). These results are consistent with Michalos' earlier works: In the 39-country survey, using a similar set of potentially explanatory life domains, satisfaction with one's self-esteem was the most influential ($b = 0.20$) for life satisfaction (Michalos, 1991). In 1985, in a survey of 3,130 students, Michalos found that satisfaction with self-esteem had the greatest impact on the global life satisfaction and happiness in both males' and females' groups and this impact was even greater compared to the impact of satisfaction with their friends (Michalos, 2005). The results from surveys in 1980, 1982, and 1983 conducted on adult participants also confirmed the relationship of satisfaction with self-esteem on global life satisfaction (Michalos). Other researchers also considered the satisfaction with self-esteem as the most dominant and powerful predictor of happiness (Furnham & Cheng, 2000; Shackelford, 2001). Self-esteem significantly correlated with happiness in the form of global, sexual, and emotional life satisfaction (Shackelford).

Drawing on empirical research, (Michalos, 1991, 1992, 2005) demonstrated that MDT (multiple discrepancy theory) can explain more than 50 % of variance in seven domain satisfaction scores. Michalos found that MDT can account for 59 % variance for satisfaction with self-esteem (Michalos). From theoretical perspectives concerned with the management of negative emotions or experiences such as terror management theory or buffer theory, self-esteem is considered as a buffer against depression, stress, and trauma. It maintains positive psychological well-being and facilitates coping through providing a buffer against anxiety (Arndt & Goldenberg, 2002; Bonanno, Field, Kovacevic, & Kaltman, 2002; Corning, 2002; Greenberg, Pyszczynski, & Solomon, 1986; Roese & Pennington, 2002).

As research shows (Michalos, 2005; Turner, Frankel, & Levin, 1983) perceived self-esteem and the satisfaction with self-esteem are highly correlated, so it would be appropriate to consider how high or low self-esteem impacts on the quality of life, life satisfaction, or well-being.

Research findings consistently suggest that low self-esteem leads to a poorer quality of life and poorer outcomes, including depression and possibly physical illness (Baumeister et al., 2003). Conversely people with higher self-esteem also have higher well-being. Individuals who see themselves and others more positively are more likely to have higher well-being (Kim et al., 2012). Orth et al. (2011), based on the longitudinal study of generations (12 years' study conducted with over 1,800 participants of age 16–96), concluded that self-esteem had a significant effect on relationship satisfaction and job satisfaction, positive and negative effects on depression, and relatively smaller effect on health. Consequently, self-esteem also has significant benefits for people's experiences in love, work, and health (Orth et al., 2011). A lot of other researchers also stress the beneficial consequences of high self-esteem (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Swann, Chang-Schneider, & Larsen McClarty, 2007; Trzesniewski et al., 2006).

It was revealed however that relationship between self-esteem and life satisfaction is moderated by various constructs relating to nationhood and culture such as different salient cultural values, wealth, and individualism/collectivism (Diener & Diener, 1995; Kwan et al., 1997; Oishi et al., 1999). Comparing the size of correlations between various domain satisfactions and global life satisfaction, Diener (Diener et al., 1995) found that although there was no cultural difference in the size of correlation between satisfaction with friends, family, and global life, there was a significant cultural difference in the size of correlation between satisfaction with self and global life satisfaction. The correlations between life satisfaction and satisfaction with self-esteem across cultures were compared on the basis of the I-C dimension (individualism vs. collectivism; Hofstede, 1980). The strength of association between satisfaction with the self and life satisfaction was significantly stronger in individualist nations than in collectivist nations. Whereas satisfaction with the self was strongly correlated with life satisfaction in highly industrialized, individualistic western nations

(e.g., Finland, Canada), satisfaction with the self was less correlated with global life satisfaction in less industrialized, collectivist nations such as Cameroon and India, especially for women (Diener et al., 1995; Oishi et al., 1999). This was the case even after controlling for national wealth. It was also found that the association between satisfaction with the self and life satisfaction was significantly stronger in wealthier nations. Moreover, mean family income significantly predicted the scale of the association between satisfaction with the self and life satisfaction, controlling for the levels of individualism (Oishi et al.).

Conclusion

Based on the reviewed scientific literature, satisfaction with self-esteem is not a psychological state that universally mitigates against any negative personal or social problems. However, it has been found to be an important ingredient of life satisfaction and psychological well-being (Yamaguchi et al., 2008). Based on the reviewed research, it is also possible to suggest that successfully maintaining self-esteem can have a direct impact on life satisfaction and well-being and therefore on the overall quality of life of an individual.

Cross-References

- ▶ [Adolescent Life Satisfaction Measurement](#)
- ▶ [Adolescents' Life Satisfaction](#)
- ▶ [Affective Component of Happiness](#)
- ▶ [Child and Adolescent Life Satisfaction](#)
- ▶ [Domain Satisfaction](#)
- ▶ [Happiness](#)
- ▶ [Life Satisfaction, Concept of](#)
- ▶ [Positive Affect](#)
- ▶ [Quality of Life](#)
- ▶ [Quality of Life Research](#)
- ▶ [Quality of Life Self-Assessment](#)
- ▶ [Quality of Life, Satisfaction with](#)
- ▶ [Satisfaction with Life as a Whole](#)
- ▶ [Self-concept](#)
- ▶ [Self-Determination Theory](#)
- ▶ [Self-Efficacy](#)
- ▶ [Self-Esteem](#)
- ▶ [Self-Fulfillment](#)

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Self-Evaluation

- ▶ [Self-Worth and Measures of Body Image](#)

Self-Evaluation Motives

- ▶ [Identity Motives](#)

Self-Expressiveness

- ▶ [Eudaimonic and Hedonic Happiness](#)

Self-Focused Approach Motives

- ▶ [Sexual Motives and Quality of Life](#)

Self-Focused Avoidance Motives

- ▶ [Sexual Motives and Quality of Life](#)

Self-Fulfillment

- ▶ [Self-Actualization](#)

Self-Image

- ▶ [Body Image](#)
- ▶ [Self-Esteem](#)
- ▶ [Self-Worth and Measures of Body Image](#)

Self-Informant Agreement in Well-Being Ratings

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Synonyms

[Convergence](#); [Self-informant concordance](#);
[Self-other agreement](#)

Definition

Self-informant agreement refers to the amount of concordance between a person's appraisal of their well-being (e.g., a judgment of happiness, life satisfaction, positive affect, negative affect, quality of life, or life domains) and an informant's (e.g., partner, acquaintance) judgment of the person's well-being. Self-informant agreement is typically assessed by the correlation between ratings.

Description

Researchers in the area of subjective well-being face the difficult task of measuring a subjective construct. This is because subjective well-being, as the name implies, is inherently subjective. Consequently, self-reports of happiness, life satisfaction, (high) positive affect, and (low) negative affect are often used as indicators of subjective well-being (Diener, 1984; Diener, Lucas, Schimmack, & Helliwell, 2009). Unfortunately, it is difficult to estimate the validity of subjective self-report measures.

Half a century ago, Campbell and Fiske (1959) proposed a procedure that could be used to estimate the amount of valid variance in a measure even if no perfect validation criterion is available. The indirect assessment of validity requires that a construct (e.g., life satisfaction) be measured with at least two methods. If two measures of the same construct are available, the correlation between the two measures provides information about the validity of the two measures. A positive correlation between the two measures demonstrates convergent validity of the two measures.

The most widely used approach to obtain multiple independent measures of well-being is to obtain well-being ratings from multiple raters, typically the target of the study (a self-rating) and one or more acquaintances of the target (an informant rating). The correlation between the self-rating and informant rating (i.e., self-informant agreement) reflects the amount of convergent validity in the two measures. Although two self-ratings could be correlated in a similar manner, common method variance, rather than valid variance that reflects the well-being of the individual, could artificially inflate this correlation.

Findings on Self-Informant Agreement in Well-Being Ratings

A meta-analysis by Schneider and Schimmack (2009) found that the average self-informant correlation for well-being measures is $r = 0.42$.

The researchers also investigated the factors that moderate the amount of self-informant agreement between well-being ratings. First, global judgments of well-being (i.e., happiness and life satisfaction) produced higher self-informant correlations ($r = 0.35$) than did positive affect ($r = 0.24$), which produced higher self-informant correlations than negative affect ($r = 0.18$). This finding suggests that global judgments of well-being may be more valid than judgments of affect. Perhaps the experiential nature of affect makes it more difficult to make judgments of affect, especially negative affect.

Further findings were that self-informant correlations were higher for older participants ($r = 0.32$) than for younger participants ($r = 0.24$; Schneider & Schimmack, 2009). Self-informant correlations were higher for studies that had multiple informants ($r = 0.31$) compared to studies with a single informant ($r = 0.24$). Notably, the type of informant (i.e., friend vs. family member) did not impact the amount of self-informant agreement.

Findings on Self-Informant Agreement in Life Satisfaction Ratings

Specific to self-informant agreement for life satisfaction ratings, Schneider, Schimmack, Petrican, and Walker (2010) found that self-informant agreement nonlinearly increases with increased length of acquaintance. Specifically, over the first 3 years of a relationship, self-informant agreement nonlinearly increases to within 90 % of the maximum level of agreement, after which negligible increases in agreement are observed.

A question that Schneider et al. (2010) finding brings up is: What information do individuals collect over time that they draw upon when making self and informant ratings of life satisfaction? Schneider and Schimmack (2010) found that in a large group of college students, both self-ratings and informant ratings of life satisfaction were informed by judgments of life domains, specifically family satisfaction, health satisfaction, and academic satisfaction. The researchers also found that self-informant agreement for life domains was significant

($r = 0.30$) and higher than self-informant agreement for life satisfaction overall ($r = 0.16$). This finding suggests higher validity of domain satisfaction judgments, but the agreement for life satisfaction was unusually low in this study.

Discussion

Quality research on subjective well-being relies on the valid measurement of constructs such as happiness, life satisfaction, and positive and negative affect. Positive correlations between self-ratings and informant ratings of well-being (self-informant agreement) provide some of the strongest evidence for the validity of well-being measures (Diener, Smith, & Fujita, 1995). An average self-informant correlation of 0.42 for well-being ratings supports the assumption made by well-being researchers that well-being measures have at least some validity (Schneider & Schimmack, 2009). Self-judgments and judgments made by acquaintances also seem to be made by drawing upon information from important life domains, supporting the assertion that well-being judgments are not based on irrelevant information (Schneider & Schimmack, 2010). Despite evidence of validity, well-being measures are not perfect. More precise estimates of effects on well-being can benefit from a multimethod assessment with self- and informant ratings. However, only a small percentage of studies have used both self- and informant assessments of well-being (Kim, Schimmack, & Oishi, 2012). Therefore, reported effect sizes for objective predictors are attenuated by systematic measurement error, whereas effect sizes for self-report predictors with shared method variance may be inflated (Schimmack, Schupp, & Wagner, 2008).

Cross-References

- ▶ [Affective Component of Happiness](#)
- ▶ [Convergent Validity](#)
- ▶ [Happiness](#)
- ▶ [Life Satisfaction](#)

- ▶ [Life Satisfaction Judgments](#)
- ▶ [Multitrait-Multimethod Analysis](#)
- ▶ [Subjective Well-Being](#)

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Self-Informant Concordance

- ▶ [Self-Informant Agreement in Well-Being Ratings](#)

Self-Integrity

- ▶ [Self-Esteem](#)

Self-Interest Thesis About Welfare State Attitudes

- ▶ [Welfare State Attitudes](#)

Selflessness

- ▶ [Altruism](#)

Self-Needs Satisfaction

- ▶ [Human Needs](#)
- ▶ [Need Fulfillment](#)

Self-Other Agreement

- ▶ [Self-Informant Agreement in Well-Being Ratings](#)

Self-Others Satisfaction

- ▶ [Relative Deprivation Theory](#)

Self-Perceived Burden (SPB)

- ▶ [Self-Perceived Burden to Others](#)

Self-Perceived Burden Scale

- ▶ [Self-Perceived Burden to Others](#)

Self-Perceived Burden to Others

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Synonyms

[Burden to others](#); [Self-perceived burden \(SPB\)](#); [Self-Perceived Burden Scale](#); [Structural Interview of Symptoms and Concerns \(SISC\)](#)

Definition

SPB is a psychological construct developed to describe care recipients' perceptions of being a burden to others. It is commonly used in the context of family caregiving and is defined as "empathic concern engendered from the impact on others of one's illness and care needs, resulting in guilt, distress, feelings of responsibility, and diminished sense of self" (McPherson, Wilson, & Murray, 2007a, p. 425).

Description

The term SPB is relatively new and was first coined in 2003 by Cousineau, McDowell, Hotz, and Hébert (2003); however, the sense of being a burden to others is not a new concern and has been identified in a wide range of studies including geriatrics (Dyerson, 2000), psychiatry (Coyne, Gallo, Klinkman, & Calarco, 1998), chronic disease (Carlsson, Bosaeus, & Nordgen, 2003), and advanced disease (Chiò, Gauthier, Calvo, Ghiglione, & Mutani, 2005; Chochinov et al., 2007; Cousineau et al., 2003; Gauthier et al., 2007; McPherson et al., 2007a; Wilson, Curran, & McPherson, 2005; Wilson et al., 2004). Indeed, the associations between SPB and the issue of euthanasia and physician-assisted suicide in people with advanced disease were made as early as the 1990s (for review, see McPherson, Wilson, & Murray, 2007b).

The emphasis in SPB is on the individual's perceptions of being a burden, since the pattern of associations with physical symptoms, physical functioning (Chiò et al., 2005; Chochinov et al., 2007; Cousineau et al., 2003; Gauthier et al., 2007; McPherson et al., 2007a; Wilson et al., 2005), and caregiver burden (Chiò et al.; Gauthier et al., 2007; McPherson et al.) is not particularly strong. In a longitudinal study of people with amyotrophic lateral sclerosis (ALS), SPB did not increase over time, despite increases in caregiver burden (Gauthier et al.). A consistent finding is for SPB to correlate more highly with psychological distress and existential issues such as hopelessness, loss of control, and loss of dignity (Chiò et al.; Chochinov et al.; Cousineau et al.; Gauthier et al.; McPherson et al.). In-depth qualitative investigation of SPB in people with advanced cancer expounds the social-relational nature of the construct (McPherson et al.). In this study, two overriding and interrelated categories emerged, "Concern for Others" and "Implications for Self." "Concern for Others" included empathic concern for perceived physical, social, and emotional hardships created for others as a result of illness, while "Implications for Self" encompassed feelings of responsibility based on the plight of others. The perception of causing hardships for others reflected back on the individual emphasizing reliance on others, resulting in distress and a diminished self-concept (McPherson et al.). Thus, SPB appears to have an existential component (McPherson et al., 2007b).

To date, research examining the construct of SPB has largely focused on people with advanced disease such as cancer (Chochinov et al., 2007; McPherson et al., 2007a; Wilson et al., 2004; 2005), renal failure (Cousineau et al., 2003), and amyotrophic lateral sclerosis (Chiò et al., 2005; Gauthier et al., 2007) because of the emergence of SPB as a relevant factor in qualitative investigations exploring quality of life, suffering, dignity, existential distress, and quality care at the end of life (McPherson, et al., 2007b). In this context, SPB is a common concern (Chiò et al.;

Chochinov et al.; Gauthier et al.; McPherson et al.; Wilson et al.).

Although there have been suggestions regarding interventions to alleviate the sense of burden to others, their effectiveness has not been determined (Akazawa et al., 2010; Chochinov et al., 2007; McPherson et al. 2007, 2007a; Wilson et al., 2005). McPherson et al. identified two broad strategies used by participants to minimize SPB, in a qualitative study of people with advanced cancer. These were described as strategies aimed at "reducing perceptions of burden to self" (e.g., resignation, sense of entitlement based on reciprocity) and "alleviating burden to others" (e.g., concealing symptoms, active participation in care, and problem solving). Reducing the need for care by concealing or not discussing care needs with caregivers has been observed in other studies examining SPB (McPherson, Wilson, Chyurlia, & Leclerc, 2010). A better understanding of the construct and the implications for both caregiver and care receiver would facilitate the development of interventions to alleviate this concern.

Measures

- *Self-Perceived Burden Scale (SPBS)*—The SPBS was developed by Cousineau et al. (2003) in a study of people with end-stage renal failure receiving hemodialysis. The frequency with which SPB is experienced is assessed on a 25-item self-report scale (a shorter 10-item scale is also available). Ratings are made on a 5-point Likert scale ranging from "none of the time" = 1 to "all of the time" = 5. Higher scores indicate greater levels of SPB. The measure has been shown to have good internal consistency (alpha 0.85) and convergent validity (Cousineau et al.; Simmons, 2007).
- *Structured Interview of Symptoms and Concerns (SISC)*—SPB can also be assessed using a single item interview question, taken from the SISC (Wilson et al., 2004). The SISC was developed to assess 13 common concerns and

symptoms in people receiving palliative care. One item asks about SPB—“With your current illness, do you feel that it has become a physical or emotional burden for your family?” The structured interview format requires the interviewer to ask the question and to probe the frequency and intensity of distress around SPB, to determine how much of a problem it poses for the individual. The interviewer then rates the overall severity on a 7-point scale from “no problem” = 0 to “extreme” = 6. A level of 3 requires the acknowledgement of SPB as a significant problem. The SPB item has excellent inter-rater reliability ($r = 0.92$) (Wilson et al.).

- *Visual Analogue Scale (VAS)*—VAS assessments of the SPB construct have been used in the literature (Chochinov et al., 2005; Wilson et al.) and have been shown to be highly correlated ($r = 0.85$) with the SISC SPB item (Wilson et al.).

SPB is a significant issue that at present is not well recognized in clinical practice and is under researched (McPherson, et al., 2007b). More research is needed to examine the construct in people with non-life-threatening disease, since preliminary research examining SPB in people receiving stroke rehabilitation indicates that SPB may be more common than in people with life-threatening disease (McPherson et al., 2010). Furthermore, the pattern of associations between SPB, physical functioning, and mental health observed in other studies (Chiò et al., 2005; Chochinov et al., 2007; Cousineau et al., 2003; Gauthier et al., 2007; McPherson et al., 2007a; Wilson et al., 2005) was not present in this study of people following a stroke, suggesting that there may also be differences in the experience. To date, much of the research has been cross-sectional; consequently, it is unclear how SPB changes over time in relation to changes in the individual’s condition and context of care or the direction of associations observed. What the research findings emphasize is the need to consider the perspectives of both caregiver and care receiver if the implications of

illness are to be fully understood in the context of family caregiving.

Cross-References

- ▶ [Caregiver Burden](#)
- ▶ [Convergent Validity](#)
- ▶ [End-of-Life Care](#)
- ▶ [Family Caregiving](#)
- ▶ [Internal Consistency](#)
- ▶ [Palliative Care](#)
- ▶ [Physical Functioning \(PF\)](#)
- ▶ [Psychological Distress](#)
- ▶ [Quality of Life](#)
- ▶ [Self-Concept](#)

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Self-Perceived Competence

- ▶ [Perceived Competence](#)

Self-Perceptions

- ▶ [Self-Worth and Measures of Body Image](#)

Self-Rated Health

- ▶ [SF-8™ Health Survey](#)

Self-Rated Health of Italian Elderly

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Synonyms

[Italian old people](#), [subjective health of](#); [Perception of health of old Italian people](#)

Definition

▶ [Self-reported health](#) is a broad and inclusive multidimensional concept: it encompasses the physical, psychological, and social aspects of health, without being linked to any specific medical condition. It allows for a global, complete, and reliable evaluation of individual health status and general well-being; in fact, people, when assessing their condition, are able to account simultaneously for all of the dimensions that constitute the concept of health. Different studies have shown that self-rated health is a valid predictor of mortality and is closely linked to objective health conditions, particularly for elderly people.

Description

Perception of health reported by individuals synthesizes simultaneously all of the dimensions that constitute the concept of health so representing a measure that allows for a global, complete, and reliable evaluation of individual health status and general well-being. Even if it is not necessarily linked to any specific medical condition, different studies have shown that self-rated health is a valid predictor of mortality (Idler & Benyamini, 1997), and is closely linked to objective health conditions, particularly for elderly people (Egidi & Spizzichino, 2007).

In social and medical survey, the perceived health status is usually measured by means of

the question suggested by the World Health Organization (WHO): “How is your health in general?” Subjects are generally asked to rate their health, taken as a whole, on a five-point scale, ranging from “very good,” “good,” “fair,” and “poor” to “very poor”; sometimes a four-point scale, without the intermediate category, is used.

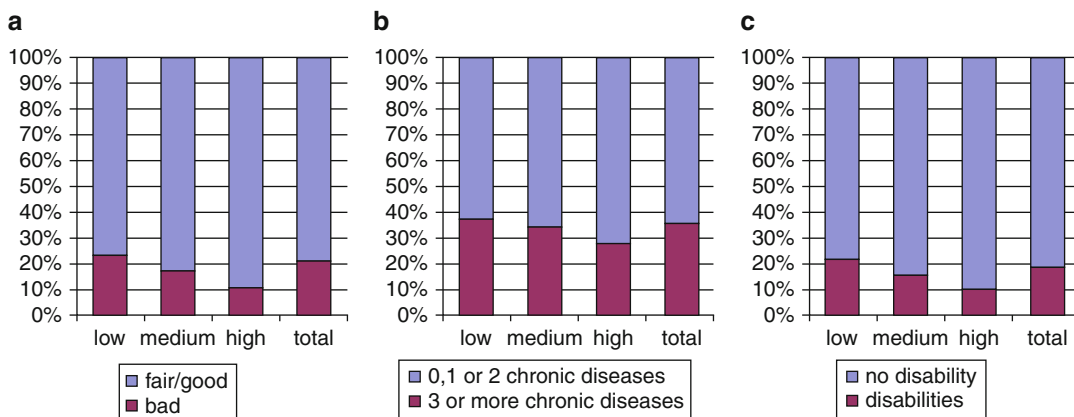
In 2005, about 6 % of the Italian population rated their own health condition as less than fair, and this proportion rose to around 20 % in the elderly (aged 65 and over). Clearly, these data first draw attention on population conditions from a sanitary point of view. But a second relevant point is that the ► [prevalence](#) of poor health and the resulting increase in the use of health services in Italy – which has the second-oldest population in Europe (United Nations, 2009) and a ► [life expectancy](#) at age 65 of 21.7 for women and 18.1 for men (Prati & Frova, 2011) – raise concerns about the economic sustainability of the national health and social assistance system. Some general figures on health and pension expenditures illustrate the relevance of the aging process in this domain in Italy. In 2003, 6.3 % of the GDP was absorbed by the ► [public health](#) system (France, Taroni, & Donatini, 2005); according to OECD statistics, this figure had risen to 9.5 % by 2009. An increase in the number of elderly would dramatically raise the prevalence of chronic diseases and thus the need for health services.

In Italy, a modern welfare state that has one of the best overall ► [healthcare](#) systems in the world, there are still significant imbalances in the field of health. Despite recent improvements, differences, from the subjective health status to the prevalence of chronic diseases, can be observed (1) for certain segments of population considering demographic characteristics, (2) according to the socioeconomic gradient of people, and (3) among regions. Using a statistical model (Pirani & Salvini, 2012a), differences associated with inequalities in self-rated health, controlling for demographic variables, objective health status, and context have been analyzed for elderly in Italy. Main results and principal finding are presented in the following.

Poor health conditions are not equally distributed among the population: inequalities of age and gender persist in health differences, and even if less pronounced, these gaps can also be seen in the elderly. All things being equal, ► [health inequalities](#) increase with age also among elderly people. As expected, “younger” elderly people are healthier than older respondents. Objective poor health conditions, measured by the presence of chronic illness or disabilities, are clearly more highly correlated with the perception of poor health, showing a higher risk of about 4–7 times. Women are more likely to report poor health status, *ceteris paribus*, with 50 % higher risk of having self-reported poor health than men. Moreover, a previous study (Egidi & Spizzichino, 2007) suggested that men and women may use different logic and rationales in evaluating their health status. A body mass index level far from the norm contributes to inequalities in health. Taking a normal-weight person as a reference, a weight slightly higher than the norm is negatively associated with perceived poor health status among the elderly, while being underweight is related to having the worst health perception (the risk increases of about 70 %). No evidence of a significant relationship between health perception and obesity is observed. A possible interpretation of this result is that among the elderly, being underweight probably arises from being ill, which leads to the perception of poor health, while being obese is not necessarily associated with any objective health problems.

The second source of health differences is found in relation to the socioeconomic position of individuals. For example, from a descriptive point of view, among people aged 65 and over, 11 % of those with a high level of ► [education](#) is reported being in less than fair health, compared to 16.8 % for the medium educated and 23.3 % for the less educated. An analogous situation is found for chronic diseases or disabilities (Fig. 1).

The relationship between health and socioeconomic status is usually explained to some extent by the prevalence among socioeconomically disadvantaged people of unhealthy or health-damaging behaviors, which increases exposure



Self-Rated Health of Italian Elderly, Fig. 1 Dimensions of health: Self-rated health (a), presence of chronic diseases (b) and presence of disabilities (c) by education, for people aged 65 and older (Source: Pirani and Salvini, 2012a)

to certain risk factors (Borg & Kristensen, 2000; Molarius et al., 2006), or by their minor skills in using the existing health facilities and services in an optimal way or adopting prevention behaviors (McNiece & Majeed, 1999). Withal, people in disadvantaged socioeconomic conditions are more exposed to health problems in the physical environment (Costa-Font, 2008; Volkens, Westert, & Schellevis, 2007) and to psychosocial stressors.

The association between health and socioeconomic position can be studied using different indicators of socioeconomic status. These measures – even while strongly correlated – are not completely interchangeable (Grundy & Holt, 2001), and the specific age under investigation may affect the choice of the most suitable socioeconomic indicators. Von dem Knesebeck, Luschen, Cockerham, and Siegrist (2003) found that in Germany, income was the best predictor for different measures of health, but according to other studies, ► **wealth**, including housing assets and housing tenure, represents a more consistent correlate of health than income for elderly people (Avlund et al., 2003; Costa-Font, 2008; Grundy & Holt, 2001, Huisman, Kunst, & Mackenbach, 2003). Sometimes a subjective evaluation of income is used (Demakokos, Nazroo, Breeze, & Marmot, 2008; Olsen & Dahl, 2007), even though

this measure could be susceptible to changes over the course of a lifetime, regardless of the actual conditions of the individual, and most importantly, as the health status worsens, perceptions about other aspects of life may change. As a measure of social stratification, education – a proxy of an individual's social capital, reflecting both material and nonmaterial resources – has been proved to be a strong predictor of self-rated health and functional limitations in countries when occupation and income are accounted for (Von dem Knesebeck, Verde, & Dragano, 2006).

Among variables that could account for socioeconomic differences for Italian elderly, the subjective assessment of financial resources shows the largest association with self-rated health. Once other elements have been accounted for, people who are dissatisfied with their economic situation have a risk of reporting less than fair health that is 76 % higher than that of satisfied people. According to a housing conditions indicator, people who reported having less-than-optimal ► **housing conditions** were more likely to report being in poor health. Education-related inequalities in health are also vast, that is, the higher the educational level, the better the reported health. Specifically, compared to people who are highly educated, those with a medium

level of education have about 25 % higher risk of being in self-rated poor health, while those in the lowest education group have a risk that is about 50 % higher.

For older people, occupational status has been demonstrated to lose its centrality as a predictor (Huisman et al., 2003; Rueda, Artazcoz, & Navarro, 2008), and this situation is verified also in Italy. For example, in this country, where fewer than 7 % of men and 2 % of women aged 65 and over are estimated to be working, employment status does not contribute substantially to variations in the health perceptions of elderly people.

Overall, these findings proved that each component of socioeconomic status – educational level, subjective economic conditions, and housing assets – is autonomously correlated with individual perceptions of health status and suggested that socioeconomic conditions may have both a spurious association, e.g., brought about by chronic diseases, disabilities, and health-damaging behaviors, and a direct relationship with the perception of health status.

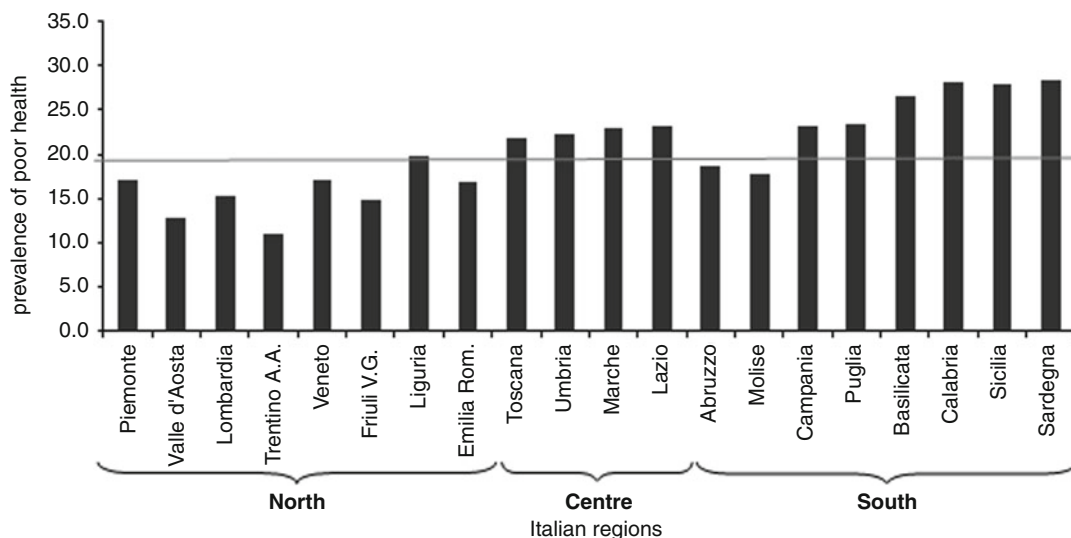
Family and ► [social support](#) have sometimes been assumed to be correlated to the perception of health conditions, mostly in old age, but it has rarely been investigated. Marital status is often accounted for in analyses of individual health; however, whereas the relationship with mortality/morbidity is contradictory among adults (Olsen & Dahl, 2007), the relationship is weaker, or not significant, among the elderly (Grundy & Sloggett, 2003; Rueda et al., 2008). Thus, ► [household composition](#) or other kinds of social support indicators are to be preferred. Recently, Olsen and Dahl (2007) suggested looking at elements like social networks, community life participation, and ► [social trust](#).

Considering the household composition, the analysis performed on elderly Italians showed that, net of objective health conditions and all the other characteristics, having someone to rely on in case of need is inversely associated with the perception of poor health. Using as a reference category a person who claims to be able to count on relatives, friends, and other people in case of

need, those who lack support at all have a 20 % higher risk of having self-rated poor health. The elderly who report being able to rely on family members only have a higher risk of about 15 %. The largest increase in risk (about 40 %) is found among those who cannot rely on family support but only on the help of people outside their family, highlighting the central role of the family in the care, assistance, and support of elderly people in Italy. Having someone to rely on represents an irreplaceable form of material and moral support that may help people to cope with and accept poor health, particularly from a subjective point of view, thus reducing its negative impact. This kind of relationship may be particularly relevant in the Italian context that is characterized by a cultural and relational model in which family cohesion and solidarity prevail. However, in a context where a process of nuclearization of the family is occurring and where public assistance for families is weak, the potential reduction of this kind of intragenerational support may lead to a worsening of the living conditions of the elderly.

Finally, in Italian context, territorial health inequalities have been found too (Ongaro & Salvini, 2009), with the southern regions recording the worst performances. For example, the percentage of the elderly population who report being in poor health ranges from 16 % in the North to 25 % in the South, with the central regions found in-between (Fig. 2). Huge imbalances can be observed across the Italian regions in various health dimensions (e.g., Carrieri, 2008; Costa, Marinacci, Caiazzo, & Spadea, 2003; Mazzucco, 2009), in the organization and provision of health services, and in access to healthcare (Pirani & Salvini, 2011).

Comparative and multilevel analysis in the field of health has grown in size over the past years (Cummins et al., 2005; Diez Roux, 2001; Mackenbach et al., 2008; Mitchell, Gleave, Bertley, Wiggins, & Joshi, 2000; Olsen & Dahl, 2007; Pickett & Pearl, 2001), but which relevant factors that engender territorial differences still represents a room for further explorations. Two main explanations for area-level effect have been



Self-Rated Health of Italian Elderly, Fig. 2 Prevalence of people aged 65 and over who rate their health status as “poor” or “very poor,” by Italian region. The

horizontal gray line represents the Italian average (Source: Pirani and Salvini, 2012a)

brought forward in literature. First, the deprived context may be deleterious on health by itself: the place where people live may be relevant in terms of lack of infrastructures, of shortage or inaccessibility of health services and other structures, and more generally in terms of ► [poverty](#) and scarcity of resources in the area (the so-called contextual effect). The second explanation focuses on an indirect mechanism and refers to the social context as sum of behaviors and ► [attitudes](#) of individuals living in those areas (the compositional effect). In this sense, observed heterogeneity may be due, completely or in part, to individual differences. These two mechanisms are not mutually exclusive and, rather, they usually coexist, underlining the necessity to define and explain the individual level before the territorial one.

Referring to Italian territorial differences, model results (Pirani & Salvini, 2012b) show that most of the total unexplained variation in health perception among the elderly (97 %) is due to individual characteristics, while only 3 % is due to the different regions of residence. The residential context emerges to be associated with the self-rated health, even after adjusting for personal demographic and socioeconomic

circumstances. In this sense, the study has documented the fact that individual characteristics (compositional effect), even representing the most important correlates of health, do not completely explain intra-regional heterogeneity, which confirms the existence of an autonomous contextual effect. On one hand, these inequalities reflect the well-known imbalances in Italy: the economic, social, and environmental conditions in the South continue to lag behind conditions in the North. On the other, these differences may be in part the result of the organization of the Italian healthcare system, for which the central government and the 20 regions (Italian Nuts level 2) share legal responsibility. Recognition of the *context* in which individuals live is thus essential for interpreting and understanding the most relevant critical factors, including those at an individual level.

Overall, these findings imply that there is still considerable scope for improvement in the health of the elderly population in Italy. Socioeconomic status is a key factor in assessing a population’s health status and its need for healthcare, both at the individual and at the aggregate level, but the public health system does not seem to be able to respond in a differentiated manner to the specific

needs of the population. This relationship calls for integrated policies and interventions – not solely those involved in the health policy – in order to reduce health inequalities or at least those that are avoidable. Efforts to reduce health inequalities must include interventions aimed at closing the existing socioeconomic gaps and improving the ► **quality of life** of individuals in all its dimensions.

Cross-References

- [Disability and Health](#)
- [Environment and Health](#)
- [Gender and Health](#)
- [Health Determinants](#)
- [Health Status Measurement](#)
- [Translating Health Status Questionnaires/ Outcome Measures](#)

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Self-Rated Poverty

- ▶ [Subjective Poverty](#)

Self-Rated Status

- ▶ [Class Identification](#)

Self-Rating Depression Scale (SDS)

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Synonyms

[SDS](#); [Self-rating depression scale of Zung](#); [SRS](#); [ZDRS](#); [Zung scale](#); [Zung SDS](#); [Zung self-rating depression scale](#); [Zung's quantitative checklist of depression](#); [Zung-D](#)

Definition

The Zung Self-Rating Depression Scale (SDS) (Zung, 1965) was developed by Duke University psychiatrist, Dr. William W. K. Zung, before the introduction of DSM-III as a self-administered measure of depression severity (in terms of frequency) referring to the past several days (1 week) but later modified to 2 weeks. The author intended the scale to be all-inclusive with respect to symptoms of the illness but also short, simple, and quantitative. The scale is freely available.

Description

Characteristics

SDS items were selected on the basis of the diagnostic criteria for depression and based on factor analytic studies available at the time (Lee et al., 1994). The scale has a behavioral and somatic orientation in assessing depressive illness (Carroll, Fielding, & Blashki, 1973). Although the SDS covers most DSM-IV symptom criteria, no items clearly cover psychomotor retardation or symptoms (e.g., increased appetite, weight gain, hypersomnia) that are more common in atypical depressions. A copy of the SDS appears in Zung (1965).

The SDS can be completed in 5 min by higher-functioning patients, although it may take up to

30 min to complete depending on patient pathology. It is suggested that the test is best used with people aged from 19 to 65 (Fabry, 1980); some depressed patients may require supervision or assistance in completing the measure, and severely ill patients may not be able to complete the test (Carroll et al., 1973).

The SDS has been used in multiple countries, with ► [cross-cultural validation](#) studies being available from Dutch, Finnish, Hmong, and Japanese investigations. Other translations have been used in studies from Austria, Czech Republic, France, Germany, Iran (Makaremi, 1992) and Italy, Poland, Sweden, and Venezuela (Naughton & Wiklund, 1993). There are multiple translations of the SDS, including Chinese (Lee et al., 1994), Russian, Thai, Czech, Farsi, Indonesian, Lithuanian, Greek (Fountoulakis et al., 2001), Arabic (Kirkby, Al Saif, & el-din Mohamed, 2005), and Brazilian (Chagas et al., 2010). Cross-cultural data are available for Japan, Australia, Czech Republic, England, Germany, and Switzerland (Zung, 1969).

A revised version of the SDS that appears in the Early Clinical Drug Evaluation Program Unite (ECDEU) manual (Guy, 1976) changes the wording of two items, adds a rating of 0 = none of the time, and extends the time frame to the past week. A companion interview version of the SDS, called the Depression Status Inventory, is also given in the ECDEU manual. There exist several short forms of the SDS both in English and other languages. A modified English version of the SDS has been developed, including 10 items from the original scale and two additional psychological anxiety items, under the name of the Wakefield Self-Assessment Inventory (Snaith, Ahmed, Mehta, & Hamilton, 1971). A 10-item shorter version of the SDS has been developed for Chinese elderly (Lee et al., 1994), and others derived a 10-question Short Zung Interviewer-Assisted Depression Rating Scale (Short Zung IDS) from the SDS (Tucker, Ogle, Davison, & Eilenberg, 1986) and a 12-item short and experimenter-rated test (Zung-12), but there has been little validation of this scale in depressed elderly (Gosker, Berger, & Deelman, 1994; Hulstijn, Deelman, de Graaf, & Berger, 1992).

Also, a brief ZSDS was developed for assessing depression in cancer patients; given there is the potential confounding influence of somatic symptoms due to cancer on the assessment of depressive symptoms, an 11-item index was statistically examined after omitting items assessing somatic symptoms (Dagnan et al., 1998). Also, there is a modified version of the test (M-SDS) that consists of 17 items (Ciacci, Iavarone, Mazzacca, & De Rosa, 1998). This version omits three items evaluating gastroenteric symptoms of depression (decreased appetite, weight loss, and constipation) to avoid bias due to medical illness. There is also a computerized version of the test for android phones; however, its psychometric properties need examination.

Scoring

The original SDS (Zung, 1965) contains 20 items rated using a four-point ► [Likert-type scale](#), with 10 items worded negatively (presence of symptoms) and 10 items worded positively (absence of symptoms). Positive items are scored inversely. For each item, the respondent rates whether the item occurred 1 = a little of the time, 2 = some of the time, 3 = a good part of the time, or 4 = most of the time. All items are summed to form a total score, which ranges from 20–80. An SDS index expressing the total score as a percentage can be obtained by multiplying the raw score by a factor of 1.25; Carroll et al. (1973), however, suggest that there is no real purpose to this. Scores can also be evaluated in terms of symptom groups (affect (two items), physiological disturbance (eight items), psychomotor disturbance (two items), and psychological disturbance (eight items)) (Lezak, 1995). The SDS scores are interpreted as follows: <50 “within normal range,” 50–59 “minimal to mild depression,” 60–69 “moderate to severe depression,” and >70 “severe depression.” Glaxo Wellcome (<http://healthnet.umassmed.edu/mhealth/ZungSelfRatedDepressionScale.pdf>) suggested that the raw score of most people with depression ranges between 50 and 69. A score of 70 and higher is noted to be unusual in practice (Carroll et al., 1973).

Factor Structure

Earlier factor analyses of the English version of the SDS show a four-factor model consisting of well-being, depressed mood, somatic symptoms, and optimism (Zung, 1967); or retarded depression, anxious depression, appetite disturbance, and performance difficulty (Rickels, Downing, Lipman, Fisher, & Randall, 1973); or depressive, cognitive, anxiety, and somatic (Romera, Delgado-Cohen, Perez, Caballero, & Gilaberte, 2008). Steuer, Olsen, and Jarvik (1980) initially reported a three-factor model but noted that four factors accounted for roughly 51 % of total variance using a sample of 60 middle-aged to elderly Caucasians suffering from unipolar major depressive disorder. Interpretation of the aforementioned factor analyses must be made with caution given that (a) there are inconsistencies in reporting factor analysis results (e.g., one reports ► [eigenvalues](#), another reports a correlation matrix), (b) there exists heterogeneity in the sample utilized (e.g., one reports on neurotic depression with or without concomitant anxiety while others report on elderly living in the community with unipolar major depressive disorder), and (c) items included in the factor analysis were selected upon the understanding of depression of that period, where understanding of depression was limited to behavioral and somatic symptoms.

Examinations of factor analyses studies from non-Caucasian samples (Japanese, Greek, Finnish, and Dutch) suggest that different factor structures and nosology have been used and are interpreted differently than with Caucasian samples. For example, one group (Sakamoto, Kijima, Tomoda, & Kambara, 1998) reported the following three factors from their ► [principal component analysis](#) based on a sample of 2,187 Japanese college students: cognitive, affective, and somatic symptoms. Their finding was further supported by a confirmatory factor analysis in a sample of 597 Japanese undergraduates (GFI = 0.92). In contrast, a Finnish study of 290 depressed adults ages 60 and older labeled the three factors differently: depressed mood, loss of self-esteem, and irritability and agitation (Kivela & Pahkala, 1987). Factor analysis of a Greek

SDS version highlighted five factors: anxiety-depression, thought content, gastroenterological symptoms, irritability, and social-interpersonal functioning (Fountoulakis et al., 2001).

Overall, it appears that the SDS is multidimensional. English factor analytic studies are suggestive of different factor loadings than the non-English studies. The finding of a multidimensional structure tends to forestall supporting the validity of an overall SDS score.

Norms

Zung (1965) provided descriptive statistics in terms of the raw and index scores for normal control ($n = 100$), depressive disorder ($n = 31$), and other disorders ($n = 25$). A later seminal work by Knight and colleagues (1983) provided sex and age-specific ► [norms](#) for normal controls from the general population in New Zealand ($n = 1,173$). The age clusters ranged from 16 to 89 with an interval of 4 years (e.g., 16–19) (Knight, Waal-Manning, & Spears, 1983).

Reliability

Internal Consistency

A split-half reliability study in a psychiatric sample reported a ► [reliability coefficient](#) of 0.73 (Zung, 1972). In a community survey of 1,173 subjects from New Zealand, ► [Cronbach's alpha](#) was satisfactory at 0.79 (Knight et al., 1983). Also, in a smaller sample ($n = 100$), the alpha value was relatively the same, 0.81 (Yesavage et al., 1983).

► [Internal consistency](#) of the SDS for adults suffering from mental retardation was evaluated to be average in one study (Cronbach's alpha: 0.58, $n = 120$, age 19–74 years) (Powell, 2003). However, the reported alpha is considered to be weak evidence to support internal consistency for the scale. One study of 85 depressed and 28 nondepressed patients in a Dutch day clinic found the internal consistency to be 0.82 and the split-half reliability to be 0.79 (de Jonghe & Baneke, 1989). Dunn and Sacco (1989) found a slightly larger value with community-dwelling elderly (0.84) with a median item-total correlation of 0.32 (ranging from 0.18 to 0.65; $n = 267$). In contrast, in a different study, superior alpha

values were reported with 282 family escorts (0.91), 369 depressed clients (0.88), and 218 nondepressed clients (0.93) (Gabrys & Peters, 1985).

In sum, the SDS has been shown to have an adequate to excellent internal consistency with regard to the general population but not with subjects suffering from mental retardation. The findings of a multidimensional factor structure for the SDS, as reported by the English and non-English studies, raise questions about the suitability of computing internal consistency related to a total score.

Test-Retest Reliability

► **Test-retest reliability** of the total score has been proven to be high with 19 schizophrenia patients over a mean 17-day interval (Spearman $\rho = 0.87$) (Kaneda, 1999) and excellent using the Greek version of the test with 12 individuals suffering from depression and 8 normal comparison subjects ($n = 20$) over a 1–2-day reapplication (Pearson's $r = 0.92$) (Fountoulakis et al., 2001).

Overall, the SDS has shown good test-retest reliability across studies; however, the sample size in these two studies is small.

Inter-rater Reliability

► **Inter-rater reliability** from 109 first-time raters of clients was reported to be robust (0.89). However, the value of the estimate of consistency was slightly smaller when raters with self-reporting client were taken into consideration (0.84) (Gabrys & Peters, 1985). Nonetheless, this study does not report type of statistic used for these assessments.

Validity

► **Known-Groups Validity**

In a study of depression subgroups, Maes and colleagues found that patients with minor depression based on DSM-III criteria showed lower SDS scores than those with major depressive disorder and those with major depressive disorder with melancholic or psychotic features showed higher SDS scores than either of the other two groups (Maes, De Ruyter, Claes, & Suy, 1988).

In a different study conducted by the National Institute of Mental Health division of public health, mean total scores for five diagnostic adult groups were 65 for depressive disorders ($n = 96$), 53 for anxiety disorders ($n = 22$), 48 for transient situational disorder ($n = 12$), 52 for schizophrenia ($n = 25$), and 56 for personality disorders ($n = 54$) (Guy, 1976); furthermore, it was found that the depressive disorder group was significantly different from the other four groups. Gabrys and Peters (1985) also found a significant difference between nondepressed and depressed patients ($t(585) = 30.85, p < 0.001$). Nonetheless, it has been suggested that the scale may not be a good discriminator when a wide spectrum of clinical depression is involved (Carroll et al., 1973).

Zung (1965) reported a range of SDS index scores from 0.63 to 0.90, with a mean of 0.74 and total score equivalent of 59, in depressed outpatients whereas hospital staff control subjects showed a range of 0.25–0.43, with a mean of 0.33 and total score equivalent of 26. Knight et al. (1983) showed SDS raw scores ranging from 30.30 to 33.86 (mean = 31.67) for men and ranging from 33.67 to 37.20 (mean = 35.56) for women from the general population. The disparity between genders was more prominent for subjects aged less than 50, which suggests that further examination of sex and age-specific norms is needed.

► **Criterion-Related Validity**

The SDS has been shown to significantly discern nondepressed from depressed groups as per psychiatrist global ratings (where zero is no evidence of any depressed mood and 4 is of a severity equivalent to the most serious depressive pathology), with means ranging from 37.47 to 54.86 (Christenfeld, Lubin, & Satin, 1978). In another study, using cutoff scores of 50 and 60, SDS was shown to classify mild to moderate depression with a sensitivity of 83 % and specificity of 81 % and those with moderate to severe depression with a sensitivity of 67 % and specificity of 92 % (Turner & Romano, 1984). Furthermore, the authors state that, by using these cutoff scores, the SDS correctly classifies individuals by 82 %

and 84 %, respectively. The overall relationship between the SDS and Diagnostic and Statistical Manual (DSM-III) in a sample of 40 chronic pain patients was reported to be more than average ($r = 0.67$) (Turner & Romano, 1984).

On a different note, data from 369 depressed patients showed 8 % of the patients scored below the depression cutoff, 26 % in the mild to moderate, 46 % in the moderate to severe, and 20 % in severe stage (Gabrys & Peters, 1985).

Convergent/Discriminant Validity

► **Convergent validity** of the scale has been examined several times with some studies reporting validity coefficients (i.e., correlations) (see Table 1) and a few studies just stating the strength and significance of the relationship without values (e.g., Bablis & Pollard, 2009). The validity evidence from those reporting values ranged from weak to strong (e.g., 0.34–0.84) and was determined with samples such as hospital employees, inpatients or outpatients, and those with heterogeneous psychiatric conditions (e.g., mental retardation, depression spectrum).

Data emerging from a general population sample in New Zealand suggested that the scale may not discriminate depression from ► **anxiety**; the SDS correlated significantly with A-state ($r = 0.54$) and A-trait ($r = 0.70$) scales of the Anxiety Inventory (Knight et al., 1983). By the same token, an Italian study of 140 individuals with an average age of 29.86 years ($SD = 8.78$) reported that the SDS correlated strongly with the Institute for Personality and Ability Testing (IPAT) scale for anxiety and ANX scales of the MMPI-2 (Innamorati et al., 2006). Additionally, a European group reported moderate positive correlations between the SDS and the ► **Hospital Anxiety and Depression Scale (HADS)** of $r = 0.53$ for depression and $r = 0.65$ for anxiety in individuals suffering from intellectual disability.

On a different note, the SDS has been used to explore relationships between depression and neurocognitive complaints and disorders in the elderly. For example, in 88 normal individuals ages 60–90, negative relationships were found between the SDS and an objective measure of

attention/concentration ($r = -0.56$) and a self-rating of mnemonic efficiency ($r = -0.49$) (Larrabee & Levin, 1986). These negative correlations, although average in magnitude, are evidence to support the scale's convergent validity.

In total, almost no study used both convergent and discriminant measures to examine the validity of the scale, and more evidence is provided pertaining to the convergent validity of the scale than the ► **discriminant validity**. Overall, this suggests that further evidence is needed.

Sensitivity to Change

As an indicator of sensitivity to change, Zung (1965) reported that the mean SDS index scores in depressed patients before and after treatment were 0.73 and 0.39, respectively (Zung, 1965). Biggs and colleagues reported a correlation of 0.63 between change on the HAM-D and change on the SDS in a 6-week treatment trial (Biggs et al., 1978). Correlations between the HAM-D and SDS were higher when HAM-D scores with cutoff score of less than 10 ($r = 0.63$) or scores ranging from 10 to 20 ($r = 0.45$) were used in a sample of 41 depressed outpatients (Biggs et al.), which suggests that the SDS is more sensitive at differentiating depressive symptoms of milder to none and moderate to severe severity but less with mild to moderate.

In a review of drug treatment studies, including five studies that used the SDS in comparison to another symptom measure, the SDS was not found to be more sensitive to change than the comparison tool in any of these studies (Moran & Lambert, 1983). Thus, the SDS's sensitivity to change over time is no better than other available measures such as the ► **Beck Depression Inventory (BDI)** and the HAM-D.

Altogether, the validation evidence shows that the SDS (a) has been tested head-to-head with psychometrically sophisticated and validated scales such as the BDI or GDS, (b) correlated better with depression scales than other scales examining psychopathology, and (c) has been recognized as a weak assessment tool for research with participants suffering from mental retardation or where matched groups are needed. Furthermore, the SDS is a non-diagnostically

Self-Rating Depression Scale (SDS), Table 1 SDS convergent validity coefficients as provided by seminal works

Scales	Convergent validity coefficient	Samples	Citations
Beck Depression Inventory (BDI)	$r = 0.34$	120 adults with mental retardation	Powell (2003)
BDI	$r = 0.86$	40 chronic pain (inpatients and outpatients) with and without depression	Turner and Romano (1984)
Modified BDI	$r = 0.59$	110 borderline-to-severely retarded patients	Kazdin, Matson, and Senatore (1983)
Short form of BDI	$r = 0.85$	40 chronic pain (inpatients and outpatients) with and without depression	Turner and Romano (1984)
Brief Symptom Inventory (BSI –depression/affective)	$r = 0.52$	162 (outpatients) and 30 (inpatient) spinal cord injury (SCI)	Tate, Forchheimer, Maynard, Davidoff, and Dijkers (1993)
BSI – global severity index	$r = 0.53$	162 (outpatients) and 30 (inpatient) SCI	Tate et al. (1993)
Depression Adjective Checklist (DACL) – form E	$r = 0.44$	309 employees of state mental hospital	Christenfeld et al. (1978)
Depression Symptom Checklist (DSC)	$r = 0.57$	179 community-dwelling older adults	Dunn and Sacco (1989)
Geriatric Depression Scale (GDS)	$r = 0.59$	196 community-dwelling elderly	Dunn & Sacco (1989)
GDS	$r = 0.84$	100 normal and depressed geriatric subjects	Yesavage et al. (1983)
Hospital Anxiety and Depression Scale (HADS)	$r = 0.70$	32 individuals with intellectual disabilities	Dagnan et al. (2008)
Hamilton Rating Scale for Depression (HAM-D)	$r = 0.80$	100 normal and depressed geriatric subjects	Yesavage et al. (1983)
HAM-D	At intake: $r = 0.45$ At 2, 4, 6 weeks of treatment: ranging from $r = 0.68$ to 0.76	41 depressed (outpatients)	Biggs, Wylie, and Ziegler (1978)
HAM-D	$r = 0.41$	67 patients with mild to moderate depression (inpatient, day hospital, and general practice)	Carroll et al. (1973)
Major Depression Inventory (MDI)	$\rho = 0.75$	89 Parkinson disease patients	Wermuth, (1998)
Minnesota Multiphasic Personality Inventory (MMPI) –Depression (D)	$r = 0.76$	40 chronic pain (inpatients and outpatients) with and without depression	Turner and Romano (1984)
MMPI-2 – (D)	$r = 0.77$	259 persons in probation or parole with mixed diagnosis	Thurber, Snow, and Honts (2002)

r = Pearson product moment correlation; ρ = Spearman rho correlation coefficient

specific indicator of depressive symptomatology, in that (a) few studies to date have examined the discriminant validity of the SDS in contrast to validated neuropsychological measures, particularly assessing memory, and (b) only limited data exist examining the discriminant validity of the SDS, particularly discriminating depression from

anxiety given that anxiety was the most highlighted syndrome as manifesting similarly to depression.

Discussion

The SDS is a popular tool used in clinics to rate the severity (frequency) of depressive symptoms

in patients with diagnosed depressive illnesses (comorbid or not); however, its utility in research has been questioned. It was designed essentially as a screening tool for depression in the middle-aged population; however, it has gained popularity in being used in studies of the elderly (Lee et al., 1994; Lezak, 1995). Generally, the scale has an easy scoring system that is not time-consuming.

A shortcoming of the scale is that the original form has four options for responses, which has been signaled to be difficult for the elderly (Lee et al., 1994), and thus a higher non-completion rate is prevalent in this population age group (Dunn & Sacco, 1989).

Overall, it appears that the SDS is multidimensional; English factor analytic studies suggest that a 3-factor model is optimal. These findings tend to question the validity of using a total SDS score.

The SDS has been shown to have an adequate internal consistency with regard to general population but not with subjects suffering from mental retardation. Also, it has shown good test-retest reliability across studies. However, only a limited number of studies report on the duration of the interval, and further test-retest reliability studies are needed.

In sum, the evidence points to (a) that the SDS has been tested head-to-head with psychometrically sophisticated and validated scales; (b) that it has good convergent validity but no or very little evidence to support its discriminant validity; (c) that limited number of studies, particularly with English speaking participants, examined criterion-related validity of the scale; (d) that the evidence points to the weakness of the scale for research use with individuals suffering from mental retardation or when matched groups are needed; and (e) it has good evidence for known-groups validity, in that it differentiates depressed from nondepressed groups.

Cross-References

- ▶ [Anxiety](#)
- ▶ [Beck Depression Inventory](#)

- ▶ [Confirmatory Factor Analysis \(CFA\)](#)
- ▶ [Convergent Validity](#)
- ▶ [Correlation Coefficient](#)
- ▶ [Criterion Validity](#)
- ▶ [Cronbach's Alpha](#)
- ▶ [Cross-Cultural Validation](#)
- ▶ [Discriminant Validity](#)
- ▶ [Factor Analysis](#)
- ▶ [Geriatric Depression Scale](#)
- ▶ [Hospital Anxiety and Depression Scale \(HADS\)](#)
- ▶ [Internal Consistency Reliability](#)
- ▶ [Inter-rater Reliability](#)
- ▶ [Known-Groups Validity](#)
- ▶ [Likert Scale](#)
- ▶ [Norms](#)
- ▶ [Principal Component Analysis](#)
- ▶ [Reliability](#)
- ▶ [Reliability Coefficient](#)
- ▶ [Test-Retest Reliability](#)
- ▶ [Translation Research](#)

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Self-Rating Depression Scale of Zung

- ▶ [Self-Rating Depression Scale \(SDS\)](#)

Self-Realization

- ▶ [Personal Growth](#)
- ▶ [Self-Actualization](#)
- ▶ [Ubuntu: The Good Life](#)

Self-Regulation

- ▶ [Biofeedback](#)
- ▶ [Individual Autonomy](#)

Self-Report Bias in Estimating Cross-Sectional and Treatment Effects

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Synonyms

[Reporting bias for health status](#); [Reporting bias for treatment effects](#)

Definition

Self-report bias is the deviation between the self-reported and true values of the same measure. The bias is a type of ▶ [measurement error](#) that may be random or systematic and constant or variable. It can mislead descriptive statistics and causal inferences.

Description

Self-report bias is a type of ▶ [measurement error](#) that can occur in any context where random or systematic misreporting is conceivable. The bias is ubiquitous in ▶ [survey](#) data where cognitive processes, social desirability, and survey conditions can alter interviewee's responses (Bound, Brown, & Mathiowetz, 2001). It occurs even in seemingly innocuous self-reported information, such as age, and is frequently found in sensitive questions, such as body weight and mental health. The bias can also occur in administrative data if there is potential for misreporting.

The potential of misreporting to induce bias in a cross-sectional or longitudinal analysis depends

on the correlation of the error with the true value of the variable of interest and the errors and true values of other variables. These factors also determine the potential strategies for addressing the self-report bias. Bound et al. (2001) provide a detailed assessment of various measurement errors and methods to address them.

Focusing on linear models and the effect of self-report bias in independent variables on parameter estimates, there are three common scenarios.

Random Self-Report Bias

As with “classical” measurement error, a random self-report error is uncorrelated with the true value of the variable and the errors and true values of other variables in the analysis. In a bivariate model, the random error creates attenuation (bias towards 0) in the parameter estimate. In a multivariate model, the random errors in multiple variables can interact in complex ways.

A common approach to correcting the random bias in an independent variable is instrumental variables, using a measure that is correlated with the independent variable of interest but uncorrelated with the error term.

Systematic Self-Report Bias in Cross-Sectional Analysis

Systematic deviations between the self-reported and measured (true) values of a variable can mislead cross-sectional analyses that only have access to the self-reported information. The systematic bias can originate in accidental or deliberate misreporting. In the case of surveys, respondents or their proxies may accidentally misreport if they are unaware of the true answer and rely on biased heuristics to form their responses. They may also deliberately misconstrue the truth, e.g., to conform to perceived ► **social norms**. A well-documented example is the underreporting of weight and overreporting of height (e.g., Ezzati, Martin, Skjold, Hoorn, & Murray, 2006).

In a descriptive analysis, the systematic bias can be examined and addressed with auxiliary information on both the true and self-reported values. Analysts can estimate a correction

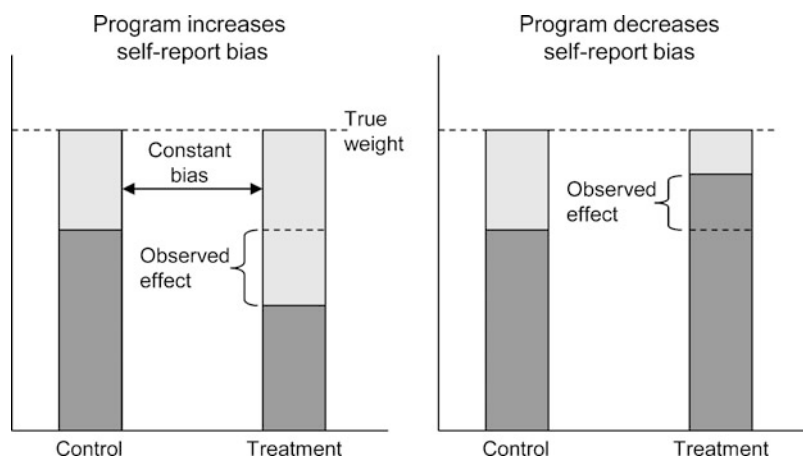
model on the validation data and use the estimates to rectify the biased self-reports in the primary dataset. The validation approach can be implemented on a separate dataset or on a subsample of the primary dataset for which both types of measures are available. Importantly, the primary and validation data must have comparable populations, measure the same constructs, and share similar survey features and conditions. For instance, Ezzati et al. (2006) point out that self-reports may be subject to mode effects and, in the validation data collection, could be affected by respondents’ expectation that they will be measured.

Systematic Self-Report Bias and Treatment Effects

Systematic self-report bias also affects program evaluations and the estimation of treatment effects. A constant systematic bias can be differenced out in a pre/post or treatment/control comparison even if the bias is unobserved by the analyst. However, it is often reasonable to expect that the reporting bias itself may respond to the intervention (Bauhoff, 2011). As a consequence, the observed change in the outcome cannot be cleanly attributed to the intervention – it could be due to either the intervention’s true effect or its effect on the self-report bias, or both.

Figure 1 illustrates this effect for the hypothetical evaluation of a hypothetical weight loss program by comparing observed outcomes in the treatment and ► **control** groups after the intervention. The program is ineffective at changing participants’ true weight so that the actual treatment effect is zero. If the program affects the reporting bias of the treatment group, any observed effect is entirely spurious. The bias may increase or decrease the initial underreporting, leading the analyst to erroneously conclude that the program reduced or increased participants’ weight, respectively.

The availability of a control group generally does not allow the analyst to isolate the true effect from the observed effect. Moreover, while random reporting errors can be addressed using instrumental variables, this approach is not suitable to dealing with systematic biases unless the



Self-Report Bias in Estimating Cross-Sectional and Treatment Effects, Fig. 1 Spurious observed effect of a weight loss program that is ineffective at changing true weight but affects the self-report bias. With initial underreporting of the true weight, an increase in the bias

(more underreporting) leads to a spurious decrease in observed weight (*left panel*). Similarly, a decrease in the bias (less underreporting) leads to a spurious increase in observed weight (*right panel*)

instrument is only correlated with the true value of the variable and not the associated bias term. For instance, the relation between wages and mental health likely suffers from systematic self-report bias as individuals may misreport their mental health for a variety of reasons. Using participation in a treatment program to instrument for mental health does not generate valid findings, as the program plausibly also affects the reporting bias. As result, the “exclusion restriction,” which requires that the instrumental be correlated with the outcome of interest only through its effect on the key independent variable, is violated and the estimate inconsistent. One approach is to use two sets of validation data on the study population – one to estimate the constant reporting bias in the control group and the other to estimate the change in the bias in the treatment group. As above, the validation data can be collected for a subset of these two groups.

Discussion

As a particular form of ► [measurement error](#), systematic self-report bias can significantly mislead all empirical research designs used to estimate cross-sectional and treatment effects. It can also confound assessments of heterogeneity if the bias changes differentially across the subgroups

under consideration. Validation data can help quantify or mitigate this issue which is pervasive in empirical research using data that are subject to misreporting.

Cross-References

- [Program Evaluation](#)
- [Social Desirability Bias and Context in Sensitive Surveys](#)
- [Survey Research](#)

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Self-Report Functional Status Measures for Hip or Knee Replacement Surgery

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Synonyms

Hip or knee clinical scores or tools; Hip or knee-specific patient-reported outcome measures (PROMs); Knee or hip arthroplasty outcome measures

Definition

Knee and hip rating scales were first developed to assess outcomes for knee and hip arthroplasty. Knee or hip arthroplasty (replacement surgery) is a surgical procedure for patients with moderate to severe arthritis and chronic functional limitation and pain that has not responded to conservative care approaches.

Other types of hip and knee scoring systems include instruments for determining peoples' need or priority for joint replacement (e.g., the New Zealand score for hip and knee surgery); however, this type of instrument is not generally suitable for assessing outcomes following treatment.

Description

The Beginnings of Patient-Reported Outcome Assessment

Knee and hip (separately or combined) rating scales were first developed to assess outcomes following knee and hip joint replacement (arthroplasty). Knee or hip arthroplasty is a surgical procedure for patients who most often have moderate to severe arthritis associated with chronic functional limitations and joint pain

that has not responded to conservative forms of intervention. Early measures were generally clinical scores, assessed by the clinician, and representing a simple index rather than a scale. Thus, items considered to be important from the clinician's perspective were scored or rated, such as range of joint movement (in degrees), severity of pain (asked of the patient), gait impairment, and joint stiffness, with item scores added to produce one or more overall score(s) covering a relatively continuous range of scores between little or no pain/impairment through to high severity pain/impairment. The involvement of patients and the application of psychometric techniques have increased over time in producing many new knee and hip rating scales, and the application of these measures has also broadened. For instance, hip and/or knee-specific rating scales may be used to assess outcomes of interventions other than surgery for the treatment of arthritis.

Hip and knee rating scales began with instruments that were designed by clinicians, and were developed from the clinician's perspective. Ratings were conducted by the clinician, and in many cases, the questions required the clinician to ask the patient about their symptoms. The first applications of these instruments were applied to patients undergoing either knee or hip arthroplasty.

Hip or knee arthroplasty has been a viable treatment for several decades for patients with moderate or severe arthritis and chronic functional limitation or pain. The first reports of knee or hip arthroplasty outcome assessment that incorporated individual patient-reported data were by Merle D'Aubigne and Postel (1954) for the hip and by Insall, Ranawat, Agliette, and Shine (1976) for the knee. The hip scale reported by Merle D'Aubigne and Postel consisted of three dimensions measured on a Likert scale, and these dimensions were (1) function-related pain, (2) hip range of motion, and (3) ability to walk. The scale reported by Insall and colleagues was the initial version of the Hospital for Special Surgery knee rating scale. This scale consisted of seven dimensions including pain, walking mobility, joint range of

motion, and muscle strength. By today's standards, these scales are limiting in several important ways. For example, there was no systematic process used to select the items and to test their psychometric soundness. The clinician queried the patient in lieu of the patient completing the form without interaction with the clinician. However, these scales were ground breaking. Traditionally, outcome was determined based on surgeon judgments using a single item on a ▶ [Likert scale](#), typically ranging from "poor" to "excellent" but with no direct input from the patient. These measures were the first to begin to incorporate the patient's perspective into outcome assessments for this increasingly common major surgical procedure.

Second-Generation Measures

Researchers quickly realized that in order for outcome measures to be psychometrically sound, a systematic development process was required and the data needed to be collected without potential clinician influence. Given the worldwide appeal and generally successful and cost-effective outcome of knee and hip replacement surgery, a great demand for psychometrically sound outcome instruments that incorporated the patient's point of view began to emerge. With this greater demand came a proliferation of instruments, both general and specific, for patients with hip or knee arthroplasty. For example, Veenhof et al. (2006) conducted a systematic review of hip and knee arthritis outcome measures and included 18 measures in their analysis. Wilkie, Peat, Thomas, and Croft (2004) broadened their search to instruments designed for older adults with mobility-related problems, including those with arthritis, and found 27 measures for their analysis. The consistent theme among these types of reviews is that while these second-generation measures demonstrate appreciable improvements in measurement properties, there is a consistent lack of application of a theoretical framework that guides the development of the instrument. For example, Pollard, Johnston, and Dieppe (2006) noted that while the Western Ontario and McMaster Universities Arthritis Index

(WOMAC) and the Oxford hip and knee scores defined the general construct of interest, neither scale was based on a clearly defined theoretical framework. Of the 13 scales examined by Pollard et al., 12 of the instruments' scores combined domains within the International Classification of Functioning, Disability and Health (ICF) domains. Hawker and Gignac (2006) echo these concerns in an accompanying editorial. They argue that in order to better understand the arthritis disease process and responses to treatments such as arthroplasty, use of a clearly defined conceptual framework that underpins the outcome measure will bring us closer to the "truth" in understanding changes in a patient's condition over time.

Nonetheless, the collection of hip and knee Patient Reported Outcomes Measurements (PROMs) data is increasingly being used as a cost-effective follow-up option for joint replacement, as compared to continued postoperative hospital visits and radiological tests. In addition, programs to capture hip and knee PROMs data in relation to joint replacement in Sweden (Dunbar, Robertsson, Ryd, & Lidgren, 2001), New Zealand (Rothwell, Hooper, Hobbs, & Frampton, 2010), and the UK have demonstrated high response rates and produced valuable information in a relatively short period (NHS Hospital Episode Statistics (HES) Online, 2010).

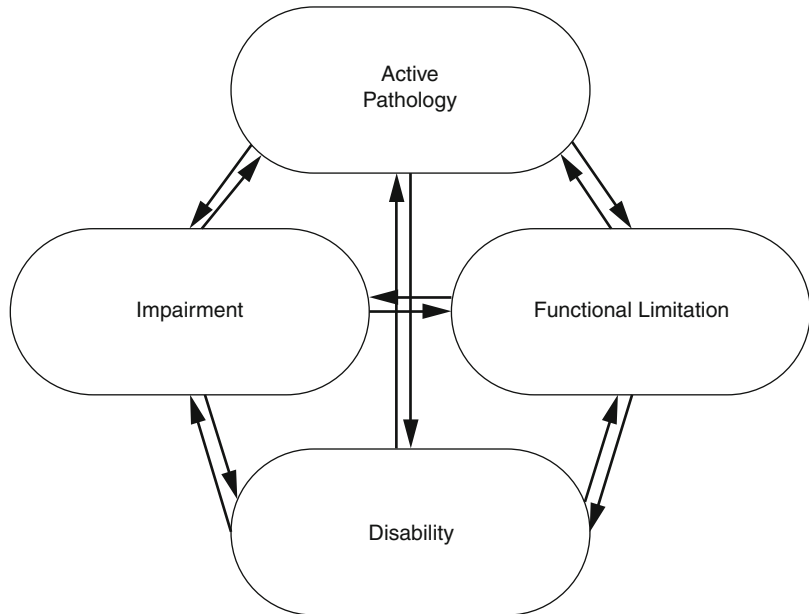
Two Common Conceptual Frameworks that Define the Disablement Process

The two most common conceptual frameworks relevant to hip and knee arthroplasty are the Nagi model and the International Classification of Functioning (ICF) model (Jette, 2006). Both have been thoroughly described in the literature and empirically tested for conceptual clarity and applicability. The Nagi model was proposed in the 1960s and describes a disablement process that consists of four distinct yet related domains. These are (1) active pathology, (2) impairment, (3) functional limitation, and (4) disability (see [Fig. 1](#)).

The four domains are conceptually distinct, individually unique, and not necessarily linearly related or linked. In other words, depending on the person, each domain may or may not be related to downstream or upstream domains.

Self-Report Functional Status Measures for Hip or Knee Replacement Surgery,

Fig. 1 Illustration of the Nagi disablement model



Active Pathology: Interruption of or interference with normal anatomical or physiological processes

Impairment: Anatomical, physiological or mental abnormalities

Functional Limitation: Limited performance of the whole person

Disability: Limitation in socially defined roles and tasks.

* Arrows indicate that relationships among the various domains may be complex and non-linear for individual patients.

The International Classification of Functioning, Disability and Health (ICF) (World Health Organization [WHO], 2001) also consists of four distinct but related domains, and these are (1) health condition, (2) body functions or structure, (3) activity, and (4) participation. In addition, the ICF model includes two additional items termed contextual factors. Environmental factors are the physical, social, and attitudinal environments in which people live, and personal factors are the unique background features of each person. These two environmental factors may influence the disablement process in various ways. The ICF framework is detailed in Fig. 2. In addition to providing a universal language to facilitate communication among health-care providers and researchers with various interests,

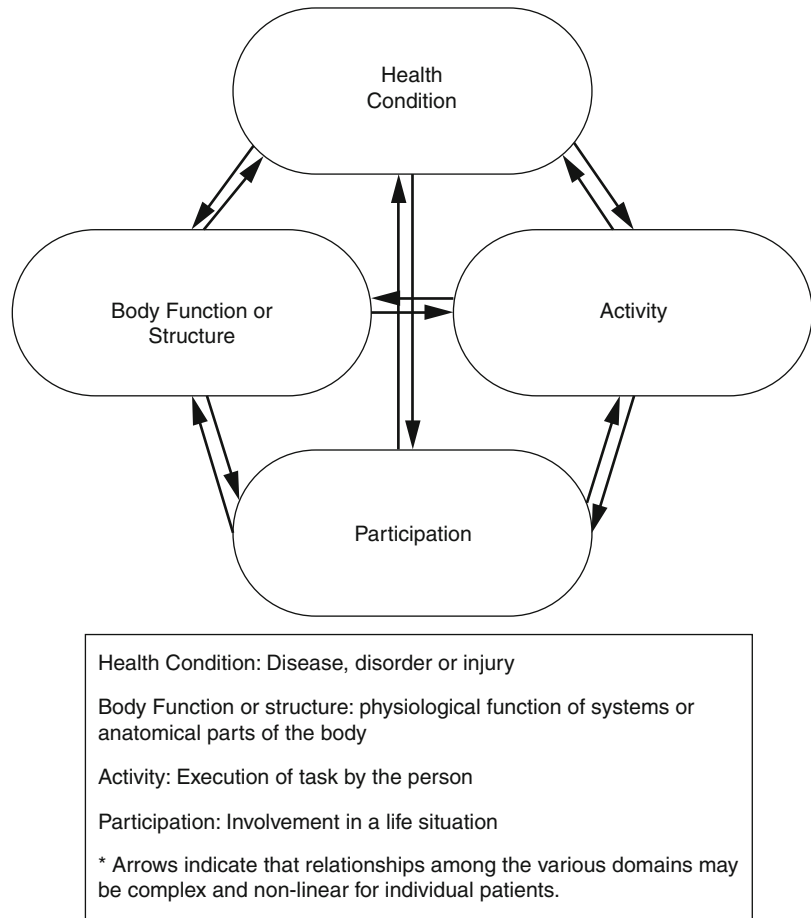
these models provide a common language and system for conceptualizing outcome measures in ways that are conceptually distinct. Use of one of these models during the development of outcome measures has potential to clarify the impact of interventions in ways that may better elucidate why and how patients change over time.

Application of Theoretical Frameworks to Outcome Measure Development

There have been several instruments that have been developed for patients with arthroplasty and that are grounded in the ICF model. For example, Rat, Guillemin, and Pouchot (2008) developed the Osteoarthritis Knee and Hip Quality of Life (OAKHQOL) instrument to measure five dimensions of health imbedded within the

Self-Report Functional Status Measures for Hip or Knee Replacement Surgery,

Fig. 2 Illustration of the ICF disablement model



ICF (physical activity, mental health, pain, social support, and social activities). Others have developed ICF-based instruments designed to specifically capture one or more domains within the ICF. Jette et al. (2009), for example, developed an instrument consisting of items directed solely toward the disability domain defined by Nagi. These conceptually “pure” instruments have potential to better inform users of the impact of interventions on specific domains within a grounded and well-accepted conceptual framework.

Future Directions for Research on Knee and Hip Rating Scales

Future research needs appear to be focused on three areas. First, there is a need to explore the potential role of computer-adapted tests using item response theory-based models for

research-based and routine clinical assessment. There are considerable resources directed toward the development of computer-adapted instruments. For example, the National Institutes of Health has developed a Patient-Reported Outcomes Measurement Information System (PROMIS) initiative (Hays et al. 2009; Cella et al. 2007) designed specifically for the development of self-reported outcome measures based on well-defined theoretical frameworks. Research should also examine the extent to which these computer-based instruments provide useful information over and above more traditional paper and pencil instruments for research and clinical decision making. Second, research needs to determine the additional value of instruments that are designed using a well-defined theoretical framework such as the ICF. Conceptually, it is clear that measures based on

pure domains from well-defined theoretical frameworks appear to have potential to inform practice, but more research needs to be done to examine this issue. Finally, research is needed to more deeply examine the disablement process on longitudinally collected data from large samples of patients with hip and knee arthritis. As patients transition to more severe forms of arthritis and presumably more invasive and costly forms of treatment for arthritis, this type of research could enhance our understanding as to why and how patients worsen and how to optimally intervene to enhance care and reduce costs.

Cross-References

► Likert Scale

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Self-Report Measures of Crime and Delinquency

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Synonyms

Crime-related self-report inventory;
Self-reporting criminal offenses

Definition

Self-report measures ask respondents to report their own behaviors, beliefs/▶ **attitudes**, symptoms, and personality characteristics in an interview, ▶ **survey**, questionnaire, or poll. Question formats can be open-ended, fixed, or hybrid and include Likert scales, true-false, and fixed choice questions, which are often used to measure demographic information and latent theoretical constructs, e.g., self-control, delinquency, peers, amenability to treatment, ▶ **subjective well-being**, ▶ **self-esteem**, and ▶ **quality of life** in a variety of domains. Self-report methodologies can be categorized under three general domains: theory guided, factor analytic, and criterion key. Specifically, self-report inventories used to measure crime and delinquency are concerned with reliably and accurately recording a respondent's delinquent and criminal behavior, as well as attitudes toward these behaviors.

Description

Before self-report measures, official data was the sole source for offender characteristics, the basis for theories of crime, and the understanding of the criminal justice system. In the 1930s, scholars recognized the discrepancy between official crime data and the actual rates of crime and delinquency. Thorsten Sellin stated that “the value of a crime rate for index purposes decreases as the distance from the crime itself in terms of procedure increases” (1931: 337). Further, Edwin Sutherland wrote the following in 1934:

The selective nature of arrest and of imprisonment make these statistics an inadequate source of information regarding the characteristics of criminals, but it is difficult to develop statistics regarding criminals who are not recorded in some manner. Apparently, therefore, the best that can be done at present is to recognize the bias in the statistics of arrests or of prisons and attempt to secure statistics in other ways regarding the classes which are not adequately represented. (p. 39)

These scholars noticed the biased nature of official crime data because of the fact

that a large portion of crime goes unreported, and criminal activity that is detected by law enforcement does not always result in official records. In addition, not all delinquent behavior is considered criminal and, consequently, those behaviors would not result in official criminal records.

In 1941, Austin Porterfield challenged researchers to be more creative in the creation of methods to study sociological phenomenon. Porterfield wrote the first paper utilizing a self-report survey, which explored delinquency among college students (1943). A series of articles exploring delinquency distribution, etiology, and correlates by Nye and Short (Nye, 1958; Nye, Short & Olson, 1958; Short, 1957) followed, which lead to various self-report studies in the 1960s examining the relationship between social class and delinquency (e.g., Akers, 1964; Clark & Weninger, 1962; Dentler & Monroe, 1961; Erickson & Empey, 1963) and theory testing correlates of delinquent behavior (e.g., Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979; Elliott, Huizinga, & Ageton, 1985; Gold, 1970; Hirschi, 1969; Kaplan, 1972). Williams and Gold (1972) and Elliott (1985) expanded the use of self-report surveys to nationally representative samples. Elliott et al. additionally expanded this scope by employing self-report surveys in a longitudinal panel design, following teenage respondents into their 30s. Numerous longitudinal panel design studies were initiated at this time and subsequently which used self-report methodologies (see Thornberry & Krohn, 2000).

Self-report measures of crime and delinquency may provide a more realistic account of crime and delinquency, but these measures do not exist without problems. Self-report measurement problems include the measurement of delinquency across life stages, testing effects, ▶ **reliability** and validity, and systematic bias (see Krohn, Thornberry, Gibson, & Baldwin, 2010 for an in-depth discussion of these issues). First, utilizing self-report measures across different life stages, i.e., childhood, teenage, young adulthood, and adulthood, can be challenging because the context in which crime

occurs, opportunities, the appropriateness, or applicability of offenses change across these life stages (Thornberry & Krohn 2000). Longitudinal studies often take these issues into account by adjusting their items; however, the new measures must remain in accord with the theoretically relevant definitions of the constructs they were initially intended to measure. Second, testing effects consist of respondents who have been surveyed previously, anticipating that an affirmative response (Thornberry, 1989) to an item will trigger follow-up questions, so to avoid additional questioning, the respondent may respond negatively to avoid those questions. Respondents may also simply become tired as the survey progresses, resulting in an increase in negative responses (Lauritsen, 1998; Thornberry, 1989). However, negative responses in later waves may be caused by the fact that certain behaviors are dependent upon the respondent's life stage and no longer be relevant or occurring, which is related to the first issue previously addressed where measures across life stages may not be applicable. Third, honesty of respondents has always been a concern for researchers employing self-report measures. Research has shown that survey administration (i.e., anonymous and nonanonymous questionnaires and interviews) does not have an effect on admission of delinquency (Hindelang, Hirschi, & Weis, 1981; Krohn et al., 1974), or self-administered questionnaires have slight benefits (Aquilino, 1994; Aquilino & LoSciuto, 1990; Turner, Lessler, & Devore, 1992). With the advancement of technology, computer-assisted self-administered and audio computer-assisted interviews produce higher reports of delinquent behavior because the removal of a human interviewer reduces respondent self-presentation concerns (social desirability) (Tourangeau & Smith, 1996). Fourth, systematic bias of groups is a concern, and studies have compared self-report data to official records to discern discrepancies. Most research has discovered "reasonably high relationships between self-reports and official data" (Krohn et al., 2010: 513), but some research discovered that African Americans are less likely to self-report arrests

(Hindelang et al., 1981; Maxfield, Weiler, & Widom, 2000) and respondents with more official arrests are more likely to self-report arrest regardless of age or race/ethnicity (Maxfield et al.). However, when Thornberry and Farnworth (1982) created similar measures of criminal offenses for self-report and official data, the differences between official and self-report measures in the evaluation of the ► [social class](#) and offending relationship decreased. Thus, when the content and severity of self-report and official delinquency and crime measures are standardized, these data are more accurate in depicting the actual relationship between crime and social class relationship (Krohn et al., 2010).

The above discoveries have led to improvements in self-report measures (see Krohn et al., 2010 for a full discussion). In addition, item response theory (IRT) measurement models have been recently employed to provide further improvements to the validity of self-report measures. Such measurement models allow researchers to evaluate (1) whether delinquency items are well suited for the sample being examined by assessing how difficult it is for respondents to endorse or agree to items relative to their underlying delinquent propensities by converting both items and individual propensities to logit scores that can be compared to assess if delinquency items are well suited for the sample, (2) person- and item-level reliability, (3) and differential item functioning which allows for the examination of item bias for particular delinquency items across groups (males versus females) (Krohn et al.). For instance, Piquero, MacIntosh, and Hickman (2002) used an IRT model and found that some self-report items in the National Youth Survey were biased across subgroups. Further, Osgood, McMorris, and Potenza (2002) proposed IRT as an alternative method to the conventional composite scores of multiple delinquency items, which violate assumptions of equal measurement intervals. Delinquency measures created from IRT measurement models are interval level measures that are continuous and unbounded.

The use of self-report measures of crime and delinquency has led to knowledge in basic

research and policy practices across disciplines by causing many to question the traditional assumptions of crime and the criminal justice system. Counter to what was known at the time, Porterfield discovered that delinquency and crime were much more evenly distributed across social classes and races than official data reported (1943). This discovery “resulted in important changes in the way we view the operation of the criminal and juvenile justice systems and the etiology and epidemiology of crime and delinquency” (Krohn et al., 2010). The discovery of extra-legal factors that impact discretion at different points in the criminal justice have informed policy, oversight, and training practice, thus producing fairer outcomes and consequently a higher ► [quality of life](#) for individuals in society.

Prevention programs also benefit from self-report measures. Baseline data on delinquency and criminal involvement are often required for evaluating programs that are designed to prevent and change delinquent behavioral trajectories. For research to be used to later develop evidence-based programming, treatment and control groups need to be similar in delinquent, antisocial, and criminal behavior, which, many argue, can be best assessed through self-report. Further, baseline measurements are necessary to determine intermediate outcomes, unintended consequences, and long-term changes. Because self-report measures can obtain many facets that official data cannot (e.g., treatment ► [motivation](#), delinquency, personality), employing self-report measures can determine which groups are most amenable to what types of treatment; this information should then be employed to create programs that will maximize treatment effectiveness to improve quality of life. Treatment providers can greatly benefit from self-report measures of offenders. By examining the “why” of delinquency and crime (e.g., substance use), providers would be able to discover why offenders use substances and target those reasons or triggers to effectively treat. Crime policy can also be improved by results of self-report measures. Property offenders can self-report on opportunity

and motivating factors to commit crime, which can inform loss prevention and recovery strategies, as well as treatment providers if assigned to treatment.

Self-report measures have evolved since Porterfield’s initial use of this methodology for examining the distribution of delinquency and have become a staple in measuring attitudes, behaviors, and personality characteristics across the social sciences. Advancements have been made in the operationalization of crime (e.g., seriousness and frequency), the application of measures across different life stages, administration techniques, and the evaluation of reliability and validity. Self-report measures have been applied to more inclusive national samples and types of behaviors, as well as to behaviors across the life course. Results from administering self-report measures have often challenged long-held assumptions about human behaviors and have often sparked the creation of new theories and perspectives. Self-report measurement has allowed for more comprehensive theoretical testing and for critiques of the criminal justice system. Evidence-based research utilizing self-report measures, at least in conjunction with other data sources, should be the foundation for policy and programmatic innovations that aim to positively change and impact the quality of life among individuals and in our society as a whole.

Cross-References

- [Adolescent Problem Behavior](#)
- [Adolescent Substance Use](#)
- [Child Self-Report\(s\)](#)
- [Self-Report Bias in Estimating Cross-Sectional and Treatment Effects](#)

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Self-Reported Health

- ▶ [Subjective Health and Subjective Well-Being](#)

Self-Reporting Criminal Offenses

- ▶ [Self-Report Measures of Crime and Delinquency](#)

Self-Reports of Health-Related Work Limitations Among Older Europeans

- ▶ [Work Disability Reporting Among Older Europeans](#)

Self-Reports of Work Disability Among Older Europeans

- ▶ [Work Disability Reporting Among Older Europeans](#)

Self-Representation

- ▶ [Independent/Interdependent Self](#)

Self-Serving Bias

- ▶ [Self-Enhancement](#)

Self-Transcendence

- ▶ [Spiritual Needs of Those with Chronic Diseases](#)

Self-Verification Theory

- ▶ [Job Satisfaction and Religious Personal Identity](#)

Self-Wants Satisfaction

- ▶ [Aspiration Theory](#)
- ▶ [Well-Being and Self-Wants](#)

Self-Weighing and Mental Health

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Synonyms

[Weight monitoring](#)

Definition

Self-weighing is a behavioral self-regulation strategy which involves monitoring one's own weight.

Description

Rising rates of obesity have prompted researchers to focus efforts on identifying the most effective components of [weight loss](#) treatment. Self-regulation strategies have been identified as important tools for successful weight loss (e.g., Wing et al., 2008). Regular weight monitoring (i.e., self-weighing) appears to be one such strategy that facilitates weight loss and maintenance and has been incorporated into clinical obesity treatment programs as well as commercial weight loss programs. Both cross-sectional and longitudinal work on self-weighing indicates that, in samples of overweight and obese adults, higher weighing frequency is associated with greater weight loss and less weight gain (Linde, Jeffery, French, Pronk, & Boyle, 2005; Wing et al., 2007, 2008; Welsh, Sherwood, VanWormer, Hotop, & Jeffery, 2009). The benefits of self-weighing among adolescents have also been documented. In a sample of adolescents with a history of being overweight, Alms, Neumark-Sztainer, Story, and Boutelle (2009) found that weekly self-weighing was associated with greater reported use of healthy weight control behaviors compared with those who self-weighed less often.

Weighing oneself on a routine basis presumably provides important feedback for assessing weight loss status and progress, which may then motivate behavioral adjustments to one's diet and ► [exercise](#) regimen.

Despite the recognized benefits of self-weighing for weight control, questions have emerged about the potential harmful psychological effects of regular weight monitoring. Researchers have considered the impact of self-weighing on outcomes such as depression, ► [anxiety](#), ► [self-esteem](#), and body dissatisfaction. Studies conducted to date have produced mixed findings, painting an ambiguous picture of the psychological impact of self-weighing. For example, a number of studies have failed to show negative effects of self-weighing on reported levels of depression or body dissatisfaction (Linde et al., 2005; Ogden & Whyman, 1997; Welsh et al., 2009), while one study found self-weighing was associated with decreased symptoms of depression (Wing et al., 2007).

In contrast, other research has linked self-weighing with decreased psychological health. In a large cross-sectional study on young adult men and women ($N = 2,287$), Quick, Larson, Eisenberg, Hannan, and Neumark-Sztainer (2012) found that increased self-weighing predicted greater depressive symptoms and lower levels of self-esteem. Results also indicated that more frequent self-weighing predicted less body satisfaction in men but not women. Moreover, it is worth noting that in this study frequent self-weighing was related to increased use of healthy and unhealthy weight control behaviors among both men and women and greater binge eating among women only. In a relatively small convenience sample of college women ($N = 145$), Mercurio and Rima (2011) reported a positive association between self-weighing frequency and body dissatisfaction, which was mediated by body surveillance, a heightened focus on the physical self.

Additional work in this area provides some evidence that self-weighing may be causally linked to poorer mental health. Ogden and Whyman (1997) found that average-weight college women randomly assigned to weigh

themselves daily for 2 weeks experienced increased anxiety and depression and lowered self-esteem compared to a control condition. These findings, however, need to be replicated with a larger, more diverse sample, and over a longer period of time before drawing any definitive conclusions about the effect of self-weighing on health. Other findings have suggested that the negative effect of self-weighing may depend on whether self-weighing information signifies that the individual is overweight relative to clinical standards. Ogden and Evans (1996) weighed normal-weight males and females and then randomly allocated them into weight categories (i.e., underweight, normal, and overweight) according to a fictional height-weight chart. Irrespective of gender, individuals who were told they were overweight reported increased depression and decreased self-esteem compared with individuals who were informed they were average or underweight. Researchers found no differences between groups in body dissatisfaction.

Inconsistent conclusions about the relation between self-weighing and various psychological and ► [body image](#) outcomes may be due in part to methodological differences across studies, particularly the type of samples recruited. Many of the studies showing little to no adverse psychological effects have focused on adults that were either obese or overweight and often were seeking formal weight loss treatment. Studies that have shown some negative effects of self-weighing have involved either young adults (e.g., Quick et al., 2012; Mercurio & Rima, 2011) and/or average-weight individuals (e.g., Ogden & Whyman, 1997). Based on past findings, it seems reasonable to suggest that the effect of self-weighing on one's mental functioning may depend, in part, on an individual's current weight status and/or the extent to which she/he aims to achieve cultural ► [beauty](#) standards. In the United States, for example, many women are striving to meet an unhealthy and often unrealistically slender body ideal. Younger women appear to place great emphasis and importance on appearance and thus may be particularly vulnerable to societal messages promoting the thin ideal (Tiggemann, 2004).

Consequently, weighing oneself on a regular basis may have a very different meaning or implication for an average-weight individual or a younger woman who is attempting to meet unrealistic body standards compared to an older adult using self-weighing as a medically prescribed tool for serious weight loss. Some women monitoring their weight in order to fit sociocultural physical attractiveness ideals promoted in Western society will likely perceive “failure” through frequent self-weighing, especially during times when their body weight might increase due to natural fluctuations.

As in most areas of research, these mixed findings necessitate continued investigation of the effects of self-weighing on psychological and body-related health. Future studies should explore more diverse samples, including ► [ethnic minorities](#) and men. Attention should also be devoted to determining the optimal frequency of self-weighing for various subgroups of the population. Perhaps for average-weight, young females, self-weighing is only detrimental when they engage in it at a high frequency. In addition, individual difference characteristics that may moderate the effects of self-weighing on mental health should be considered more fully. For instance, recent data emerged showing that self-weighing was helpful for regulating the weight of unrestrained eaters but that restrained eaters experienced weight gain using this strategy (Strimas & Dionne, 2010). This particular study did not evaluate psychological health outcomes; however, it is reasonable to suggest that if restrained eaters’ weight is negatively impacted by self-weighing, their psychological health may be as well.

Finally, more longitudinal and experimental studies are needed to clarify the direct and indirect relations among self-weighing, psychological health/body image health, and additional related outcomes such as weight control behaviors and weight status. Evidence suggests that increased self-weighing is associated with both body dissatisfaction (e.g., Quick et al., 2012; Mercurio & Rima, 2011) and unhealthy weight control behaviors (e.g., Quick et al., 2012; Neumark-Sztainer, van den Berg, Hannan, & Story, 2006b). Moreover, less body

satisfaction predicts the likelihood of engaging in unhealthy weight control behaviors over time (Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006a). Consequently, it is possible that for some individuals increased self-weighing leads to unhealthy weight control behaviors through the development of greater body psychopathology. This line of research has important implications for an individual’s weight management efforts given that unhealthy weight control behaviors appear to undermine weight loss attempts (Neumark-Sztainer, Wall, Haines, Story, & Eisenberg, 2007). Further research will shed light on the causal order of the constructs, providing crucial information about the mechanisms linking self-weighing to important aspects of psychological and behavioral health.

Taken together, present research findings relating self-weighing and psychological health suggest caution in how self-weighing is promoted as a weight loss tool in the general population. The question of interest is not whether self-weighing is beneficial or harmful but rather for whom and under what circumstances is self-weighing most beneficial or most harmful. At present, it appears that some subgroups may not benefit from, and others might be harmed, regular self-weighing practices. Researchers, clinicians, and ► [public health](#) officials should reconsider blanket recommendations to practice weight monitoring techniques like self-weighing until we have a clearer picture of the implications it has for different segments of the population.

Cross-References

► [Beauty](#)

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Self-Worth and Measures of Body Image

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Synonyms

Appearance-related aging anxiety; Functional body image; Internalization of appearance ideals; Objectified body consciousness; Perceived appearance; Perceived physical appearance; Perceived physical attractiveness; Perceived physical competence; Self-evaluation; Self-image; Self-perceptions

Definition

The term self-worth is one of several that are commonly used in the psychological research literature to describe aspects of individuals' perceptions of the self. The more general term “self-perceptions” can be defined as the beliefs, perceptions, attitudes, thoughts, and feelings that individuals hold about themselves in general or about their abilities, competencies, traits, and behaviors.

Within this broader construct of self-perceptions, researchers and scholars (e.g., Davis-Keane & Sandler, 2001; Harter, 1999) have distinguished between ► [self-concept](#), a term often used to describe individuals' relatively stable assessment of the self in regard to perceived personal competencies, abilities, and attributes, and ► [self-esteem](#) (or self-worth), which describes individuals' evaluations or judgments of the overall self. Thus, self-concept has been categorized or labeled as the descriptive aspect of the self (i.e., Who am I? What am I good or not so good at?) while self-esteem/self-worth is seen to be the evaluative aspect of the self (i.e., How much do I value the person

Self-Worth

► Self-Esteem

I am and the traits and characteristics that are part of me?). Although this distinction between self-concept and self-esteem/self-worth might seem logical, some scholars (e.g., Harter, 1999) have argued that this division is too simplistic in that individuals' *evaluation* of themselves is so much a part of their *description* of themselves that it is difficult to actually distinguish or differentiate between the two. Thus, the psychological constructs underlying the terms self-concept and self-esteem/self-worth may not really be clearly differentiated. Nevertheless, the two general terms do provide some value in relation to the measurement of the overall self-perceptual system and to the examination of its link to psychosocial well-being.

With regard to the terminology that is used in the research literature to describe or refer to individuals' global evaluation of their value or worth as a person, some scholars use the term self-esteem (e.g., Rosenberg, 1979), whereas others use self-worth (e.g., Harter, 1999). Given that these researchers are all referring to a global self-evaluation process and that the previously defined and differentiated constructs of self-concept and self-esteem are quite probably highly interrelated, the terminology may likely be considered interchangeable.

Description

Research studies (see review by Harter, 1999; Trzesniewski et al., 2003) suggest that global self-worth is an important psychological construct as high levels of it have consistently been linked to a variety of positive outcomes, including ► [perceived quality of life](#), ► [life satisfaction](#), occupational and academic achievement, satisfying social relationships, and positive coping skills. In contrast, low levels of global self-worth have been found to be a predictor of a range of adverse life outcomes including depression, low perceived quality of life, antisocial behavior, and ► [substance abuse](#). As a result of its importance to individuals' psychosocial health and well-being, global self-worth (or ► [self-esteem](#)) has been the focus of much

theoretical and empirical research. In the following section, an overview of theoretical models on global self-worth is provided. Then, the research and theory linking individuals' evaluations of their physical bodies to global self-worth is reviewed.

Theoretical Models of Global Self-Worth

Early models or conceptualizations on the self-system viewed the global constructs of self-concept and self-esteem/self-worth in a simplistic and unidimensional way (e.g., Coopersmith, 1967). That is, individuals' ► [self-concept](#) or self-esteem/self-worth was perceived to be a single construct that could be measured by adding up or averaging their responses to a set of self-statements. The underlying assumption with this approach was that individuals' evaluations of themselves across a range of life situations would contribute equally and completely to an overall level of self-concept and/or self-esteem/self-worth.

These early models were subsequently replaced by those that incorporated a multidimensional and, subsequently also, a hierarchical framework (e.g., Harter, 1999; Marsh, 1990). Although these frameworks do exhibit some relatively small differences, there are likely more similarities than differences across models.

In general, the hierarchically structured models place general or global self-worth/self-esteem at the top or apex of the model. This construct, again, represents the person's overall evaluation of him or herself as an individual. At the second level (directly below the apex) is a set of domain-specific self-assessments. Depending on the age level of the person under scrutiny, these domain-specific self-assessments could include academic self-concept, physical self-concept, social self-concept, as well as others. At the third level is individuals' sense of self within particular subdomains (e.g., English, history, and math within the overall academic self-concept subdomain). At the fourth level are individuals' evaluations of themselves in relation to even more specific subject-matter areas. Thus, individuals' self-assessment or self-evaluation in English might be subdivided

into such specific areas as literature, grammar, basic composition, and creative writing. Finally, at the lowest levels in the hierarchical model, we would find individuals' assessments of themselves and their abilities/competencies in regard to very specific behavioral situations (e.g., ► [self-efficacy](#) or ► [self-confidence](#) concerning today's science examination or the free throw that they are getting ready to shoot in a basketball game).

An important characteristic of these theoretical models is that the top or apex of the structure (i.e., general or global self-worth) is considered to be the most stable across time and thus the most resistant to external forces (Harter, 1999). In contrast, individuals' assessment of themselves at each successive level is hypothesized to be less stable and thus more variable across time but also probably more open to change through external forces.

Although the hierarchical nature of the model might be interpreted to suggest that individuals' global self-worth (top of model) can be calculated or configured by adding up all scores at the second level, this is not the case. Rather, most multidimensional self-worth/self-esteem theorists (e.g., Harter, 1999; Marsh, 1990) hypothesize that individuals' global self-evaluation exists as an independent entity that does reflect their evaluation of themselves across a range of domains, but is not necessarily an additive function of those subdomain self-assessments. Part of this discrepancy between the subdomain self-assessment (► [perceived competence](#)) scores and the overall global self-worth/self-esteem score is due to differences between individuals in the importance they attach to particular subdomains. One individual, for example, might hold low perceptions of his competence in regard to the social domain (i.e., does not believe that he is competent in social settings). If that individual also believes that ► [social competence](#) is unimportant (i.e., he does not value social competence), then such a low perception of competence in that domain may not have a negative impact on his overall or global self-worth/self-esteem. In contrast, if that individual does place importance on social

competence and he judges himself to be low in that subdomain, then his overall self-worth/self-esteem may be negatively affected.

To measure the "importance" that individuals attach to each domain and/or subdomain, some researchers have constructed an importance or relevance subscale. Harter (1999), for example, has included this component as part of her scale to measure children's, adolescents', and adults' overall self-worth as well as their perceptions of competence across several different domains. Her research in this area has provided support for the idea that individuals' scores on the subdomains *interact* with their importance scores to predict their overall self-worth (Harter, 1999). Furthermore, Harter's work has shown that individuals with high scores on the global self-worth scale appear able to "discount" or "devalue" the subdomains in which their self-perceptions are low, whereas individuals with low global self-worth scores appear unable to "discount" the subdomains in which they perceive low competence.

In her work with children, adolescents, and young and older adults, Harter (1999) has found that one subdomain seems to be particularly important to individuals' global self-worth across all the developmental levels. This subdomain is perceived physical appearance. Other researchers (e.g., Shapa & Keating, 2005) have also found that perceived physical appearance is one of the most important contributors to individuals' overall global self-worth/self-esteem.

The relative importance of perceived physical appearance to individuals' overall evaluation of themselves is not really surprising given the plethora of research in the ► [body image](#) literature (see summary by Cash & Smolak, 2011) that links individuals' perceptions of their physical bodies to a wide range of physical and mental health indices. Interestingly, however, recent research has indicated that individuals at all developmental levels (childhood through older adulthood) may vary not only in the *degree* to which they perceive their physical bodies in a positive or a negative way but also in the *criteria* they use to make such self-judgments. This perspective is examined in the next section.

Sources of Evaluation of the Physical Body

Three particular approaches have been used in the psychology and social psychology literatures to characterize how individuals may differ in the sources of information they use to evaluate or judge their physical bodies. The first of these approaches postulates that individuals may use either appearance or competence (function) cues. Specifically, Lehman and Koerner (2004) used tenants from cultural resource theory (Miller, Sabo, Farrell, Barnes, & Melnick, 1998) as well as work by other scholars (e.g., Blinde, Taub, & Han, 1993) to suggest that adolescent females might exhibit either an appearance orientation (evaluation of physical body based on what it looks like as compared to culturally prescribed notions of physical attractiveness) or a more functional body image orientation (evaluation of physical body based on its functionality or competence). The research procedures used by Lehman and Koerner (combination of both quantitative and ► [qualitative methods](#)) revealed that the older female adolescents (ages 18–19) within their sample did exhibit such differing body image orientations and that higher levels of a functional body image orientation were significantly and positively linked both to their sexual/reproductive health as well as to their engagement in health-enhancing sexual and reproductive behaviors.

Subsequent research by Horn, Newton, and Evers (2011) using these contrasting body image orientations verified the distinction between the two different dimensions of body image evaluation and also demonstrated that adolescent girls who exhibited a body appearance orientation (e.g., “I feel good about my body when other people tell me I look good”) scored higher on social physique anxiety (anxiety regarding others’ observation and potential evaluation of their bodies) while girls who exhibited a body competence orientation (e.g., “I feel good about my body when I am fit and healthy”) scored lower on social physique anxiety. In turn, social physique anxiety was significantly and negatively correlated with global self-worth.

Other researchers have found links between high levels of body appearance orientation and

risk for disordered eating behaviors (e.g., Petrie, Greenleaf, Reel, & Carter, 2009). Thus, evaluation of one’s physical body using a more functional or competence orientation appears to be more predictive of psychosocial well-being than does use of an appearance orientation.

A second approach to the notion that individuals may differ in their evaluation of their physical bodies comes from the research and theory (Thompson & Stice, 2001) on the “internalization of appearance ideals,” a construct which refers to individuals’ tendencies to incorporate socially (or culturally) defined ideas of attractiveness, ► [beauty](#), body size, and shape into their own self-perceptual belief system. Within the United States as well as in other westernized cultures, gender differences probably exist in regard to the ideals of attractiveness, with girls and women tending to identify this in terms of having a thin and lean physique while boys and men perceive leanness and muscularity (also defined as a muscular/mesomorphic physique) to be the ideal (see summary of this research by Lawler & Nixon, 2011). Although researchers have found that females are more apt than are males to internalize such ideals, there is considerable evidence to show that internalization of appearance ideals in both males and females serves as a risk factor for higher levels of body dissatisfaction and disordered eating behaviors (e.g., Halliwell & Harvey, 2006; Knauss, Paxton, & Alsaker, 2008; Lawler & Nixon, 2011).

A third approach comes from the theories of objectification (Fredrickson & Roberts, 1997) and objectified body consciousness (OBC) (McKinley & Hyde, 1996). Both theories originated within the ► [feminist](#) literature and hypothesized that the female body (more than that of the male) is culturally constructed as an object “to be looked at” and evaluated on the basis of societally determined criteria for attractiveness and beauty. The term “objectified body consciousness” (OBC) was coined to describe the degree to which individuals do view themselves as objects (i.e., whether or not they have internalized a “third-person” perspective and thus see themselves as objects to be looked at and evaluated by others). Thus, like most psychologically based

constructs, it is assumed that individuals will differ in the degree to which they score lower or higher in their tendencies to possess such an objectified body consciousness.

Subsequent research with this construct revealed that OBC could best be assessed or measured in relation to three different subdimensions (subscales within the OBC, McKinley & Hyde, 1996). These subdimensions include body surveillance (tendency to habitually self-monitor one's body from the perspective of an outside observer), body shape (negative feelings about the self when cultural standards of beauty are not achieved), and appearance control beliefs (extent to which individual believes he/she can control her/his appearance).

Although objectification theory and OBC were originally developed primarily as feminist constructs (with primary application to females), researchers have found that both men and women (as well as boys and girls) may engage in self-objectification processes (Knauss et al., 2008; Lindberg, Hyde, & McKinley, 2006). Furthermore, high scores on OBC have been linked to body dissatisfaction (Knauss et al., 2008), depression and/or depressive symptoms (e.g., Muehlenkamp & Saris-Beglama, 2002), and lower scores on measures of overall well-being (e.g., ► [life satisfaction](#), self-esteem, body esteem, and appearance-related aging anxiety) (e.g., McKinley & Lyon, 2008; Mercurio & Landry, 2008).

In general, then, the research and theory from the three different approaches described in the previous paragraphs do provide strong support for the idea that individuals differ from each other in the sources of information and/or the processes they use to evaluate their physical bodies. A number of factors have been examined relative to their potential influence on the development of different types of body image evaluation processes. These factors include the media (e.g., Levine & Murnen, 2009) as well as socializing agents (e.g., parents, peers) (e.g., Lawler & Nixon, 2011). Other researchers have examined the extent to which participation in various forms of ► [physical activity](#) (e.g., competitive sport,

exercise) might affect the way in which females evaluate their bodies (e.g., Blinde et al., 1993; Lehman & Koerner, 2004). Although the results of these studies generally support the idea that physical activity can decrease girls' and women's dependence on appearance-oriented sources of information, such positive effects may not occur when girls/women (as well as boys/men) participate in activities that place an emphasis on body appearance (e.g., ballet, gymnastics) (see, e.g., Slater & Tiggemann, 2011). Finally, for children and adolescents, rate of biological (sexual) maturation has been found to be a significant predictor of objectified body consciousness in girls (e.g., Lindberg et al., 2006). Specifically, girls who are early maturers (going through the pubertal process at an earlier chronological age than their peers) appear to be more susceptible to developing higher levels of self-objectification and appearance orientation. Although it has been hypothesized that late maturing boys (those who are going through the pubertal and prepubertal process at a later chronological age than their peers) might be most likely to experience higher levels of body dissatisfaction (and possibly self-objectification), the results of this research are not yet clear (see discussion by Lindberg et al.).

Cross-References

- [Beauty](#)
- [Body Image](#)
- [Gender Role Attitudes](#)
- [Self-Enhancement](#)
- [Social Comparison Theory](#)
- [Subjective Well-Being](#)

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Semantic Continuity of QOL

► Systemic Quality of Life Model (SQOL)

Semantic Differential

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Definition

Scaling approach aimed at investigating attitudes and, in particular, the subjective (connotative) meaning of concepts and objects.

Description

In defining any concept/object's meaning, two different aspects can be distinguished:

- *Denotative* aspect, which is objective
- *Connotative* aspect, which is subjective and related to emotional reactions which each object evokes at individual level (subjective perceptions)

Assessing subjective components of quality of life may require exploring the connotative meaning that people assign to specified objects (social groups, cities, works, etc.).

According to the studies accomplished by Osgood and his group (Osgood, Suci, & Tannenbaum, 1957), the connotative/affective meaning of a concept/object is multidimensional. The dimensions define the *semantic space*. While the dimensional structure is stable among individual, the position of the concept/object varies from one individual to another.

The approaches allowing the subjective meaning to be investigated are mainly the following:

- By directly asking each individual the meaning
- By asking each individual to choose/select words which can be associated to the objects

Osgood and his collaborators studied how to measure the connotative meaning through the latter approach. In particular, they defined an instrument able to measure the connotative subjective meaning by avoiding any direct question and allowing individuals to be compared with reference to the concept/object, the *Semantic Differential Scale*.

It is made up of a series of pairs of polarized adjectives. The two adjectives of each pair are presented separately by spaces (generally five or seven). This characteristic allows this scaling technique to be classified among the non-comparative approaches.

Table 1 shows an example of a Semantic Differential Scale applied in a quality of life survey (Maggino, 2006) and aimed at investigating the image that the citizens have about their city in order to better evaluate their levels of satisfaction about the city.

Each pair represents a component of the meaning to be explored. Several pairs, each referring to one conceptual dimension, allow each concept to be placed in the multidimensional space according to the measured individual coordinates. In other words, the position assumed by the concept in the space represents the connotative meaning of that concept. The semantic space allows the comparison between individuals' positions of the concept but also individual's positions of several concepts.

Osgood's studies empirically verified (through several studies which were based upon several and large samples, several and familiar concepts, and same pairs of adjectives, survey methods, and data analysis approaches) that the dimensions composing the semantic space recur among different objects and concepts and are independent from each other (orthogonal) and are *evaluation*, *potency*, and *activity* (factors). The statistical approach allowing the dimensional structure to be assessed is factor analysis. Since – from the statistical point of view – a portion of the total variance remains unexplained, it should be concluded that the identified three main factors do not describe the whole semantic space (Heise, 1970, 2010; Maggino and Mola, 2007; Snider, 1969).

Apart from the usual problems to be faced in constructive and applying instruments aimed at measuring subjective characteristics, some specific problems can emerge while dealing with the Semantic Differential Scale mainly concerning:

- The choice of the pairs with reference to the represented dimension
- The true bipolarity of the adjectives composing each pair
- The number of pairs to be defined with reference to the dimensions (too many pairs can make the interviewee's task very difficult to accomplish)

In spite of these problems, the approach turns out to be effective in measuring attitude in quality of life surveys.

Semantic Differential,
Table 1 An example of
 Differential Semantic Scale

Think about Florence. For each pair of adjectives, point out the position that is closer to the adjective that describes your city in a better way. Please, do not dwell to much.	
Tolerant	Intolerant
Beautiful	Ugly
Innovator	Conservative
Organized	Disorganized
Easy-going	Quarrelsome
Well-known	Unknown
Active	Inactive
Secure	Insecure
Open	Close
Appreciated	Despised
Planner	Improvisator
Silent	Noisy
Formal	Informal
Pleasant	Unpleasant
Industrious	Indolent
Tidy	Chaotic
Courteous	Rude
Gratifying	Disappointing
Fast	Slow
Liveable	Unliveable
Hospitable	Inhospitable
Amusing	Boring

Cross-References

- ▶ [Item Analysis](#)
- ▶ [Multi-Indicator Measures](#)

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Semantic Structure of Emotional Lexicon

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Definition

One of the traditional access routes to the emotions consists in studying the lexicon of emotional terms, that is, words with which the different forms of emotive and affective experiences are identified, isolated, and distinguished in the various human languages. Analyzing the way people consider the meanings of these words and particularly how people organize the relationship between each word with each other, we can discover the semantic structure of emotional lexicon: a sort of guideline by which our knowledge about emotional experience is structured and organized in our mind.

Description

Semantic Structure of Emotional Lexicon: The Lexicon of Emotion in the Neo-Latin Languages

The first pioneering works about lexicon of emotional terms were carried out in the 1950s (Nowlis & Nowlis, 1956), and interest heightened after the results that Osgood and his collaborators (Osgood, 1952; Osgood, Suci, & Tannenbaum, 1957) obtained from their research into the semantic structure of natural languages.

These authors demonstrated that the principles which organize the significance of the words in natural languages may be referred to three dimensions of an affective nature (Osgood, 1969): *evaluation*, which has to do with the level of ► **pleasure** or displeasure to which the words refer; *activity*, or the level of physiological and behavioral activation which the words suggest implicitly or explicitly; and *potency*, which implies a semantic reference to the capacity of the person to tackle environmental challenges. Another piece of work that opened the way to research on the lexicon of emotions was conducted on the English language by Davitz (1969), who identified four dimensions: activation or arousal, hedonic tone, competence, and relatedness. The first three correspond to the dimensions identified by Osgood, whereas the fourth refers to the quality of the relationship with the environment and the persons which characterizes an emotional experience (Galati et al., 2005).

Much of the recent research on the lexicon of the emotions has used Multidimensional Scaling (MDS) procedures (Bush, 1973; Conte & Plutchik, 1981; D'Urso & Galati, 1990; Galati, 1986; Neufeld, 1975; Plutchik, 1980; Russell & Merhabian, 1977; Russell, 1978, 1980, 1983; Russell, Levicka, & Niit, 1989; Zammuner, 1998). The results of the studies conducted on the English lexicon of the emotions substantially identified the three dimensions proposed by Osgood, that is, the axis of evaluation, or of pleasure/displeasure (*evaluation*), that of physiological activation (*arousal*), and that of control of the situation (*potency*) (Russell, 1980, 1991). However, based on his most recent studies, he maintained that there seem to be only two principal dimensions of emotional lexicon: *valence* and *arousal* (Feldman Barrett & Russell, 1998; Russell & Feldman Barrett, 1999; Feldman Barrett & Fossum, 2001). In general, bearing in mind the various research projects in which it is used, this model attributes an almost circular arrangement to the semantic space of emotive words, where similar words are close to each other (contiguity principle) and those with a very different meaning are

placed at polar opposites (polarity principle). The semantic groups that are most frequently identified in the various works on emotive lexicons generally correspond to the main families of basic emotions such as ► **anger**, joy, surprise, fear, and sadness.

In most cases, the results that have been summarized and discussed thus far refer to research conducted on the Anglo-American language, or on other languages having used the translation of English terms for the comparative analysis, without a preliminary analysis of the lexicons having been carried out on the languages studied in order to find the emotional terms that are most typical of each language. Therefore, for this reason, they cannot be considered definitive and valid for all languages. In order to arrive at more general conclusions, research must be developed transculturally. Other research on Indonesian (Shaver, Murdaya, & Fraley, 2001) or Filipino (Church, Katigbak, Reyes, & Jensen, 1998) lexicons of emotions has avoided these methodological limitations by directly analyzing the lexicons of certain languages other than English, obtaining results that were not wholly in agreement with those already available in the literature. Still other studies have been conducted on Italian and on French, also by using a sample batch of terms that is representative of the lexicon being examined (Galati & Sini, 1998a, 1998b; Zammuner, 1998). These studies confirmed the importance and the priority of the *hedonic valence* axis in the organization of the structure of the emotional lexicon, but the *potency* axis proved to be more important than the *arousal* axis. Fillenbaum and Rapaport (1971) applied the Multidimensional Scaling to 15 Hebrew emotional words, finding that ► *pleasure/displeasure* was the only interpretable dimension; a similar result was found in Japanese by analyzing 35 terms (Yoshida et al., 1970). In a study conducted by applying the MDS on 235 German emotional words, Gehm and Scherer (1988) found that the two fundamental dimensions were, in order, *pleasure/displeasure* and *dominance* (assimilable to potency). When analyzing the same German lexicon and applying a factor analysis, Abele-Brehm and Brehm (1986), on the other hand, found that

the two fundamental dimensions were, in order, *pleasure/displeasure* and *arousal*. All three of the dimensions of *pleasure*, *arousal*, and *dominance*, respectively, were found by Corraliza (1987) by applying a ► **factor analysis** to Spanish emotion-related terms.

Taken together the results discussed above are not wholly in agreement, and we therefore feel it is premature to conclude that there is a universal structure of the lexicons of the emotions characterized by the same dimensions which have the same importance order in all languages.

Aims and Hypotheses

Starting from the above considerations, a coordinated European research project has been organized with the main aim of comparing the dimensional structure of the emotional lexicons of the six principal Neo-Latin languages: Italian, French, Spanish, Catalan, Portuguese, and Romanian.

Method

The research was subdivided into the following two parts: a first phase in which emotional terms were selected so as to identify the words commonly used to describe emotions by speakers in each of the six linguistic contexts investigated; a second phase in which the terms were evaluated subjectively. The second phase used a method aimed at measuring the reciprocal similarities among the terms of each of the six emotional lexicons; it aimed to point up and compare the semantic structures of the different lexicons.

Phase 1: Selection of Emotional Terms

The corpus of emotional terms to be judged was chosen in three different steps, which involved only native speakers of the language in question who were entirely outside the purposes of the research.

As a first step, three people of university culture, experts in the field of linguistics, were asked to select, from the most up-to-date and complete dictionary of their mother tongue, all the adjectives that had a clearly emotional meaning.

The participants were provided with common criteria of choice derived from Ortony, Clore, and Foss (1987). The criteria were reformulated as follows: (1) the terms should refer to internal and mental conditions; (2) they should describe a momentary state; (3) they should refer mainly to affective aspects, even though they might also imply other aspects related to emotional knowledge, emotional behavior, physiological changes, and expressive aspects of emotions.

In the second selection step, another panel of a further six native speakers for each language, were asked to select from the first six lists only those terms which in their opinion had a clear and typical emotional meaning. Despite the use of common semantic criteria for the selection of the emotional terms, the six lists ended up with different numbers of words (83 terms for Italian, 111 for French, 86 for Castilian, 109 for Catalan, 141 for Portuguese, and 94 for Romanian). This could be explained by an actual difference in the number of emotional terms available in the different languages.

The objective of the third phase of the selection process was to make the six lists of terms more comparable, sacrificing any differences in number in the lists selected in the previous phases. To this end, it was decided to carry out a further selection, establishing a priori a limit of 32 terms for each language. In order to obtain these lists, an additional panel of judges, six native speakers for each language, were asked to select the 32 most typical emotional terms from each of the previous lists (Table 1).

Phase 2: The Reciprocal Comparison Judgements

The similarity among the selected words was evaluated by a group of 30 mother-tongue university students for each of the six languages and was carried out on the 32 terms resulting from the last selection explained above. Each participant was asked to evaluate the reciprocal similarity among all 32 terms selected for this analysis. The participants were invited to express an evaluation of reciprocal similarity between all possible pairs of words, using a double-entry table. The evaluations were formulated using a seven-point Likert scale, which went from maximum

similarity, scored +3 (terms with identical meaning), to minimum similarity, scored -3 (terms with opposite meanings).

In order to ensure the opinions expressed by the judges could be compared and to eliminate as much as possible the effects due to different uses they might make of the similarity scale, the scores referring to each judge have been ipsatized (cf. Russell & Pratt, 1980). The Classical Multidimensional Scaling (CMDS) procedures were carried out on the above data ipsatized in this way (Source: Galati, Sini, Tinti, & Testa, 2008).

Results

The similarity scores were transformed into distance scores as requested by the Classical Multidimensional Scaling technique (ALSCAL procedure of SPSS) used in the analyses. A three-dimensional solution emerged from the analysis.

Two common dimensions have been found in all six languages. The first one can be labeled “hedonic valence” because it is identified by the contraposition of terms referring to the positive/negative emotions: in Italian, *felice/infelice* and *addolorato*; in French, *heureux/mecontent* and *contrarié*; in Castilian, *euforico* and *contento/abatido* and *triste*; in Catalan, *alegre* and *content/amargat* and *frustrat*; in Portuguese, *contente* and *alegre/infeliz*; and lastly in Romanian, *entuziasmat* and *bucurosi/indurerat* and *trist*.

The other dimension that has been found in all six languages can be labeled “physiological activation” since it was identified by the contraposition of terms of low and high activation: in Italian, *annoiato* (bored) and *sbalordito* (astounded); in French, *agité* and *excité* (excited)/*accablé* and *désolé* (dejected/sorry); in Castilian, *enfurecido* and *furioso* (furious)/*calmado* (calm); in Catalan, *enrabiat* and *empipat* (angry, annoyed)/*moix* and *nostalgic* (dejected, nostalgic); in Portuguese, *agitado* and *agressivo* (agitated and aggressive)/*calmo* and *acanhado* (calm and embarrassed); and in Romanian, *infuriat* (furious)/*melancolic* (melancholy).

Semantic Structure of Emotional Lexicon, Table 1 Thirty-two emotion terms selected by judges for the subjective judgements procedure in each language

Italian	French	Castilian	Catalan	Portuguese	Romanian
addolorato	accablé	abatido	acollonit	acanhado	abatut
allegro	agité	abochornado	alegre	aflito	apriins
angosciato	angoissé	acongojado	amargat	agitado	bucuros
annoiato	anxieux	angustiado	angoixat	agressivo	buimacit
ansioso	bouleversé	animado	animat	alegre	decepcionat
arrabbiato	calme	ansioso	ansiós	apaixonado	demoralizat
contento	content	apesadumbrado	atemorit	arrependido	deprimat
depresso	contrarié	asustado	avergonyit	calmo	disperat
disgustato	découragé	aterrorizado	content	chateado	dor
disperato	déçu	calmado	deprimit	ciumento	îndurerat
divertito	dégoûté	compungido	desesperat	contente	enervat
entusiasta	déprimé	consternado	divertit	culpado	entuziasmat
euforico	désesperé	contento	empipat	desanimado	fericit
felice	désolé	desconsolado	emprenyat	desconsolado	îngrozit
gioioso	effrayé	desdichado	enfadat	desgostoso	încordat
imbarazzato	embarrassé	desesperado	engelosit	encantado	încremenit
impaurito	en colère	desgraciado	enrabiat	envergonhado	încurcat
indignato	énervé	desolado	enutjat	espantado	înfuriat
infelice	étonné	disgustado	enyorat	excitado	îngrozit
irritato	excité	emocionado	estar mosca	feliz	melancolic
malinconico	fâché	encolerizado	eufòric	furioso	mirat
meravigliato	furieux	enfervorizado	feliç	impaciente	nelinistit
preoccupato	géné	enfurecido	frustat	infeliz	nervos
risentito	heureux	eufòrico	horrorizat	magoado	nostalgic
sbalordito	inquiet	exaltado	indignat	medo	placere
scontento	joyeux	excitado	irritat	nervoso	rusine
sconvolto	mécontent	feliz	melancòlic	orgulhoso	speriat
sereno	nerveux	furioso	moix	preocupado	suparat
sorpreso	ravi	infeliz	nostàlgic	satisfeito	trist
spaventato	surpris	irritado	perplex	saudoso	tulburat
stupito	tranquille	rabioso	rabiós	triste	uluit
triste	triste	triste	trist	zangado	zbuciumat

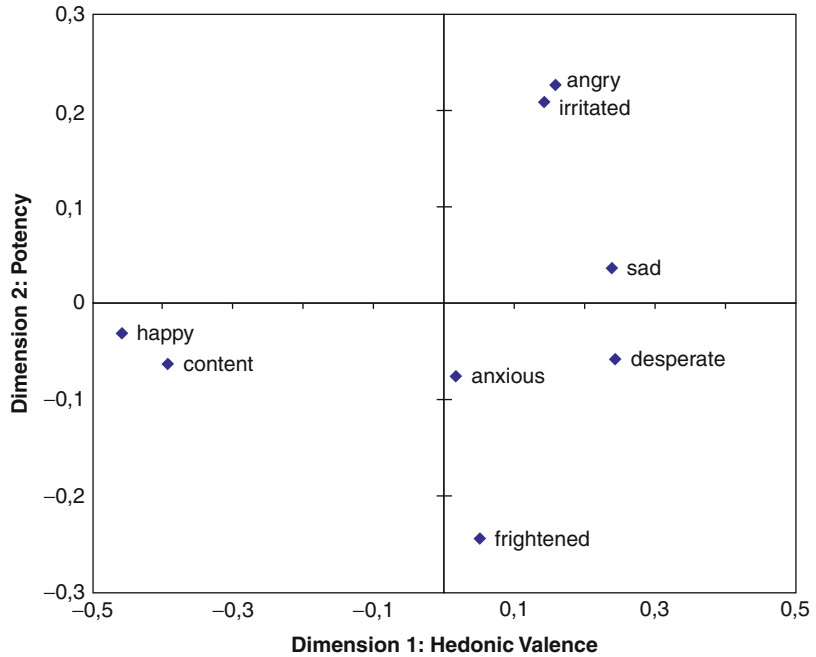
The last dimension identified is not the same for the six languages: It can be referred back to “potency” in Italian, French, and Romanian and to a mixture of potency and activation in Castilian and Catalan, while it can be referred back to the evaluation of the “behaviour adequacy to one’s own inner ► norms” in Portuguese. More specifically the contrapositions characterizing the “potency” dimension are as follows: in Italian, *indignato*, *disgustato*, and *irritato* (approximately indignant, disgusted, and irritated)/ *ansioso*, *pauroso*, and *spaventato* (anxious,

afraid, and frightened); in French, *fâché* (angry)/ *effrayé* (frightened); in Romanian, *apriins*, *enervat*, and *entuziasmat* (heated, angry, and enthusiastic)/ *încremenit* and *buimacit* (both meaning astounded, disoriented).

The contrapositions characterizing the last dimension found in Castilian and Catalan are the following: in Castilian, *abochornado* (ashamed)/ *aterrorizado* and *asustado* (terrified and frightened); in Catalan, *trist* and *melancolic* (sad and melancholy)/ *atemorit* and *horrorit* (frightened and terrified). This makes us think

Semantic Structure of Emotional Lexicon,

Fig. 1 GPA centroid solution (first and second dimensions) (Source: Galati et al., 2008)



that negative emotions are differentiated among themselves, according to the potency level, which can be associated with the action tendency of behavioral activation (fear) vs. action arrest (sadness or shame).

Finally in Portuguese the contrapositions characterizing the “behaviour adequacy to one’s own inner norms” dimension are *orgulhoso* (proud)/*envergonhado* (ashamed).

The third dimension in all languages seems to refer to different strategies of coping.

Generalized Procrustes Analysis (GPA) was applied to the six CMDS solutions with the aim of testing the congruence of the tridimensional configurations obtained, the ► **reliability** and comparability of the results, and the salience of the different dimensions. In order to carry out this verification, a limited common base of emotional terms with similar meaning was identified in the six languages. We chose to take a sample representing 25 % of the 32 words in each of the six lists (eight terms).

Starting from the six three-dimensional configurations of the eight terms of the CMDS, a centroid configuration was obtained from the GPA. The three dimensions that emerged can clearly be labeled respectively: “hedonic valence”

(characterized by the opposition between ► **happiness** and sadness), “potency” (characterized by the opposition between anger and fear), and “physiological activation” (characterized by the opposition between anger and fear, on the one hand, and sadness, on the other) (Figs. 1 and 2).

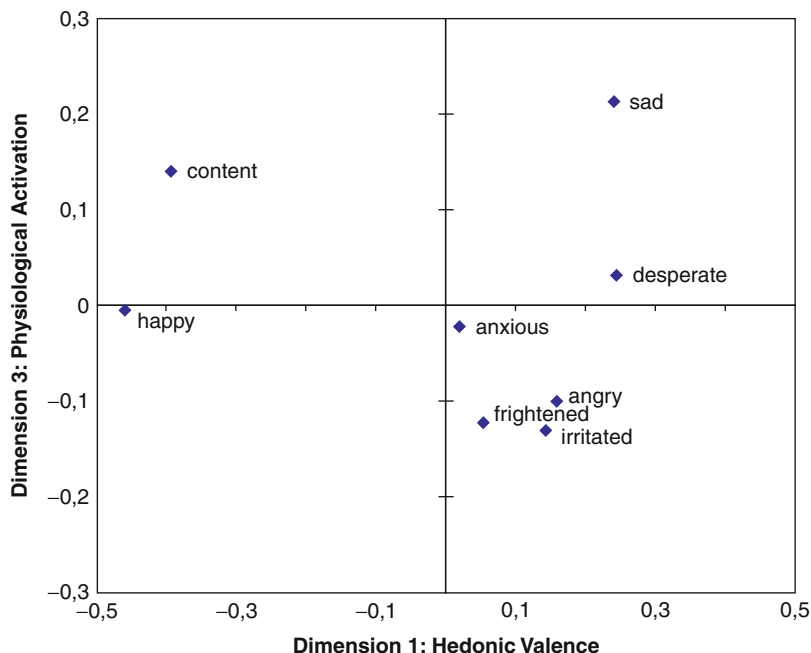
The model showed very high fitness values in relation to the six configurations (Table 2) and allowed interesting differences among the languages to emerge. In all six of the languages, the most important dimension (the one with the highest relative weight) is “hedonic valence.” In Italian, Catalan, Castilian, and French, the second dimension is “potency,” even though there is little difference between “potency” and “physiological activation” in French. In Romanian, and especially in Portuguese, “physiological activation” is relatively more important than “potency.”

Discussion and Conclusions

From the CMDS results, it emerges that three dimensions are sufficient to organize the meaning of the emotional lexicons of the six Neo-Latin languages analyzed. Some differences emerged in labeling these dimensions, except for the first, “hedonic value,” which was constant in all languages. The other two dimensions referred to the

Semantic Structure of Emotional Lexicon,

Fig. 2 GPA centroid solution (first and third dimensions) (Source: Galati et al., 2008)



Semantic Structure of Emotional Lexicon, Table 2 Fit values and dimension weights in relation to the six languages configurations (Source: Galati et al., 2008)

Language	R ²	Normalized weights		
		Hedonic valence	Potency	Physiological activation
Italian	0.94	0.77	0.53	0.26
French	0.92	0.75	0.45	0.41
Catalan	0.95	0.74	0.55	0.30
Castilian	0.94	0.80	0.43	0.33
Romanian	0.87	0.85	0.25	0.30
Portuguese	0.83	0.85	0.17	0.28

specific modality adopted to cope with environmental challenges or to the somatic and physiologic changes associated with the different emotions. If the verbal markers of the coping dimensions are taken into account, results revealed some cultural-specific aspects. In Italian, French, and Romanian, the coping dimension is characterized by the opposition between anger and fear, while that of activation is characterized by the opposition between anger and fear, on the one hand, and rest behavior, on the other hand. In Castilian and Catalan, in one dimension, escape

emotional reactions are opposed to rest behavior and, in the other, aggressive reactions are opposed to rest behavior. This seems to indicate that people speaking these languages organize the emotional meaning of the language by considering the activation and coping dimensions together, but distinguish between active aggressive reactions and active escape behavior. In Portuguese the dimension referred to coping implies mainly an assessment of the outcomes of coping behavior and, more specifically, of the adequacy of this behavior to one's own inner norms, contrasting good performances (pride) with bad performances (shame).

Clearer polar oppositions between the terms identifying the three dimensions emerged from the synthetical GPA analysis, in which the data referring to all six languages are considered together. The oppositions are the following: happy and content vs. sad and desperate; angry and irritated vs. frightened; and content and sad vs. angry, frightened, and irritated. The meaning of the three dimensions emerging from these oppositions can be defined more concisely tracing them to the classical three dimensions proposed by Osgood (1969): *evaluation*, *potency*,

and *activity*. In conclusion we can generalize this result by arguing that the most suitable model to represent the structure of emotional lexicons of natural languages seems to be three dimensional and not two dimensional, as claimed by Russell and his collaborators (Russell & Feldman Barrett, 1999), or four dimensional as proposed by other authors, such as Davitz (1969). In this model, the *potency* dimension plays a substantial and not merely auxiliary role in organizing the meaning of emotional words.

Nevertheless, considering our results, it emerges that the relative salience of the *potency* and *activation* dimensions can vary among different natural languages. In our study, even though *evaluation* is always the first dimension, the other two dimensions have different salience in the six languages. In Italian, French, Catalan, and Castilian, the second dimension is *potency*, followed by *activation*, confirming previous results obtained for the Italian lexicon (Galati & Sini, 1998a, 1998b; D'Urso & Galati, 1990). Alternatively, in Romanian and Portuguese, the second dimension is *activation* and the third is *potency*.

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Cross-References

- ▶ Hedonic Adaptation
- ▶ Physiological Arousal

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Senior Abuse

- ▶ [Elder Abuse](#)

Senior’s Abuse

- ▶ [Elder Abuse](#)

Seniors in Remote Areas

- ▶ [Rural Seniors](#)

Seniors Injuries

- ▶ [Falls in Seniors](#)

Sense of Belonging

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Synonyms

[Identity, social](#); [Sense of community](#)

Definition

...the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of the system of environment. (Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier, 1992 p. 173)

The *sense of belonging and identification* involves the feeling, belief, and expectation that one fits in the group and has a place there, a feeling of acceptance by the group, and a willingness to sacrifice for the group. (Macmillan & Chavis, 1986 p. 10)

Description

Sense of belonging is the psychological feeling of belonging or connectedness to a social, spatial, cultural, professional, or other type of group or a community (Hurtado & Carter, 1997). Shared beliefs or ideals, a supportive environment, self-esteem, and opportunities for interaction can

influence the development of sense of belonging in an individual (Winter-Collins & McDaniel, 2000; Ma, 2003). They can further influence the level of involvement and attachment an individual has to a community or group. It has been also accounted for psychological and physical well-being of individuals (Hagerty & Patusky, 1995).

Discussion

Sense of belonging is argued to have significant influence on many aspects of an individual's life. It can influence the formation of social ties, participation of individuals in a community, and affect well-being and general quality of life as well as have significant role in building a sense of community within a neighborhood, motivating a community or groups. Developing a sense of belonging is related to both the physical and social environment of an individual. Therefore, sense of belonging can be related to a place (spatial or geographic groups) or social group (non-geographic groups).

Sense of Belonging and Proximity. The feeling of belonging can be to a spatial group defined by a geographical area (e.g., neighborhood social network, residing in a country) or a group which has no spatial boundary (e.g., based on a football team, cultural group, social networking site). The formation of social ties in these groups is either facilitated by spatial proximity (Raman, 2010) or by social proximity formed and facilitated by many factors of modern life, including modern communications and emergence of social media (Cummings, Butler, & Kraut, 2002; Ellison, Steinfield, & Lampe, 2007). However, much of the research on social interaction and social media so far suggests the latter facilitates communication rather than forms a central component of a community, whereas in geographic communities, the sense of belonging and attachment to a place can often be the reason behind social engagement in the neighborhood.

Through the formation of social networks, social interaction, and active or passive participation in neighborhoods, people develop a sense of belonging to the place or space (Leach, 2005; Riger & Lavrakas, 1981). The formation of sense of belonging to a neighborhood involves a

complex psychological and physical understanding on the part of the user and their interpretation of neighborhoods. They are influenced by factors such as environment, emotional attachment, interaction, participation, sense of safety, nature of social contacts, housing condition, and physical design (Young, Russell, & Powers, 2004). Individuals' evaluation and feeling of connectedness to the place and cohabitants of the neighborhood (Forrest & Kearns, 2001 p. 2140) can vary depending on sociodemographic factors such as gender, age, and nature and type of community which can also influence the sense of belonging. For example, rural areas were reported to have a higher sense of community and belonging (Pretty & Paul, 2003) than urban neighborhoods.

Due to the link between the quality and design of physical environment and its relationship to perception of neighborhood and sense of belonging, many governments have developed policies and guidance to inform local neighborhood design (Department of Communities and Local Government, 2009) and improve the identity of place and sense of belonging to neighborhood. Hillier argues that spatial design can significantly influence the awareness and copresence of neighbors in a space which can have an impact on their neighborhood relationships (Hillier, 1996, pp. 213–214). Design and layout of neighborhoods that allow better visual connection between neighbors have been found to have significant impact on social networks and social interaction (Raman, 2010).

In contrast, for non-geographic communities/groups, it is the proximity in social networks, rather than spatial proximity, that can initiate community membership and through shared values and ideals can develop a sense of belonging (Brown, Crabbe, & Mellor, 2008). However, the fundamental aspect that instills a sense of community and belonging such as common goals or shared beliefs, social interaction, social network, and support remain constant even in non-geographical communities and groups such as Facebook and fan clubs.

Sense of Belonging, Mental Health, and Well-Being. Sense of belonging was found to have a significant impact on mental health (Hagerty et al., 1992), and a lack of sense of

belonging is often used as a good predictor of depression (Hagerty & Williams, 1999), lack of social participation (Chavis & Wandersman, 1990), and general well-being. As an individual psychological state and one of the key indicators of well-being, sense of belonging is described as the feeling of belonging in a family, local or virtual community, cultural group, social group, region, or a country. It can greatly influence the extent of participation in a community, the development of a sense of identity, general well-being, and quality of life. It can be influenced by individual state of mind, culture, gender, physical and social characteristics of the community, nature, and structure of social network of the community.

Sense of Belonging, Social Cohesion, and Quality of Life. Social cohesion is an important constituent that influences quality of life (Berger-Schmitt, 2002). Social cohesion is defined as the “vertical and horizontal interaction among members of society as characterized by a set of attitudes and norms that include trust, a sense of belonging and the wiliness to participate and help” (Chan, To, & Chan, 2006 p. 290). Seminal work by Putnam (2000) has shown the importance of participation in community in developing the social capital of a neighborhood. It is suggested that two important factors that influence the perception of social cohesion by individuals are sense of belonging and feelings of morale (Bollen & Hoyle, 1990). Sense of belonging is an outcome of an individual’s evaluation of a group, and his or her role in that group has been argued to be a key factor that influences perceptions of social cohesion (Hurtado & Carter, 1997). So it is very clear that the concepts of social cohesion, participation, sense of belonging, and quality of life are intertwined and influence one another. Previous work has also indicated social networks and interaction to form part of the building blocks of social cohesion and participation in neighborhoods (Forrest & Kearns, 2001). Therefore, a sense of belonging can be seen as a key factor that increases social interaction and participation in the community and improves social cohesion and participation that can improve the quality of life and perception of quality of life of community members and neighborhood residents.

Cross-References

- ▶ [School and Student Engagement](#)
- ▶ [Sense of Community](#)
- ▶ [Social Network](#)
- ▶ [Social Participation](#)

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Sense of Coherence

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Definition

Sense of coherence (SOC) is a global orientation that expresses the extent to which one has a pervasive and enduring, though dynamic, feeling of confidence that (1) the stimuli derived from one's internal and external environments in the course of living are structured, predictable, and explicable (*comprehensibility*); (2) the resources are available to one to meet the demands posed by

these stimuli (*manageability*); and (3) these demands are challenges that are worthy of investment and engagement (*meaning*) (Antonovsky, 1987).

Description

Sense of coherence (SOC) is the main concept in the theory of salutogenesis. Salutogenesis (*salute*, of health, and *genesis*, the origins or coming into existence) has its origin in Greek writings and was actualized in modern times by humanistic psychologists such as Carl Rogers and Abraham Maslow and the sociologist Aaron Antonovsky (1923–1994). It was Antonovsky (1979) who developed the theory of salutogenesis. He raised the following crucial question: “what explains movement towards the health pole of the ease/disease continuum?” (Antonovsky, 1996, p. 15). His answer to this salutogenic question was formulated in terms of the sense of coherence and general resistance resources (GRR). He conducted a study on female survivors from the concentration camps of the World War II. He found that some of these women had a surprisingly good health, and they had one common characteristic: a high or strong SOC.

Salutogenesis including SOC is built on the following view of health: it does not view health as a dichotomous variable (healthy/not healthy), but instead as movement along an ease/disease continuum. It focuses on the story of the whole person rather than on specific problems and diagnoses. It views people as biological, psychological, social, and spiritual beings who are both proactive and reactive and who make choices. Persons are understood as actively involved in health seeking and self-actualization. Further, salutogenesis understands tension and strain as potentially health promoting rather than as inevitably health damaging. The theory stresses the use of potential and/or existing resistance resources to enhance coping, and not primarily on minimizing risk factors, as well as emphasizing active adaptation as the ideal in treatment (Antonovsky, 1987).

The primary focus is on the dynamic interaction between health-promoting factors and stressors in human life and how people can move to the healthier end of the health continuum. A person with a strong SOC has an advantage in preventing tension from being transformed into stress by using available GRR and thus manages tension, promotes coping, and moves towards better health and well-being.

The notion of boundaries suggests that one does not need to feel that all of life is comprehensible, manageable, and meaningful in order to have a strong SOC (Antonovsky, 1987). However, four spheres in human life are emphasized by Antonovsky in which people must invest time and engagement if they do not want to lose resources and meaning over time. These spheres are one's inner feelings, immediate personal relations, major activity, and existential issues (Antonovsky, 1987).

A review of the literature concludes that, in general, a high SOC is related to better health and a higher life satisfaction (Erikson & Lindstrøm, 2005, 2006, 2007). In addition research overviews reveal that SOC has a relatively high predictability both in short- and long-term perspective (Langeland, Wahl, Kristoffersen, Nortvedt, & Hanestad, 2007a; Erikson & Lindstrøm, 2005, 2006).

Based on theoretical considerations, Antonovsky hypothetically claimed that SOC is a rather stable quality of an individual after 30 years of age. Research shows that life experiences such as consistency, appropriate challenges, participation in shaping outcomes, and emotional closeness shape SOC, and GRR provides the person with sets of meaningful and coherent life experiences (Sagy & Antonovsky, 2000). New research presents interesting results indicating that SOC is more dynamic than formerly believed. Empirical evidence reveals that SOC may be improved due to a mode of therapy (Langeland et al., 2006; Yamazaki, Tokari & Sakano, 2011). Langeland et al. (2007b) have developed an intervention program based on the theory of salutogenesis showing positive effect on SOC. The target group is people with mental health problems, but since the theory gives

a general description of how SOC may be improved, the program may also be adapted to people with other health problems such as heart and cancer diseases. Further the self-tuning model (Vinje & Mittelmark, 2006; Langeland & Vinje, 2010) is an example of a new model that may contribute to shed light over SOC's dynamic characteristics. However, there is a call for more research on processes that may enhance and strengthen SOC.

Higher levels of GRR are associated with a stronger SOC. Because the interaction between a person and the environment will always be in flux, it is not possible to identify all possible GRRs; Antonovsky (1979, p. 99) therefore formulated the following definition that provides a criterion to identify GRRs: "every characterization of a person, group or environment that promotes effective management of tension."

In addition, he identifies the following GRRs as exemplars:

- *Culture* gives people a place in the world. SOC may be enhanced in a culture that enables social participation (e.g., participation in social decision-making, the visual arts, handicrafts, song, music, outdoor life, garden work, and different kinds of athletic sports).
- *Social support* is a crucial GRR. People who have close ties to others resolve tension more easily than those who lack that quality in their relationships. The perceived certainty about the availability of social support is often sufficient for this to be an effective component of GRR, with the quality of social support such as intimate emotional ties being especially important. The concept of "emotional closeness" refers to the degree to which a person experiences emotional ties and social integration in different groups (Sagy & Antonovsky, 2000).
- *Religion and values* give direction and meaning to life.
- *Physical and biochemical* resources such as a strong physique, good genes, and a strong immune system are key GRRs.
- *Material goods* such as money, food, clothing, and accommodation are of obvious significance.

- *Continuity, overview, and control* are macro-sociocultural coping resources that are decided by the culture and society that a person is part of.
- Good *coping strategies* are characterized by rationality, flexibility, and foresight, including the ability to regulate emotions.
- *Knowledge and intelligence*.
- *Self-identity* is a resource on the emotional level and is a crucial coping resource.

The relationship between GRR and SOC is reciprocal. GRRs such as social support lead to a stronger SOC, and it is SOC that makes a person able to mobilize and make use of social support (Landsverk & Kane, 1998). When people experience concordance between their use of GRRs and their expectations, wishes, and demands, life's challenges are experienced as "appropriate." The experience of appropriate challenges in daily life strengthens SOC.

SOC may be measured by the Orientation to Life Questionnaire (Antonovsky, 1987). It is based on self-report and has been tested for validity and reliability in several studies, and their conclusions support the validity and reliability of the questionnaire (Erikson & Lindstrøm, 2005, 2006; Antonovsky, 1993). The questionnaire includes 29 items and measures the degree to which an individual views the world as comprehensible (11 items), manageable (10 items), and meaningful (8 items). Responses to all items are scored by means of a seven-point, Likert-type scale. Antonovsky has also developed a shorter form of the Orientation to Life Questionnaire – SOC-13. The SOC questionnaire has been translated into 44 languages.

In 124 studies, internal consistency reliability (Cronbach's alpha) ranges from 0.70 to 0.95 (Erikson & Lindstrøm, 2005).

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Sense of Community

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Definition

Sarason (1974) first proposed the concept of psychological sense of community as “the key to the understanding of one’s society’s most pressing problems, the dark side of individualism, manifested in alienation, selfishness and despair” (p. 157). Sarason described it as the feeling that one is part of a readily available, supportive, and dependable structure. He also emphasized that it is difficult to bring the concept into the theoretical and empirical traditions of mainstream psychology because the concept “is not a familiar one in psychology . . . it does not sound precise, it obviously reflects a value judgment, and does not sound compatible with “hard” science”. Yet, according to Sarason, people knew when they had it and when they didn’t. Inherent in this psychological construction of sense of community are the notions of interdependence, mutual responsibility, and collective consciousness.

Description

Sense of community is currently a popular, almost *commonsense* notion; it is generally considered an ideal and a desired state and a value, and as such, it frequently appears within public policy documents and in the press. Within the social sciences and especially community psychology, this concept has attracted considerable theorizing and research, with attempts at defining and measuring as well as to investigate its relationships with other phenomena. Moreover, it is considered an aim and conceptual foundation for community psychology interventions and practice.

The concept of sense of community is related to the notion of *community*. From the classic

work by Hillery (1955), documenting 94 descriptive definitions of community, subsequently different conceptual distinctions have been provided. Traditionally, it is common to use the term to describe both social organizations (formal and informal) that are bounded by a physical or geographical location (town, neighborhood, school) (*locational communities*) and organizations that are constituted on the basis of common interests, goals, and needs (e.g., religion, sport, hobby, political groups, faith communities, web-based communities) (*relational communities*).

Conceptual foundations of the notion of *sense of community* are based on earlier sociological thoughts of Tönnies, with his distinction between *gemeinschaft* (sometimes thought of as the village or small town with strong kin and friendship linkages) and *gesellschaft* (the impersonal city). Tönnies was especially concerned with changes in social structures, leading to the potential loss of the supportive interdependence, mutual responsibility, and common goals of village and town life typical of *the gemeinschaft*, to the highly differentiated and individualistic nature of larger-scaled structures of *gesellschaft*. Durkheim continued to explore this erosion of cohesiveness and collective consciousness, with his reflections on the notion of *anomie*. Other theoretical contributions to the notion of sense of community have been provided by environmental and ecological theories of human behavior, such as Bronfenbrenner (1979). Scholars within ecological theory emphasized the need to focus on the relationships between persons and the social and physical environments of their communities, in order to understand behavior and well-being and, particularly the physical settings (e.g., schools, therapeutic communities, neighborhoods) where behavior takes place. Ecological perspectives that maintained the physical characteristics of behavioral contexts do not exist independently of the place where the behavior occurs, which can alter positively or negatively the cognitions, affect, and behavior of its inhabitants.

Attempts to operationally define and measure sense of community were made by McMillan and Chavis (1986). The authors provided the most

accepted model of sense of community which includes many of the sociological and political ideals described earlier. McMillan defined sense of community as “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (McMillan & Chavis, 1986, 9). Components include *membership*, referring to the feeling of belonging, and emotional safety, created by being part of a defined community. *Influence* captures the idea of community cohesiveness and attractiveness, dependence on the community’s influence on its individual members, and the members’ feelings of control and influence over the community. *Integration and fulfillment of needs* refers to the idea that common needs, goals, beliefs, and values provide the integrative force for a cohesive community that can meet both collective and individual needs. *Shared emotional connection* refers to the bonds developed over time through positive interaction with other community members. McMillan and Chavis suggest that these elements work together to create the dimensions, which in turn work dynamically together to create and maintain an overall sense of community. This model of SOC is applicable to all types of communities where members feel a sense of belonging, influence, some kind of need fulfillment, and an emotional connection with other members (from neighborhoods, university settings, and workplaces to virtual communities). This model has retained its prominence partly because a measure of sense of community, the Sense of Community Index (SCI; Perkins, Florin, Rich, Wandersman, & Chavis, 1990), was developed on the basis of it.

Since Sarason’s initial discussion and McMillan and Chavis (1986) theory and definition, research in this area has flourished (e.g., Fisher, Sonn, & Bishop, 2002). Several authors have explored the meaning of SoC in different settings, contexts, and groups including local community or town (Prezza, Amici, Roberti, & Tedeschi, 2001), neighborhoods (Perkins & Long, 2002), schools, ethnic and immigrant groups (Brodsky, 1996; Sonn, 2007), community organizations

(Hughey, Speer, & Peterson, 1999), religious settings (Miers & Fisher, 2002), work organizations (Royal & Rossi, 1996), and the web. Most of this research has been published on the *Journal of Community Psychology* (e.g., special issues in 1986 and 1996) and the *Journal of Community & Applied Social Psychology*; moreover, an edited book has been produced (Fisher et al., 2002) and in the last decade, several debates took place within congresses in community psychology.

Even though researchers using the SCI have contended that there is empirical support for McMillan and Chavis four-dimensional model, critical considerations have been made, especially by authors adopting constructivist and dialogical perspectives as well as cultural perspectives (e.g., Fisher & Sonn, 2007; Mannarini & Fedi, 2009; Novel & Boyd, 2010); therefore, theoretical developments in conceptualization of SoC have been made.

It has been noticed that sense of community may be considered both as an individual-level (e.g., individuals’ perceptions of community belonging) and as an extraindividual-level construct (e.g., as a property of a social system, such as a well functioning community) and is not related to the perceptions of specific personal relationships (e.g., members may continue to have a sense of community even though individuals move). Hence, it has been argued that sense of community can be an illusive cognition and affect which is not necessarily based on experiencing individual-level transactions. On these grounds, research has sought to understand these psychological processes in terms of social identity theory (Obst, Smith, & Zinkiewicz, 2002).

One issue that has been raised is the role of the different community belongings of individuals. Most of the extant literature has limited exploration of PSOC to one referent community, or *primary community*, meaning mostly the territorial community. However, Brodsky and Marx (2001) argued that individuals are members of different *nested* communities, to which they are connected by their multiple identities and multiple roles. Thus, an individual may likely have multiple,

interrelated, psychological senses of community in reference to these multiple, separate communities identified in terms of nationality, gender, politics, religion, etc. At different times each community has different salience, with one being the primary community on which people draw at times of significant challenge. Such definition of community belonging allows for both commonalities (at the higher level of *macrobelonging*) and diversity (at the lower level of *microbelonging*).

A further issue is whether sense of community is always positive or if there are circumstances in which it may be negative. Community is often depicted as a buffer against the hard challenges people face and offers support and identity derived from those nearby or with whom there are meaningful ongoing interactions. However, these conceptualizations of SoC in terms of positive effects reflect a static picture of sense of community, seen an outcome to be desired and achieved. When focusing on the processes occurring within communities, it becomes clear that it can also serve negative ends. For example, this may happen when communities feel threatened (e.g., by terrorism, immigration) and turn inward by adopting a protective stance in which members progressively construct community such that it excludes those people and things that are different. Fisher and Sonn (2002) discussed the ways in which calls to icons, images, and ideals could be used to reinforce individuals' national (Australian) identity and show who are the *others*. This discourse may include the dehumanizing of the *others* (e.g., in political rhetoric over refugees and immigrants). Hence, while sense of community is a crucial aspect to well-being and mental health promotions, it is also important to understand negative aspects of sense of community that promote division and negative mental health states for those who may be excluded from the benefits of community membership and resources.

A debated issue has been the closeness of sense of community with other constructs, which sometimes have been subsumed into it (e.g., empowerment, social capital, place attachment). For example, when investigating SoC with

reference to geographical residential locations (e.g., neighborhoods, towns), the physical characteristics of the places and individuals' psychological relationship with them may become a central component of the construct. Hence, the partial overlap of SoC with other constructs measuring attributes of individual-place relationships (e.g., place attachment, referring to the bonding relationship with places where individuals experience close and significant relationships) has been emphasized in the literature (e.g., Pretty, Chipuer, & Bramston, 2003).

The issue of measurement of sense of community has attracted considerable debate, and there is a diversity of methodological approaches adopted to explore the nature and meaning of SoC. Many debates consider how it is best assessed, whether by using quantitative methods (Chipuer & Pretty, 1999) or qualitative methods. Assessments of sense of community have mainly used questionnaires developed for use within survey methodologies. The SCI remains the most widely used instrument and has been used to measure PSOC in diverse settings such as the workplace, religious communities, immigrant communities, student communities or schools, as well as residential or geographic communities. It has also been subject to continuous revision and confirmatory research and criticism (e.g., Long & Perkins, 2003; Peterson, Speer, & Hughey, 2006; 2008; Peterson, Speer, & McMillan, 2008; Tartaglia, 2006). Moreover, other instruments have developed, both for the general population and for specific groups and contexts.

Some authors have emphasized some limitations of questionnaires and survey techniques in terms of the external and conceptual validity of the data they generate. Critical issues reported are lack of norms for the interpretation of sense of community data (it is difficult to determine whether a score is a *good* or a *bad* value; indeed, the usual implicit assumption is that high scores are good); the low stability of the theoretical dimensions of SoC across settings, contexts, and with different groups (e.g., gender, ethnicity, age) which suggests that SoC may be context specific (Hill, 1996); the relative salience of the different communities (the target community investigated

may not have salience for the participants at that time); and the importance of considering historical factors for understanding community processes as well as changes in SoC across time.

Alternative methods adopted to overcome such limitations include the use of qualitative methods to capture participants' perspectives on community. Most typical methods include the use of stories and narratives about the life and experiences of the community, structured interview and focus groups, and photovoice methods. However, these methods are also not without their critics, including the lack of generalization of outcomes. Pretty, Bishop, Fisher, and Sonn (2007) report some general principles to guide the utility of specific methods. If the data are to be used for policy advice and formulation, it is often preferable to have quantitative data, especially where this can be linked or triangulated with other relevant data sources. If the aim of the data gathering is community building, then a number of the qualitative approaches (including participatory action research, photovoice, and narrative enquiry) may be more useful.

Empirical research has investigated sense of community in different populations and age groups, and its associations with several phenomena (e.g., community participation, feelings of unsafety, well-being/health). As regards sociodemographic characteristics, typical results are the increase of SoC with age, among adults, whereas scores tend to decrease from early to late adolescence; scores increase also with length of residence and home ownership and are higher among male versus females. Sense of community has been found as positively associated with community participation, both among adults and adolescents (Chavis & Wandersman, 1990; Albanesi, Cicognani, & Zani, 2007; Cicognani, Albanesi, & Zani, 2008), with lower feelings of unsafety and fear of crime (Zani, Cicognani, & Albanesi, 2001), and with higher well-being and mental health outcomes (Davidson & Cotter, 1986; 1989; 1991; Cicognani et al., 2009). Moreover, research has shown further that sense of community is related to many aspects of adolescents' well-being (Chiessi, Cicognani, & Sonn, 2010; Pretty, Conroy, Dugay, Fowler, & Williams, 1996).

Conversely, a lack of connections, identity, and supports inherent in sense of community may lead to less positive outcomes. Sense of community provides a buffer against physical and psychological symptoms of illness and facilitates adjustment.

Cross-References

- ▶ [School Sense of Community](#)
- ▶ [Social Cohesion](#)
- ▶ [Sense of Belonging](#)

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Sense of Humour

► Humor

Sense of Humour Questionnaire (SHQ-6)

► Humor

Sense of Life, Spirituality

► Adolescents and Spirituality

Sense of Place

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Synonyms

Place attachment; Place identity; Place meaning

Definition

Sense of place is:

- “A virtual immersion that depends on lived experience and a topographical intimacy” (Lippard, 1997, p. 33).
- The local “structure of feeling,” of subjective territorial identity (Agnew, 1987).
- “Feelings, attitudes, and behavior towards a place which varies from person to person, and from one scale to another (e.g., from home to country)” (Shamai, 1991, p. 354).

...the complex bundle of meanings, symbols, and qualities that a person or group associates (consciously and unconsciously) with a particular locality or region. (Dattel & Dingemans, 1984, p. 135)

...the pattern of reactions that a setting stimulates and aspects the person brings to it... [it] is an interactional concept: a person comes into contact with a setting, which produces reactions. (Eyles & Williams, 2008, p. 20)

Antonym: Sense of displacement

Description

Sense of place is a term found in a variety of the social sciences, including psychology

(particularly environmental psychology), sociology, geography, and anthropology. Environmental scientists first used the term to represent a biologically based way of perceiving a space, invoking the five senses (Eyles & Williams, 2008). Poets also have spoken about sense of place, emphasizing sensorial experiences, memory, regional folklore, emotions, identity, and history in order to orient ourselves in space (Lippard, 1997). Finally, architects, urban planners, and designers incorporate the term when designing or writing policy or guidance (e.g., master plans, design briefs) to mean character or appearance, especially in conservation areas (Jivén & Larkham, 2003).

Based on the range of definitions from the last section, sense of place may be perceived as a dynamic concept involving lived experience (Lippard, 1997), interpretation, emotional reaction (Hummon, 1992), attitudes, beliefs, views, and symbols (Peterson & Saarinen, 1986; Shamai, 1991) and may incorporate notions of attachment, identity, and meaning with a space (*place* is space plus character; Sime, 1986). *Lived experience*, however, does not necessarily refer to deep or shared rootedness with a place; rather, sense of place exists on a continuum, from fleeting to involved and from individual to communal. Regarding the latter, it is suggested that everyone possesses their own sense of place because every place has multiple identities or values. People’s affective responses to places, though, likely have emerged from a common structure that has been remade, generation after generation (Pred, 1986), and depends on culture, social context, and local social relations. Furthermore, there is no one *correct* sense of place, even though a dominant person’s or group’s sense of place may be seen as more legitimate than others or they may feel as though one place is better than other places (called *place-boundedness*).

Sense of place is sometimes confused with other terms. For example, *genius loci*, or the spirit of a place, is a concept that is believed to be the antecedent to sense of place, referring to a place’s atmosphere (Norberg-Schulz, 1980). Although overlapping, the two terms are different: one may be used to describe an individual’s or

group's experience with a place (sense of place), whereas the other describes the qualities of a place itself (*genius loci*). Another term, *rootedness*, has been used to describe sense of place (Tuan, 1980). The former term is believed to be part of a more unconscious, deeply ingrained experience with a place, while the latter possesses an element of conscious awareness (Eyles & Williams, 2008) that can be achieved or maintained (Tuan, 1980).

Theoreticians also have explored the *lack* of a sense of place. Relph (1976) and Hummon (1992) described the concept of *placelessness*, which they defined as a place without character, somewhere that is relatively homogeneous and common. Shopping malls are often used as examples of placeless places because of the prevalence of similar shops, an *avenue* for walking between shops, climate controlled interiors, vast swathes of parking, and so forth. Relph also used terms such as *outsideness* (as opposed to *insideness*), alienation, and not belonging to express the idea that people were not connected to a place. With the push for increasing globalization, some have argued that sense of place has weakened due to the production of commodified, inauthentic, generic spaces and standardized products that could be found anywhere (Mohammed Abdullah, 1998; Wheeler, 2004; cf. Massey, 1991).

Empirical research into sense of place has been limited due in part to the lack of a concrete definition of the term. In response, Shamai (1991) attempted to create a measure for sense of place, using a questionnaire administered to Jewish students in Toronto, Canada. Findings suggest that sense of place is composed of four concepts on a sliding scale: knowledge, belonging, attachment, and commitment to a place. This builds on previous work that has examined the ranking of sense of place and related concepts (e.g., Goldlust & Richmond, 1977; Piveteau, 1969; Shamai & Kellerman, 1985, all as cited in Shamai, 1991). In another study proposing to create an explanatory model for sense of place, Jorgensen and Stedman (2006) identified several sense of place variables from the literature, created a questionnaire with those variables, and

distributed the questionnaire to households living by the shore in Wisconsin, USA. Using a regression analysis, the authors found several variables had an influential mediating effect: length of stay at a property, attitudes (in this case, toward shoreline development and retaining negative vegetation), and the attribution of importance toward a place (i.e., the lake).

Further empirical research has used qualitative methods to ascertain sense of place. In their quest to understand children's *insideness* in their sense of place, Lim and Barton (2010) undertook interviews with 19 schoolchildren in New York City. The authors also conducted walk-alongs with the students in their neighborhood and asked them to map and take pictures of the area. The study showed that children's sense of place develops through a variety of ways, dimensions, and channels and that insideness is comprised of environmental understanding, environmental competence, and multiple, affective relationships with a place. Furthermore, Hay (1998) longitudinally explored sense of place from a developmental perspective, using interviews and surveys with residents and tourists in New Zealand, respectively. Results revealed that residential status and stage of life influenced people's sense of place: older and well-established residents possessed an ancestral and cultural sense of place, whereas younger and more transitory residents had a superficial, partial, and personal sense of place. Finally, using a mixed-methods approach, Qian, Zhu and Liu (2011) investigated the possibility of creating a multi-scalar approach to sense of place by distributing a questionnaire and interviewing migrants in Guangzhou, China. The authors found that sense of place involves several different constructs (e.g., place dependence, place identity) and that the concept must be adapted to different geographical scales with the caveat that context (i.e., social conditions) is understood.

Related concepts to sense of place include place attachment (Low & Altman, 1992), place identity (Proshansky, Fabian, & Kaminoff, 1983), place meaning (Manzo, 2005), and *topophilia* (Tuan, 1974).

Cross-References

- ▶ [Person-Environment Fit Theory](#)
- ▶ [Place-Related Measures](#)
- ▶ [Sense of Belonging](#)

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Sense of Responsibility

- ▶ [Personal and Institutional Accountability](#)

Sense of Well-Being Inventory (SWBI)

- ▶ [Sense of Well-Being Scale](#)

Sense of Well-Being Scale

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Synonyms

[Sense of Well-Being Inventory \(SWBI\)](#)

Definition

The Sense of Well-Being Inventory (SWBI) is a ► [quality of life](#) assessment instrument developed specifically as an outcome measure for people with disabilities in vocational rehabilitation.

Description

Background

Quality of life (QOL) is defined as a multidimensional concept that includes both objective and subjective dimensions (Bishop & Feist-Price, 2002; Dijkers, 1997). Objective dimensions of QOL refer to external criteria indicative of success, or a lack of success, in a variety of accepted life roles (e.g., as a productive worker). Subjective dimensions of QOL consist of the individual's phenomenological feelings about his or her well-being and involve a personal estimate of global satisfaction (or dissatisfaction) or domain-specific satisfaction (or dissatisfaction); some examples of domain-specific areas include family, work, school, and social life.

When using objective indicators, people with disabilities reported a lower QOL than

people without disabilities which can be attributed to a high rate of ► [poverty](#) and ► [unemployment](#) and restriction in ► [social participation](#) (Dijkers, 1997). When using subjective measurements, however, individuals with disabilities reported a much higher QOL (Dijkers, 1997). Therefore, subjective measures may be more appropriate indicators of QOL for people with disabilities (Chapin, Miller, Ferrin, Chan & Rubin, 2004).

The original 36-item version of the *Sense of Well-Being Inventory* (SWBI) was developed as a subjective QOL measure for people with disabilities by several vocational rehabilitation researchers in the United States, with funding from the National Institute on Disability and Rehabilitation Research (cf., Rubin, Chan, Bishop & Miller, 2003a, b). As a subjective QOL instrument developed specifically for people with disabilities, it has great potential for use as a component instrument for program evaluation in vocational rehabilitation.

Outcome Measure

The state-federal vocational rehabilitation program in the United States, which serves over 1,000,000 clients a year and spends more than \$2.5 billion annually, plays a large and instrumental role helping individuals with disabilities achieve their independent living and employment goals (Martin, West-Evans & Connelly, 2010; U.S. Government Accountability Office [GAO], 2005). Although the benefits of vocational rehabilitation intervention go beyond employment including full inclusion and participation of people with disabilities in all aspects of life, evaluation of service outcomes of state vocational rehabilitation agencies has been relying heavily and narrowly on short-term employment outcomes (Gilbride, Thomas & Stensrud, 1998; Rubin et al., 2003a, b). Limiting the assessment of service effectiveness to short-term employment outcome data provides an insufficient and sometimes misleading picture of the benefits of vocational rehabilitation interventions for people with disabilities (Rubin et al., 2003a, b).

Major efforts have been made to broaden and improve the definition of successful vocational rehabilitation outcomes beyond short-term,

competitive employment outcomes (Catalano et al., 2010; Chapin et al., 2004; Gilbride et al., 1998). Current perspectives on assessing vocational rehabilitation service outcomes recommend the inclusion of both qualitative indicators as well as objectively verifiable outcome measures (Bishop, Chapin & Miller, 2008). Multidimensional subjective measures of QOL may lead to greater insight about what individuals consider to be most important to their life satisfaction and the specific aspects with which they are most, and least, satisfied (Bishop & Feist-Price, 2002).

The *Sense of Well-Being Inventory* is a quality of life measure developed and validated among individuals with disabilities as an outcome measure for people receiving vocational rehabilitation services.

Instrument Development

Rubin et al. (2003a, b) developed the SWBI based on an elaborate process including a comprehensive review of the literature, focus group study, and Delphi process with several groups of counselors and clients of vocational rehabilitation services. The crude instrument developed from these processes was then refined in three instrument-refinement workshops attended by state vocational rehabilitation agency administrators (two workshops) and private-sector rehabilitation managers/service providers (one workshop). The items for the SWBI were developed from an a priori classification of quality of life (i.e., physical well-being, psychological well-being, social well-being, and economic well-being). The SWBI was administered to a sample of vocational rehabilitation clients, and the data generated from the study were subjected to an exploratory factor analysis. The measurement structure of the SWBI was further validated by Chapin et al. (2004) and Catalano et al. (2010) with Canadians with spinal cord injuries.

Description of Instrument

The original SWBI is composed of 36 items and five subscales: (1) physical well-being and associated feelings about self (e.g., “I feel good

about my physical stamina”), (2) freedom from psychological distress (e.g., “I accept the positives and negatives associated with my disability”), (3) economic security (e.g., “I feel good about my financial future”), (4) family and ► **social support** (e.g., “I have friends who care about me”), and (5) medical care (e.g., “I have good medical services”). Respondents are asked to indicate the extent to which they agree that each item on the SWBI is descriptive of them, using a four-point Likert-type rating scale (rating: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). The internal consistency reliability coefficients (Cronbach’s alpha) were reported to be 0.88, 0.83, 0.79, 0.72, and 0.62, respectively. The current version of the SWBI validated by Catalano et al. (2010) is comprised of 20 items and four subscales (psychological well-being, financial well-being, family and social well-being, and physical well-being).

Validity

Rubin et al. (2003a, b) administered the original SWBI to 149 vocational rehabilitation clients. Exploratory factor analysis results indicated a five-factor solution (physical well-being and associated feelings about self, freedom from psychological distress, economic security, family and social support, and medical care) accounting for 50 % of the total variance to be optimal both in terms of parsimony and interpretability, providing empirical evidence for the factorial structure of the SWBI. Chapin et al. (2004) administered the SWBI to 132 adult Canadians with spinal cord injuries living in the community and found a 26-item four-factor structure to be more parsimonious. Although the factors were similar to the Rubin et al. (2003a, b) factors, Chapin and colleagues interpreted the four factors more meaningfully as (a) ► **psychological well-being**, (b) financial well-being, (c) family and ► **social well-being**, and (d) physical well-being. Recently, using confirmatory factor analysis, Catalano et al. (2010) confirmed the four-factor structure of the SWBI reported by Chapin and her colleagues, with a large community sample of Canadians with spinal cord injuries using confirmatory factor analysis.

External evidence of ► **concurrent validity** is supported by correlations reported by both Chapin et al. (2004) and Catalano et al. (2010) of the SWBI factors in the predicted direction with demographic variables such as employment status, years since disability onset, marital status, education, and perceived social-economic statuses as well as related psychological constructs such as disability acceptance, ► **self-esteem**, life satisfaction, and ► **happiness**. For example, in the Catalano et al. (2010) study, the financial well-being factor is positively related to happiness ($r = 0.45, p < 0.01$), disability acceptance ($r = 0.37, p < 0.01$), and self-esteem ($r = 0.42, p < 0.01$). Psychological well-being is positively related to happiness ($r = 0.72, p < 0.01$), disability acceptance ($r = 0.59, p < 0.01$), and self-esteem ($r = 0.76, p < 0.01$). Social and family well-being is positively related to happiness ($r = 0.58, p < 0.01$), disability acceptance ($r = 0.44, p < 0.01$), and self-esteem ($r = 0.49, p < 0.01$). Physical well-being is positively related to happiness ($r = 0.46, p < 0.01$), disability acceptance ($r = 0.50, p < 0.01$), and self-esteem ($r = 0.49, p < 0.01$). Chan et al. (2003) correlated functional skills ratings of rehabilitation clients with QOL using the SWBI and reported that clients with higher functional ability were found to have higher physical well-being and associated feelings about self, economic security, and family and social support than the lower ability groups.

Reliability

There is evidence of the ► **internal consistency** and stability of the SWBI. The reported internal consistency reliability coefficients (Cronbach's alpha) of the original SWBI factors (Rubin et al., 2003a, b) were as follows: physical well-being and associated feelings about self ($\alpha = 0.88$), psychological well-being ($\alpha = 0.83$), family and social well-being ($\alpha = 0.79$), financial well-being ($\alpha = 0.72$), and medical care ($\alpha = 0.62$). Chapin et al. (2004) and Catalano et al. (2010) found similar four-factor structures and reported the following internal consistency estimates: psychological well-being ($\alpha = 0.87; 0.82$, respectively),

financial well-being ($\alpha = 0.88; 0.81$), family and social well-being ($\alpha = 0.84; 0.85$), and physical well-being ($\alpha = 0.79; 0.81$).

Discussion

The SWBI is an easy to administer, self-report, multidimensional outcome measurement tool that has demonstrated strong potential for assessing the quality of life of individuals with disabilities receiving independent living and vocational rehabilitation services. In order to support the claim that objective indicators somewhat fail to provide adequate representation of QOL for people with disabilities (Biswas-Diener & Diener, 2001; Marmot & Wilkinson, 1999), it is essential to accurately identify and measure subjective indicators of QOL, including individuals' judgments about their own state and satisfaction with life, social relationships, work, health, future goals, and personal achievements (Diener, 2000; Veenhoven, 2002). These measures should allow individuals to assess their own lives instead of relying on judgments made by professionals about the quality of their lives based predominantly on external characteristics and values (Phillips, 2006). The SWBI has been developed to be such a measure, and the instrument has been validated among individuals with disabilities as a multidimensional instrument that measures psychological, family and social, physical, and financial well-being. With the accumulating evidence on its reliability and validity, as well as its special inclusion of financial well-being related to vocational rehabilitation, the SWBI has the potential to become a useful, multidimensional outcome measurement tool for evaluating the quality of life of state vocational rehabilitation consumers.

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Cross-References

► Subjective Well-Being

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Sen-Shorrocks-Thon Index

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The Sen-Shorrocks-Thon (SST) index is an index of poverty intensity. It is also called the modified Sen index of poverty intensity. This index is proposed by Shorrocks (1995) as an extension of the Sen (1976) index. As noted by Zheng (1997), the resulting index is consistent with the limit of another index proposed by Thon (1979). Because of this interesting intellectual history, Xu (1998) calls this index the Sen-Shorrocks-Thon (SST) index. Now it is one of the widely used indicators of poverty in a society (see Haughton & Khandker, 2009, pp. 74–76). The SST index measures poverty incidence, depth, and inequality jointly and hence is a comprehensive poverty measure. In addition, this index can be decomposed into its constituting parts transparently.

Definition

According to Osberg and Xu (1999, 2000) and Xu and Osberg (2002), the SST index of poverty

intensity can be calculated as the product of three poverty measures during a certain period of time: (1) poverty rate, (2) average poverty gap, and (3) 1 plus Gini coefficient of poverty gaps *for the population*.

SST index = (poverty rate) \times (average poverty gap) \times (1 + Gini coefficient of poverty gaps for the population).

Description

The first measure of the SST index defined above is the poverty rate (or the head count). It is the proportion or percentage of the population whose incomes are below a predetermined poverty line. This measure provides the information on poverty *incidence* or shows how widespread poverty occurs in a society. The higher the poverty rate is, the more people suffer from poverty in a society.

The second measure is the average poverty gap (or simply the poverty gap) of the poor. The average poverty gap is the average income shortfalls below the poverty line as the percentages of the poverty line for the poor. In the population, the poor have positive poverty gaps while the nonpoor have zero poverty gaps. Because the average poverty gap is only for the poor, this measure provides the information on poverty *depth* of the poor or shows how deep poverty occurs among the poor. The higher the average poverty gap is, the deeper the poor are in poverty.

The third measure is 1 plus Gini coefficient of poverty gaps *for the population*. Here the Gini coefficient is calculated for nonzero and zero poverty gaps. Unlike the Gini coefficient for incomes for the population which measures *income inequality*, the Gini coefficient of poverty gaps for the population measures *poverty inequality* in a society. Therefore, the higher this Gini coefficient is, the higher poverty inequality the society faces. Adding 1 to this Gini coefficient does not change the nature of, the information provided by, this Gini coefficient.

The above multiplicative decomposition of the SST index is a simplification proposed by

Osberg and Xu (1999, 2000) and further explained by Xu and Osberg (2002). This multiplicative decomposition shows that the SST index measures jointly poverty *incidence*, *depth*, and *inequality*.

The original expression of the SST index proposed by Shorrocks (1995) is a mathematical equation which links more closely to the Sen (1976) index. Prior to Sen's (1976) proposal, most analysts focused on the poverty rate and/or the average poverty gap. However, Sen (1976) notes that these poverty measures have undesirable properties and, in some cases, may lead to unreasonable policy choices. For example, to reduce the poverty rate, the policy maker could enhance the income levels of those who are least in poverty. For example, to reduce the relative poverty gap, the policy maker may provide social assistance to all poor people equally or arbitrarily without thinking of their different income levels and hence their different needs. All of the above possible policy choices are not sound, but they do bring down poverty measured by the poverty rate and/or the average poverty gap.

The key part of Sen's (1976) proposal is that he proposes a set of sound axioms for designing poverty measures. In particular, his proposal emphasizes the importance of the distributional aspect of incomes and income shortfalls. The theorist should design poverty measures that are consistent with a set of sound axioms. Hence, Sen (1976) proposes the Sen index of poverty intensity.

Shorrocks (1995) shows that the SST index and the Sen index are closely related but the SST index has more desirable properties. The Sen index does not satisfy the strong upward transfer and continuity axioms, but the SST index does. The strong upward transfer axiom says that a regressive transfer from a poor person to a rich person must always cause a poverty measure to fall even if, in the process, the beneficiary crosses the poverty line. The continuity axiom says that a poverty measure must vary continuously with incomes. This axiom ensures that a poverty measure is a well-behaved function of incomes and does not have unwanted jumps.

Although as the SST index, the Sen index of poverty intensity in its original form is not formulated as the product of poverty incidence, depth, and inequality, Xu and Osberg (2002) show that the Sen index also measures these three dimensions of poverty jointly: (1) poverty rate, (2) average poverty gap, and (3) 1 plus Gini coefficient of poverty gaps *for the poor*.

$$\text{Sen index} = (\text{poverty rate}) \times (\text{average poverty gap}) \\ \times (1 + \text{Gini coefficient of poverty gaps for the poor}).$$

Clearly, the Sen index differs from the SST index because it uses the Gini coefficient for poverty gaps for the poor, whereas the SST index uses the Gini coefficient for the whole population.

Xu and Osberg (2002) also show that based on the Sen index and two of its constituting components (poverty rate and average poverty gap), one can always compute the SST index from the Sen index as follows:

$$\text{SST index} = (\text{poverty rate}) \times (\text{Sen index}) \\ + 2 \times (\text{poverty rate}) \times (1 - \text{poverty rate}) \\ \times (\text{average poverty gap}).$$

While calculating the SST index and Sen index using micro survey data with sampling weights is transparent, it is relatively straightforward to use the bootstrap method to compute the standard errors for the SST and Sen indices and their constituting components for the purpose of statistical inferences (Osberg & Xu, 1999, 2000).

Because the SST index is the product of the poverty rate, poverty gap, and 1 + Gini coefficient of poverty gaps for the population, the percentage change in the SST index over time (Δ SST index) can be expressed as the sum of the percentage changes of its constituting parts over time (Δ (poverty rate), Δ (average poverty gap), and Δ (1 + Gini coefficient of poverty gaps for the population)) (Osberg & Xu, 1999):

$$\Delta \text{SST index} = \Delta (\text{poverty rate}) + \Delta (\text{average poverty gap}) \\ + \Delta (1 + \text{Gini coefficient of poverty gaps for the population}).$$

Some empirical studies on the percentage change of the SST index over time (Osberg & Xu, 1999, 2000, 2008) find that the percentage change of 1 + Gini coefficient is often very small, while the percentage changes of poverty rate and poverty gap are often large. Because of this empirical observation, Osberg and Xu (2008) propose the use of *the poverty box* in a unity box to better communicate with the public about main contributing factors to changes in poverty intensity. The poverty rate is illustrated by the poverty box width (on the horizontal axis), while the poverty gap is shown by the poverty box height (on the vertical axis). The overall poverty intensity is roughly indicated by the size (or area) of the poverty box. If a study involves multiple periods, the researcher can trace the changes of poverty boxes over time to infer the changes in overall poverty intensity (box size changes) and in poverty rate and gap (box width and height changes) over time.

Cross-References

- ▶ [Gini Coefficient](#)
- ▶ [Poverty](#)
- ▶ [Poverty Gap Index](#)
- ▶ [Poverty Lines](#)
- ▶ [Poverty Measurement](#)
- ▶ [Poverty Rate](#)
- ▶ [Watts Poverty Index](#)

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Sensitivity

- ▶ [Power Analysis](#)
- ▶ [Responsiveness to Change](#)

Sensitivity Analysis

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Synonyms

[Uncertainty](#)

Definition

Sensitivity analysis is the study of how the uncertainty of any inference related to quality of life studies (based on models or data) depends on the uncertainty of its input parameters.

Description

Sensitivity analysis looks at where the uncertainty is coming from. Imagine a statistical inference is being made, e.g., on the relative impact of two policies, on the level of ▶ [quality of life](#) of citizens, on how much would be gained by taking

remedial action against an unwanted social outcome. The inference is based on an analysis that could involve, e.g., statistical indicators, mathematical modeling, or some other formal device meant to link a set of information and assumptions to the quantitative assessment being sought. Two legitimate questions in this context are:

- How uncertain is this inference? Can we quantify the different quality of the given two social policies or can we at least state which one is better?
- Given that the inference is done under uncertainty, which among the assumptions entering into the analysis is more influential in determining, e.g., the uncertainty in the score of quality of life of citizens of a given country?

The first question is answered by uncertainty analysis, which could, e.g., produce an answer in terms of confidence bounds – e.g., policy A is between 1.5 and 2.2 times better than policy B with 95 % confidence. The second question is answered by sensitivity analysis, which could tell us that, e.g., 60 % of the uncertainty in the inference is due to the uncertainty in the data used to build the inference, or that policy A is only better than policy B under the assumption that the agents will not change their behavior as a result of the policy. A full-fledged sensitivity analysis would provide an estimate of the contribution of each uncertain input to the variance of the inference. This would normally involve an exploration of the space of the input assumptions by mathematical simulation. In this sense, sensitivity analysis resembles ▶ [statistical experimental design](#), where actual experiments are performed in place of mathematical simulation. An honest, well-executed sensitivity analysis adds to the transparency and defensibility of a social statement, and is for this reason a recommended practice in ▶ [quality of life](#) studies.

Cross-References

- ▶ [Indicators, Quality of Life](#)
- ▶ [Inference, Statistical](#)

- ▶ [Quality of Life](#)
- ▶ [Statistical Experimental Design](#)

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Sensitivity to Change

- ▶ [Responsiveness to Change](#)

Sentiments

- ▶ [Emotions, Sociology of](#)

Separation and Suicide

- ▶ [Social Integration and Suicide in Norway](#)

Separation Anxiety

- ▶ [Childhood Anxiety](#)

Serenity

- ▶ [Peace of Mind](#)

Serious Mental Illness in Israel

- ▶ [Israel, Personal Well-Being Index; Application to Different Population Group](#)

Service Activities Assessment

- ▶ [Performance Indicators](#)

Service Quality in New Public Management

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Synonyms

[Government service quality](#); [NPM](#); [Public sector reform](#); [Reengineering the public sector](#); [Total Quality Management \(TQM\)](#)

Definition

New Public Management means a disintegration of traditional public structures using private sector management style with clear account of goals and performance in order to enhance the service efficiency, effectiveness, and quality and demonstrate greater transparency and accountability but without affecting negatively any objectives and concerns of democratization, participation, openness, and non-corruption.

Description

New Public Management (NPM) can be regarded as a consequence of the economic and debt crisis of the late 1970s and 1980s which has forced “the world’s money doctors, the World Bank and the International Monetary Fund to look for diagnosis, prescription and treatment” (Analoui, 2009). This coupled with the accumulation of excessive power, lack of accountability and representation, indifference towards public needs and demands, official secrecy and inaccessibility, and role “in depoliticizing the public sphere”

(Garnham, 1990) has put pressure on the governments to get more out of public sector resources. As a result the idea of “reengineering the public sector” (Andersen, 2006) or “reinventing government” (Osborne and Gaebler, 1993) or “public sector reform” or the “New Public Management reform” (Skalen, 2004) or New Public Management has been emerged.

The idea behind these labels was led by the aim to bring in criteria and knowledge from the private sector management into public sector administration due to the growing perception that the latter was too inefficient, slow, and rules driven instead of performance driven and unresponsive to users with its growth getting out of control. Therefore, “efficiency, cost effectiveness, and business-like processes and operations were deemed essential if not vital for reforming public institutions” (Analoui, 2009).

The NPM concept has challenged public managers and politicians to act as entrepreneurs of a new, leaner, and increasingly privatized government that places value on the use of public money (Budd, 2007). Overall it aims the following:

- To cast as antidote to the perceived bureaucratologies of the public sector through “a deliberate move from a less desirable past to a more desirable future” (Aveni, 2002)
- To improve performance and demonstrate greater transparency and accountability (Williams & Saunders, 2008)

NPM was originally conceived by Christopher Hood (1991) who described its principal themes as a shift away from old public administration to NPM. Advocates of NPM place emphasis on the following:

1. *Operational efficiency*, by encouraging competition between units through the roles of provider and purchaser
2. *Terms of service*, by downsizing and limit union influence while providing flexibility in hiring and firing employees
3. *Professional management*, by delegating management authority and by breaking up existing bureaucracies into separate agencies consisting of networked contracts tied to efficient performance

4. *Output control*, by encouraging greater awareness by adopting “citizens’ charters” and funding of outputs not inputs

5. *Budgeting*, by encouraging governments to become more enterprising, produce more transparent budgets with ► **performance indicators** for outputs and attributing costs to outputs, and be earners rather than spenders

Other main NPM components include improved service quality and decentralization, managerialism and management techniques, contractualism, privatization, market-driven techniques and competition, a vibrant civil society, customer orientation, and separating political decision-making from the direct management of public services (Gaebler & Osborne, 1992).

NPM moves along two axes that incorporate all the components described above. One that stresses “managerial improvement” and “organizational restructuring” aiming at the devolution or decentralization within public services and the other that supports “markets,” “competition,” and “customer orientation” in the delivery of public services.

Quality and Quality Management in Services

While quality is regarded as a complex and elusive subject, on the other hand, it consists of a key concern of almost all organizations independent on the sector. High-quality goods and services affect organization performance. Good quality reduces waste, returns, and complaints but most importantly increases ► **customer satisfaction** for a company which, in turn, can be a source of considerable competitive advantage.

There is no clear or agreed definition as to what “quality” means. Various quality gurus provide alternative approaches to build quality into the products and services that the organization offers. The critical differences in their approaches stem from their different ways of defining quality; therefore, it is important to appreciate the implications of these alternative definitions.

Garvin (1988) has categorized many of the definitions of quality into five major approaches:

(a) the transcendent approach, which views quality as subjective and personal; (b) the manufacturing-based approach, where quality is defined in terms of conformance to requirements and *free of errors*; (c) the user-based approach, which assumes the concept that quality is *fit for its purpose*; (d) the product-based approach, which views quality as a measurable variable; and (e) the value-based approach, which defines quality in relation to *cost and price*.

In time, the customer-based approach appeared to prevail, but at the same time, this can present a challenge, since a particular type of service that is considered high quality by one customer may be considered low quality by another. Also, the fact that customers leave the service apparently satisfied can provide little information about what makes customers satisfied and how the service can improve.

Gummesson (1991) argues that quality management has to bridge the gap between internal quality management as a consequence of lack of service design and the external quality management as a consequence of the customer-employee interaction in the service process.

Originally, quality management was developed in the private sector with the most significant development taking place in the manufacturing sector in Japan, just after the Second World War. Although it is not a new concept for the public sector, systematic quality management started to appear after the 1990s mainly due to unwillingness to accept and adopt practices from the manufacturing sector. Today literature can show quite a lot of successful examples employing quality management in different public services such as hospitals (Lagrosen, 2000), higher education (Lagrosen, Seyyed-Hashemi, & Leitner, 2004), inland revenue (Kakouris & Meliou, 2010, 2011), and ministries (Hope, 2001).

Quality Dimensions and Criteria for Services

Undoubtedly, the focus of service quality is to satisfy customers' expectations. This in services introduces an additional burden in that the customers may interact with the organization's people, processes, physical elements,

technology, etc. Consequently, customer interaction directly influences quality of service as well as behavioral and organizational outcomes. Hence, it is essential to identify what factors will increase customer satisfaction taking also into consideration that different approaches will produce different kinds of relationship between ► **customer satisfaction** and service quality.

Often terms like "quality dimensions" are employed to describe service quality. The most widely reported set of service quality dimensions has been suggested by Parasuraman, Berry, and Zeithaml (1985), comprising of the following:

1. Tangibility – the appearance of physical objects which are necessary to deliver the service such as appearance of personnel, equipment, and facilities
2. Reliability – ability to perform the promised service reliably and correctly
3. Responsiveness – willingness to help customers and provide prompt service
4. Assurance – knowledge and courtesy of employees as well as their ability to inspire ► **trust** and confidence
5. Empathy – caring, ability to be approachable

Along these five dimensions Parasuraman et al. (1985) developed a 22-item instrument named SERVQUAL or RATER or "the gap" model of service which measures the gap between service users' perceptions and expectations which characterizes the service. SERVQUAL or its modified forms are considered as the most eminent instruments in attempting to measure the scale of quality in the service sector. In a different framework, Gronroos (2000) described service quality in terms of seven perceived criteria: professionalism and skills, attitudes and behavior, accessibility and flexibility, reliability and trustworthiness, service recovery, servscape, and reputation and credibility.

Although the disconfirmation approach is the most commonly used representation of customer satisfaction in the literature, there has also been considerable ongoing discussion concerning the rather standardized nature of dimensions. Also there is debate over whether the main intention of such instruments is to offer a true assessment of service quality (prognosis) or discover

particular motives for quality issues (diagnosis). Further, Brysland and Curry (2001) question the appropriateness of such approaches with respect to quality improvement in an NPM context. Some researchers advocate that service quality is a crucial antecedent to customer satisfaction (Nimako, 2012), while some others suggest the opposite that customer satisfaction may be an antecedent of service quality (Cronin & Taylor, 1992; Negi, 2009). Either way, one thing appears to come clear that the relationship between customer satisfaction and service quality is strong and vital to the overall success of any organization, either private or public.

Quality in New Public Management

One consequence of all these reforms that NPM has brought has been the reorientation of public services towards their consumers. This has brought with it pressure for better quality public services, from service users as their needs change and their expectations rise in respect of how well services can be performed (Williams & Saunders, 2008). As a result, service quality improvement has become a very real issue for NPM (Edvarsson & Enquist, 2006). Kelly (1998) suggests that “grounded in rational choice and public choice and containing elements of Total Quality Management (TQM), the NPM seeks to offer more efficient mechanisms for delivering goods and services and for raising governmental performance levels.” Mathiasen (1999) says that “TQM provides a systematic and quantified rationale for the NPM idea of government that both works better and costs less.” On the other hand, “soft” versions of TQM have more in common with NPM (due to the emphasis on performance management and HRM practices) than “hard” versions of TQM (that focus more on processes) and conclude that “that there is a considerable overlap between TQM and NPM.” In fact, Osborne and Gaebler (1993: 159) mentioned that public managers who are interested in effective management techniques are not deeply concerned with whether they are listed under TQM or NPM.

But what TQM principles could shift from the private sector, where they flourish, to the NPM

environment? Can the quality dimensions and criteria for services described above smoothly translated and adopted into the public institutions?

Demming along with Juran and Ishikawa, who are considered the founders of TQM, recommend five actions to accomplish the principles of TQM:

1. Explicit identification and measurement of customer requirements
2. Creation of supplier partnerships based on quality rather than on price
3. Use of cross-functional teams to identify and solve quality problems
4. Use of scientific methods to monitor performance and to identify points of high leverage for performance improvement
5. Use of process management heuristics to enhance team effectiveness

The *first principle* is a central feature of NPM, as the NPM and performance measurement initiatives in public sector have called for a focus on customer service and citizen satisfaction. One has to consider here the constraints that may be imposed in the public manager in responding to these requirements due to the lack of authority or the budget to do so.

The idea of an *open partnership* style relationship – where both parties share and benefit – is strongly associated with the TQM in the private sector. However, this idea seems to be a problem for NPM, as the administrative law procedures deny public managers the discretion needed to resemble TQM-like relationships with suppliers, similar to that of the private sector.

NPM encourages the use of *cross-functional teams*, new forms of structure, and a need to abandon the traditional hierarchical bureaucratic culture in which organizational members are often repressed. The example of one-stop service centers in public sector which represents a shift from department-task organization to citizen-risk organization has a lot in common with the TQM concept.

NPM places emphasis on developing *performance standards*, while scientific methods have been extensively used to measure performance in TQM environments; therefore, NPM is encouraging the use of scientific methods.

Classical methods such as cost of quality analysis and Pareto analysis can have wide applicability.

The three most commonly used *heuristic techniques* in TQM are flowcharts, brainstorming, and cause-and-effect diagrams. Flowcharts help to identify where bottlenecks are occurring, thus creating unnecessary delays and at the same time providing a focus for improvement. They expose complexity and help teams to target areas needed added value. Therefore, it is ideal to deal with problems that often occur in the public sector. Brainstorming is a technique used to recognize problem causes and generate ideas, while cause-and-effect diagram or fishbone diagram is a visual tool used for identifying all the possible causes related with a specific problem (output). Cause-and-effect diagram stimulates thinking during a brainstorming session of potential causes and helps team members to communicate within the team as well as with the rest of the organization. Both tools go well together with the three major forms of administrative decentralization attributed to NPM reforms: deconcentration, delegation, and devolution. The quality circles concept is another quality improvement initiative of TQM that has found space in NPM, originating in Japan from Ishikawa out of the “participative management” as a means of solving quality and production problems. Within the scope of NPM, it has been used in Botswana, where in 1993 the government initiated a quality improvement program in the public sector by creating work improvement teams, as well as in Mauritius (Hope, 2001).

Vinni (2007) considers that NPM shares several characteristics with TQM. In his research through a tentative comparison in ten areas, he demonstrated that the major components of NPM concept such as customer orientation (including internal customers), performance measurement, increased managerial freedom in resource and personnel management, investment in human and technological resources, and receptiveness to competition are (at least to some extent) represented in one or another version of (“reformed”) TQM. However, his research also reveals that there are also some divergent aspects in TQM and NPM. An important difference is

that NPM stresses outputs (results), which are hard to standardize, while TQM (especially its “hard” side) relies relatively more on processes. Hence, all the effort has to be placed with processes which have to be kept under surveillance by creating an organizational culture of employees’ commitment and quality through extensive training and education. NPM disaggregates and decentralizes the units to make them more manageable and to increase competition among them, thus creating “rivalry as a key to lower costs and better the performance” (Hood, 1991). TQM, on the other hand, encourages cooperation between organizational units and stakeholders. Dissimilarity comes from the top-level leadership which is quite important for TQM but not so important for NPM, since NPM does not stress the importance of managerial commitment.

Some argue that TQM and NPM seem to have several features in common; others believe that broad application of TQM elements to public sector does not promote the principles on which NPM is based upon, like equity, the rule of law, and public interest, while some others are highly critical of its possibilities (Connor, 1997). In that sense one can argue that despite the possible dissimilarities of the two concepts, different adaptations of TQM can certainly address different situations. This is in line with Swiss (1992) who considers that “TQM can have a useful role to play in government, but only if it is substantially modified to fit the public sector’s unique characteristics.”

Obviously there appears to be a lack of research conducted on the use of the ideas of TQM in the NPM, let alone when some critics argue that “TQM is a faddish concept created on a flimsy footing.” Quality is the strength of any organization and quality is an attitude of mind. Quality gains happen all the time in the private sector. Why not in the public sector?

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Service Quality of Hotels

► Hotel Service Quality

Service-Learning

► Community-University Partnership(s)

Services

- ▶ [Environmental Amenities and Disamenities](#)
- ▶ [Facilities](#)

Set Point Theory

- ▶ [Top-Down QOL Models](#)

Set-Point Theory

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Definition

The central claim of set-point theory is that adult SWB is stable because it depends on personality traits and other fixed genetic or partly genetic factors.

Description

The set-point theory of SWB is probably still the most influential theory in the field, although it has recently been called in question. Its influence and importance have been somewhat disguised by the tendency of researchers to give new labels to variations of the same theory. Set-point theory was labeled as such by Lykken and Tellegen (1996), who showed that the happiness ratings of identical twins were much more highly correlated than was the case for fraternal twins. Estimates of the genetic component of SWB have varied from about 30 % to almost 100 % (Lykken, 2000). A common estimate is 40–50 % (Lucas, 2008). Lykken and Tellegen's (1996) twin

studies led them to conclude that “trying to be happier may be as futile as trying to be taller”.

Theory development was initiated by Brickman and Campbell (1971) who formulated what they termed an *adaptation-level theory* of happiness. They postulated that people adapt or habituate quite rapidly to virtually all life events, so that their happiness levels return to “baseline” (their term for set-point) within a relatively short time. Brickman and Campbell (1978) claimed that even people who became paraplegics or won large sums in a lottery reverted to baseline within a year or two. A summary statement of this line of research is, “We are all on an hedonic treadmill”.

Easterlin (1974) provided strong support for adaptation (or set-point) theory by showing that adaptation occurs almost completely in the economic domain of life. When people become financially better off, they are temporarily happier, but soon habituate to their new circumstances, so that no lasting subjective benefit transpires. In framing the *Easterlin Paradox*, Easterlin theorized that the failure of economic growth to bring happiness gains is also due to the human tendency to make *social comparisons*. People compare themselves with their neighbors, the Jones's, and if the Jones's are becoming better off at the same rate as they are, they experience no gain in satisfaction.

Costa and McCrae (1980) gave further support to this line of theory by showing that the stable personality traits of extroversion (sociability) and neuroticism (emotional instability) are quite strongly correlated with SWB. Headey and Wearing (1989) then showed that there is some tendency for the same life events to keep happening to the same people, and that extroversion and neuroticism partly account for these repeating patterns. They formulated what they termed “dynamic equilibrium theory” to account for the stability of adult SWB and its linkages to both personality traits and life events.

Several researchers have focused on the finding that, as well as reporting fairly stable levels of SWB, most people answer well above the midpoint of survey scales (more happy or satisfied

than unhappy or dissatisfied). Michalos (1985) developed what he called “multiple discrepancies theory” to show that high levels of SWB are bolstered by the perception that most of us have that we lead more satisfying lives than our parents and than most of our peers. Nearly all of us feel that we are well above average, mathematically impossible as that may be. On somewhat similar lines, Cummins (1995) formulated “homeostatic theory” to highlight psychological mechanisms which enable most people to record high stable levels of SWB.

These various but overlapping lines of research could be said to have culminated in Lykken and Tellegen’s twin studies and their coining of the generally accepted label “set-point theory.” By the mid-1990s, it appeared that set-point theory had developed in a cumulative and convincing way to become the accepted *scientific paradigm* for the field of SWB (Kuhn, 1962).

However, in the last decade, set-point theory has come under attack. New evidence from long-running panel studies (i.e., studies in which the same respondents are interviewed year after year), notably the German Socio-Economic Panel, has shown that substantial minorities of people record long-term and apparently permanent changes in life satisfaction (Fujita & Diener, 2005; Headey, 2006, 2008a). Headey, Muffels, and Wagner (2010), using the German panel data, find that, contrary to the implications of set-point theory, long-term changes can be due to personal and economic choices. These choices relate to the personality of one’s long-term partner, social participation, preferred working hours, and “healthy lifestyle.” There is some evidence that choice of life goals/priorities can also make a long-term difference to happiness. People who prioritize family and altruistic or community goals appear to be happier than people who prioritize material and career goals (Diener & Seligman, 2004; Headey, 2008b). Easterlin (2005), whose previous work lent key support to set-point theory, has pointed out that, in contrast to the economic domain, life events and changes in the family and health domains sometimes appear to cause permanent changes in SWB.

In particular, people who suffer from chronic health problems (e.g., arthritis and type 2 diabetes) appear to become permanently less happy (see also Mehnert, Kraus, Nadler, & Boyd, 1990; Lucas, 2007).

There are two important groups of SWB researchers who, while tending to ignore mainstream psychology and set-point theory, have generated findings contrary to the theory. Some economists, during the last 20 years or so, have begun to treat measures of life satisfaction as direct measures of utility. They aim to find personal and policy choices which add to or reduce utility. Policy choices which appear to matter include low unemployment and an electoral system based on direct democracy (Frey & Stutzer, 2002; Frijters, Haisken-Denew, & Shields, 2004). Oswald and Wu (2010) showed that objective social and economic conditions in the 50 American states correlate about 0.6 at an aggregate level with measures of life satisfaction. This finding plainly runs counter to set-point theory, since the correlation could not be due to personality traits or other genetic factors.

Positive psychologists are a second group of researchers who tend to pursue their own agenda and ignore set-point theory. Positive psychologists do not accept the validity of standard measures of happiness, life satisfaction, and positive affect. They claim that a sustainably happy and good life must be based on a sense of purpose and meaning, and also on engagement/commitment, and not just on satisfaction (Seligman, Parks, & Steen, 2005). They have conducted many studies which appear to show the short-term benefits of pro-social commitments, acts of kindness, and what they term “character strengths” (Seligman et al., 2005; Lyubomirsky, Sheldon, & Schkade, 2005). It is perhaps fair comment that their studies to date have not demonstrated long-term gains in SWB.

In summary, set-point theory is now under attack as the paradigm theory of SWB. It is certainly the case that personality traits and other genetic factors account for considerable variance in SWB. But set-point theory is purely a theory of stability. It is a reasonable guess that, in future years, more research effort will be

focused on trying to find out more about what causes *change* in SWB, and particularly the personal and public policy choices which can make a difference.

Cross-References

- ▶ [Adaptation-Level Theory](#)
- ▶ [Easterlin Paradox](#)
- ▶ [Happiness](#)
- ▶ [Multiple Discrepancies Theory](#)
- ▶ [Positive Psychology](#)
- ▶ [Subjective Well-Being](#)

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Severity of Illness

- ▶ [Duke Severity of Illness Checklist](#)

Sex Differences

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Synonyms

[Gender differences \(in quality of life\)](#)

Definition

Sex differences in [▶ quality of life](#) refer to discrepancies of [▶ quality of life](#) between males and females. Important aspects of gender gaps include differences in mental health, physical health, and [▶ subjective well-being](#). Males tend to report a higher level of life satisfaction than females, while females usually express more happiness. Such gender patterns and gaps may vary across races, life courses, and cultures.

Description

Three aspects of [▶ quality of life](#) will be discussed here, including mental health, physical health, and [▶ subjective well-being](#) (perceived [▶ quality of life](#)).

Mental Health

Women consistently report greater negative emotions, such as distress and anxiety (McDonough & Walters, 2001) throughout their life span (Macintyre, Hunt, & Sweeting, 1996; Rieker & Bird, 2005).

Some researchers doubt this gender difference in negative emotions to be artifact of emotional expressiveness. Indeed, there is some evidence that men keep emotions to themselves more than women and that women express emotions more freely than men. However, after adjusting for emotional reserve and expressiveness, this gender difference is still significant (Mirowsky & Ross, 1995). Studies that minimized any

gender-related underreporting or exaggeration of symptoms yield the same conclusion: women are at higher risk of a depressive disorder (Nazroo, Edwards, & Brown, 1998).

Accounting for this gender difference in psychological distress, researchers are interested in whether biological factors or social factors play a more crucial role. By studying couples who had experienced at least one life-threatening event, Nazroo, Edwards, and Brown (1997), Nazroo et al. (1998) found that women were only at greater risk of depression following an event involving children, housing, and reproduction and only when there were clear gender differences in associated roles. In other words, biological sex difference may not be an adequate explanation, since women's risk of a depressive episode is not greater when she and her husband do not report clear differences in gender roles. It is more likely that women's higher risk of poor mental health is a consequence of gender differences in social roles and the stresses and expectations that go with them.

Physical Health

Differences between men and women in physical health are paradoxical. It is consistently found that women live longer than men, yet they have higher morbidity rates and a diminished [▶ quality of life](#) in later years (Read & Gorman, 2010). In order to obtain a more comprehensive understanding of the puzzling pattern of gender differences in health, researchers emphasize the importance of a synthesis of biological and social perspectives (Rieker & Bird, 2005).

How do we account for women's longer life expectancy, a pattern which is found in every developed country in the world? Biologically, women are more robust than men. For example, estrogen is associated with women's lower risk of heart disease (Owens, 2002). Other than biological gender difference, numerous studies show that men are more likely to engage in harmful and risky behaviors, including drinking, smoking, illegal drug use, drunk driving, and lack of seat belt and helmet use. They also have higher rates of suicide and homicide. Therefore, men experience more unintentional injuries than

women. Adjusting for behavioral measures tends to narrow the gap in mortality for men relative to women (Rieker & Bird, 2005).

Generally speaking, although women live longer, they spend more years in poorer health relative to men. Differences in access to resources contribute to gender differences in physical health. Women occupy fewer positions of power in most occupational categories, are more likely to work part-time and engage in unpaid or domestic work, and hence have a greater chance to become economically disadvantaged. These economically deprived women lack the resources which are essential for curing disease and maintaining good health (Read & Gorman, 2010). In addition to socioeconomic factors, women's greater risk of mental health problems is also associated with their physical health. To be more specific, female excess in psychological disorder accounts for women's higher odds of reporting certain chronic health problems, such as arthritis, headaches, and seasonal allergies. In contrast, men have higher rates of certain life-threatening conditions, including stroke, heart disease, and high blood pressure (Needham & Hill, 2010).

Subjective Well-Being (Happiness and Life Satisfaction)

Empirical studies provide mixed results for sex differences in ► [subjective well-being](#), which is often measured by self-reported levels of ► [happiness](#) and ► [life satisfaction](#). The gender difference in SWB is not only inconclusive but also difficult to explain.

Numerous studies show that women report greater ► [happiness](#) than men (Blanchflower & Oswald, 2004). Some suggest that women are happier than men before old age but less happy during old age, because women suffer more from widowhood and worse health later in life (Easterlin, 2003). This shift is confirmed by empirical analysis (Yang, 2008). However, the gender difference in ► [happiness](#) is small and not consistent across countries (Simon, 2008).

The ► [life satisfaction](#) gender difference is even more inconclusive. In one study, World Value Surveys asked respondents to rank their

feelings of satisfaction with their lives on a scale from 1 to 10. In most countries, more men than women reported “above average” satisfaction with their lives (OECD, 2005). If men are more satisfied with their lives, then their more advantageous gender status may be the explanation. Analyzing comparative data across countries, some scholars suggest that gender differences in SWB are influenced by unequal access to individual resources (such as education and income) and by indicators of macrostructural settings that describe the degree to which women are disadvantaged or excluded from societal resources and opportunity structures (Tesch-Romer, Motel-Klingebiel, & Tomasik, 2008). However, cross-country comparisons yield paradoxical results. Women report lower ► [life satisfaction](#) than men in the United Kingdom and Norway, where gender egalitarianism is more prevalent, and women report greater life satisfaction than men in Turkey and Korea, where there are more limitations on female life chances (OECD, 2005).

In short, men are more likely to report higher levels of ► [life satisfaction](#) in many countries, although women are happier than men; both issues lack conclusive answers. Further research is needed to explore possible explanations as well.

Cross-References

- [Gender and Health](#)
- [Happiness](#)
- [Life Satisfaction](#)
- [Quality of Life](#)
- [Sexual Satisfaction and Gender Differences](#)
- [Subjective Well-Being](#)

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Sex Offender(s)

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Synonyms

[Adult sex offender](#); [Convicted sex offender](#); [Male sex offender](#); [Sexual offender](#)

Definition

Sex offender is a generic term used here to classify a heterogeneous group of individuals convicted of committing a forcible or non-forcible sex or sex-related offense that is prohibited by applicable criminal law (i.e., state, federal, tribal, and/or military). While sex and sex-related offenses can vastly vary by type (e.g., *forcible v. non-forcible*; *contact v. noncontact*), class (e.g., *misdemeanor v. felony*), and sentencing guidelines (e.g., *probation v. prison*), any individual convicted of committing any sex-related criminal offense (to include all state, territory, tribal, federal, UCMJ, and certain foreign convictions) is considered a sex offender. As such, the offender is thereby subjected to federally mandated, and jurisdiction enacted, national sex offender registration acts (42 USC § 16901–16945). Sex offenders are presented with unique complications that can have a significant and direct impact upon their overall quality of life. Most notably, sex offenders are met with distinct challenges throughout the criminal adjudication process and sentencing, their mental health treatment during and after imprisonment, their reentry into the community during parole and/or probation, and their overall vilification by policymakers and the surrounding communities into which

Sex in Casual Relationships

► [Casual Sex and the Quality of Life](#)

the sex offenders are being released. While quality of life issues affect sex offenders globally, with many overlapping issues from one country to the next, the specific quality of life issues presented herein are limited to an American context.

Description

The term, *sex offender*, can technically be applied to any individual who engages in sex or sex-related behaviors that have been deemed unlawful by either local or federal jurisdictions. However, to be considered a sex offender by legal terms, an individual must not only be found to have committed a sex or sex-related offense, but the individual must also be successfully prosecuted and convicted of committing the alleged offense in a court of law. Once convicted of the ► [crime](#), a judge and/or jury determine(s) the severity and length of the sentence that the sex offender will serve for his crime (in some cases, a plea deal is reached before or during a trial, and this deal will strictly lay out the terms and conditions of the accepted sentence). The most common type of adjudicated sentences for sex offenses, particularly felony sex offenses (e.g., rape, sexual abuse of a minor, and distribution of child pornography), involves some combination of probation, jail, prison, and/or parole. The most widely heard public sentiment is that sex offenders should be locked in prison and never allowed to leave due to their publically perceived inability to be rehabilitated in any way by any means. The reality, however, is that the overwhelming majority of sex offenders will eventually end up back in the community on either probation or parole, and it is the extremely rare case that a sex offender is ever imprisoned (through either criminal or civil commitment) for the duration of their life. Therefore, no matter what position one might take on the treatment and/or incarceration of sexual offenders, there is one issue that is a relative certainty: Eventually, after serving their prison sentence, the overwhelming majority of sexual offenders who

were once incarcerated for their crimes will eventually be right back out in the community upon their release (Robertiello & Terry, 2007).

As a result, removing sex offenders from society is not a realistic long-term solution. At any given time, there are approximately 900,000 sex offenders in the US criminal justice system, and only 350,000 (40 %) of them are removed from society via jail, prison, or state mental health hospital. The remaining 550,000 (60 %) sex offenders in the criminal justice system are managed in the community through parole and probation services. These numbers underscore the importance for individual communities to research their current resources allocated toward rehabilitating sex offenders both in prison and once they are released into the community under the supervision of parole and probation. If it were determined to be a community's collective hope of increasing an offender's overall quality of life upon reentry into the community, it would appear that a relationship based upon a mutual responsibility toward a rehabilitative goal for the offender would be prudent. At a minimum, responsibilities would need to be shared via meaningful partnerships between correctional, community supervision, law enforcement, mental health, social services, victim advocacy, educational and vocational, employment, and housing entities, as well as the community at large (CSOM).

Criminal Sentencing

Sex offense is a legal category that encompasses a wide array of unlawful acts, covering both misdemeanors and felonies, which can range from behaviors such as indecent exposure while urinating in public to rape. The violent sexual offender, particularly in North American society, has unfortunately become increasingly sensationalized as the most visible segment of the much larger totality of the overall sex-offending population. The primary vehicle that has fueled this spiral of attention appears to be the proliferation of dramatized media coverage that consistently portrays the images of the more ghastly, violent sexual offenses committed

(Robertiello & Terry, 2007). However, these particular types of offenses should serve as just *examples* of potential sex offenses at the extreme end of an array of sex-offending behavior rather than serve as defining characteristics for the entire category of offenses that are committed by sex offenders. There are even a number of sex offenses that do not require any physical force or even physical contact between a victim and the offender (e.g., owning and/or distributing child pornography, indecent exposure, solicitation, and pandering obscenity) – this should not be misconstrued, however, to assume that any sex offense that does not involve force or contact is therefore a *victimless crime*.

Sex offenses are criminal offenses, and therefore, sex offenders are *primarily* subject to criminal punishment – though sex offenders can be sued in civil court as well – and its commonly accepted fundamental theories of criminal justice: *Punishment* (the sex offender is punished for the crime, also known as *just deserts*), *retribution* (the sex offender receives punishment for the sake of the victim, also known as *an eye for an eye*), *deterrence* (deters sex offenders and potential sex offenders from committing similar criminal acts in the future based upon the consequence of receiving equal punishment), *removal* (remove the sex offender from society so that he is physically unable to commit any crime again), and *rehabilitation* (reform the sex offender while in custody of the legal system so that upon release, the criminal will not commit offense again). The criminal punishments that are currently handed out to sex offenders arguably meet each of these theories of criminal justice to varying degrees. While removal is only a temporary, albeit effective, solution for the vast majority of sex offender cases, none of the other tenets of criminal justice alone prove to be an effective long-term solution for a sex offender's successful reentry into the community after serving his time. While neither punishment nor rehabilitation *alone* appears to be sufficient to manage sex offenders upon reentry into the community, punishment *combined* with ongoing rehabilitation services (e.g., therapy,

specially trained parole/probation staff, adequate living conditions, and accessibility to a job) does show promise in reducing the likelihood of reoffending. Unfortunately, largely underfunded or poorly developed rehabilitative treatment programs for sex offenders fail to adequately prepare the offender – or the community into which the offender will be released – for successful reentry into the community.

Treatment

Unfortunately, psychological rehabilitation of sex offenders while in prison or while on parole and probation does not show strong and consistent effects across different prison and jail settings. Most of the reasons for this are due to poorly structured psychological and psychiatric treatment for offenders, inconsistent quality of treatment for offenders, and a lack of empirically supported treatments (ESTs) being implemented within any of these settings. While there has been some improvement in establishing ESTs designed specifically for sex offenders and implemented within prisons and through community management services, this is an ongoing process that does not currently serve as an immediate solution for reducing the occurrence of sex offenses. Often, so-called *sex offender treatment programs* are designed as a knee-jerk response to a wholly societal issue (sexual offenders), giving short shrift to researching, developing, and implementing effective treatment programs for the sex offender population (Miller, 2003). The minimal effectiveness of these treatment programs is exemplified through the limited time, attention, and other resources contributed by the county and/or state in supporting specialized sex offender programs. There are several contributing factors that appear to support the continued overall ineffectiveness of, if not at times apathy toward, many of the existing programs: (1) sex offenders inspire such little sympathy from the general public – on a completely societal level – that there is minimal reimbursement provided for the treatment providers of the sex offender population at state, federal, or managed care levels and (2) little research is even conducted in the area of sex offender treatment

due to a general lack of funding for any projects involving sex offenders (Miller, 2003).

Since 2003, the majority of studies performed on treatments and treatment components have continually found cognitive-behavioral therapy (CBT) to likely have the greatest impact on reducing the rate of sexual reoffending, specifically targeting attitudes that support sexual offending, anger management, victim empathy, deviant sexual arousal, and relapse prevention (Yates, 2003). Broad cognitive concepts have also been targeted and studied to determine the specific components of CBT that appear to have the largest impact on reducing recidivism. These studies found that generalized cognitive factors such as the management of emotional states, management of anger, intimacy deficits, and risk self-management were of most use (Marshall, Anderson, & Fernandez, 1999). Additionally, CBT appears to be a particularly effective treatment for sex offender relapse prevention due to its inherent focus on the cognitive-behavioral chains (a sequence of cognitions and behaviors that culminate in the engagement of a sex offense) that exist for the offender. This process is also beneficial for identifying high-risk situations (situations in which the offender is most likely to reoffend). Once the offender's high-risk situations have been identified, adequate coping responses can then be learned and implemented as an alternative to the lapse of cognitions that might otherwise arise in the high-risk situation and lead to sexual reoffending.

Sex Offenders and Mental Health

There is a growing body of research that tends to link significant ► [negative affect](#) and major depression to sex offending. In a study performed by Hanson and Harris (2000), it was found that levels of negative affect were significantly elevated just prior to sexual offending. In an earlier study, Laws (1995) identified that a negative emotional state and interpersonal conflict were high-risk factors for sexual offender relapse. Adding to the link of negative affect and sex offending are numerous studies showing that when in a negative

► [mood](#), sex offenders are more likely to choose a coping method that involves sexual offending (Proulx, McKibben, & Lusignan, 1996). Such a coping method aids in the alleviation of negative mood, thereby, also increasing positive mood. This type of behavior establishes a reinforcement schedule that teaches the offender to sexually offend whenever he is feeling an undesirable level of negative affectivity. Proeve and Howells (2002) consider this superficial, maladaptive attempt at emotion regulation as a cyclical model that shows that depressed mood may not only serve as a precipitant to committing a sexual offense but that the shame and guilt experienced after committing the sexual offense can send the offender even further into depression. Additionally, studies consistently show that sex offenders tend to demonstrate high rates of psychopathy (Hare, 1999; Porter et al., 2000).

Sex Offender Risk Assessment and Recidivism

The primary goal of rehabilitation for a sex offender is to minimize his chances of reoffending and thereby lower the overall recidivism rate. While it is portrayed quite commonly that the recidivism rate of sexual offenders is extremely high, this is actually not the case. Across 61 recidivism studies with a sample size of almost 24,000 convicted sex offenders, only approximately 13 % would recidivate with a new sexual offense within 4–5 years after release from prison (Hanson & Bussiere, 1998). A second study showed the recidivism rate for untreated sexual offenders to be about 20 % (Hanson et al., 2002). However, studies have shown that as time increases to 20 years and beyond, following the release of a sexual offender, the sex offense recidivism rates can increase to 30 % or even 40 %. These numbers become especially alarming when considering the current prison population is on the rise, with 25 % of those incarcerated being sex offenders (Brooks-Gordon, Bilby, & Wells, 2006). It would be remiss, however, to not distinctly point out that the observed recidivism rates are obviously inherently lower than actual reoffending rates since not all reoffenses end in rearrest.

Reentry into the Community

For a convicted sex offender, his process of reintegration into the community could come about after a brief stay in jail or after a long prison sentence has been completed. There are a significant number of factors that can complicate a sex offender's reintegration into the community including the type of crime committed, number of victims, length of offender's incarceration, and quality of the offender's ► [social support](#) system. Every offender has unique challenges to face, thus, reentry plans need to be tailored to the individual and his particular circumstances. Life for a sex offender who committed a lower-level sex offense, possesses a skill set that is in high occupational demand, and maintains a strong, integrated social support system within his community will provide different types of challenges than life for an offender who committed a series of higher-level sex offenses, possesses few or no marketable occupational skills, and lacks any semblance of a social support within his community.

The best-case scenario is that the person was properly assessed while incarcerated, medicated if necessary, and given *appropriate* psychological treatment to increase appropriate sexual arousal, decrease deviant sexual arousal, and teach skills necessary to maintain an appropriate relationship if one is desired. However, jails and prisons are often not equipped to assess and treat sex offenders, and/or the budgets have been cut so much that only the bare minimum is provided. Offenders are often released into the community without the requisite skills to reenter the community and be successful (Aos, Phipps, Barnosi, & Lieb, 2006). Given that many, if not most, sex offenders will be released into the community at some point, it is important that these individuals are able to adjust to life on the outside and are successful in staying out of prison. Perhaps the worst-case scenario is the situation in which an offender spent his entire sentence in prison with no time off for good behavior. These individuals, often referred to as *max outs*, receive no or little follow-up care once released. They are required to register in their community as a sex offender

but are not required to report to a probation or parole officer or seek treatment. Ideally, a continuum of care should be provided for the offender so that the treating clinicians (medical and psychological) and law enforcement agencies will receive records to indicate what has been done, what is currently being done, and any suggestions for future care. It is important that the records, such as test scores, progress notes and reports can be, *and are*, released in a timely and efficient manner.

Because of the many issues faced by sex offenders throughout the process of being released back into the community during reentry after incarceration, The Center for Sex Offender Management (CSOM, 2007) has created an extensive guide called the Comprehensive Assessment Protocol of Sex Offender Management Practice that provides a coordinated and integrated approach to sex offender management in the community. The manual contains known gaps that exist in a wide variety of local, state, and federal jurisdictions that could serve as barriers to successful reintegration of the offender back into the community. While each jurisdiction will prove to be unique in its specific needs, as well as barriers present, CSOM provides an array of examples and suggestions to help any jurisdiction begin to narrow its gaps between sex offender incarceration and successful sex offender reentry into the community. Some examples of gaps and barriers that are commonly found are a lack of job training/employment opportunities, lack of housing or lack of affordable housing, lack of health/mental health care, family reunification issues, ► [transportation](#), and finances.

Sex offenders are often segregated in prison from other inmates for safety issues so that the only associates of a sex offender are other sex offenders. Offenders once convicted may have been shunned by their families and former friends and have no support systems upon release. Parole and probation officers may restrict association with convicted felons upon release so that offenders cannot have any contact with those they met in prison. Offenders may not be allowed to live with their families for a variety of reasons

(e.g., the offender's victim living in the home; other minor children living in the home; the home located too close to a restricted area such as a playground, licensed daycare, or a school; or the family may not want the offender living there). Further, a partner of a released offender is often forced to make a decision of whether to allow the offender back into the home at the expense of having her children removed from the home. Additionally, offenders may have a difficult time obtaining employment and/or even the required skills to even gainfully reenter the job market. There are often restrictions on where and with whom sex offenders can work. Offenders are also often not allowed to use the Internet or even use a computer, making the act of locating a job or completing an employment application difficult. Employers may not be willing to risk hiring a convicted sex offender for many reasons (e.g., may fear other employees will be in danger and may not want their business to be boycotted). Additionally, depending on the skill set of the offender and how long the person was incarcerated, he may not be equipped to compete in the day's job market. Offenders are often required to find a job as a condition of parole or probation so they have to take whatever work they can find. The jobs that are available often do not pay well, do not offer benefits, and may not be flexible in terms of the offender needing to take time off for psychological/medical care and parole/probation officer appointments. Offenders at times choose not to disclose their convictions to their employers, but they then face termination upon the truth being revealed.

Transportation may be an issue depending on where the offender is able to live and work. The offender may need to pass by a restricted area (school, daycare, or playground) in order to get from his residence to the bus stop or work. This could require a circuitous route around these restricted areas, requiring additional time to navigate the community perhaps during inclement weather. The schedules of the mass transit may not be convenient and could stop running prior to the needs of the offender. Additionally, the cost of these services can limit use.

The jobs offenders obtain may not provide health-care benefits to cover their medical and psychological care. Therefore, these services may need to be procured from community agencies that are very busy and require one to wait to be seen or the services may need to be paid for out of pocket by the offender. Offenders who cannot pay for their medications or therapy appointments may run afoul with their probation officers for noncompliance and receive a technical violation, which could include a jail sentence.

Additionally, several jurisdictions have parole and probation agents who specialize in supervising sex offenders. These agents generally receive specialized training to manage a sex offender population, and the agents often carry a reduced caseload to allow for stricter offender monitoring. This type of a focused, sex offender-specific management structure promotes a greater overall collaborative approach to sex offender management while promoting the inclusive efforts of a multidisciplinary team. Team meetings are regularly held in which the treatment provider, a victim advocate, the parole/probation agent, and a polygraph examiner meet to share information and plan the offender's ongoing care and needs.

Sex Offender Registry

The Sex Offender Registration and Notification Act (SORNA) provides a comprehensive set of minimum standards for sex offender registration and notification. The sex offender registry enables any citizen to search online (including via customized mobile device applications) for the identity and location of known sex offenders. Offenders must comply with the requirements of the registry that include regular updates and notifications of any address change. Offenders are also required to pay a fee when they register and then again when there are periodic updates. Citizens can check their particular locale to see who if any sex offenders reside in their ► [neighborhood](#), and address, photographic, and identifying information is also commonly included. The registry, while intended to make communities safer, aware, and vigilant, can ultimately pose a risk to any sex offenders

whose names are on the registry. At times, informed neighbors have taken to protesting an offender living in an area. Known protests have ranged from taunts and/or threats to physical attacks. At times, *misinformed* neighbors have even taken to aggravating innocent people who happened to be living in a home where a sex offender also lives or lived. The registries are being updated to provide more specific information about the crimes that were committed by the offender; however, in many instances, the degree of felony is all that is stated without any specifics. This lack of information could raise concern beyond that that is necessary, whereby a so-called *Romeo and Juliet* offender – an 18-year-old boy who has sex with a 15-year-old girl friend – may be confused for a repeat offender who uses force with child victims. New legislation is being enacted to provide more information on the sex offender registry to protect the community but to also protect the offender as well.

Sexually Violent Predator Act (SVPA)/ Sexually Dangerous Person (SDP)

Sexually violent predator laws (SVPL) provide the state or federal government the ability to confine – indefinitely – sex offenders who have completed their previously imposed sentence if the offender is deemed to have a *mental abnormality* or personality disorder that would predispose them to likely engage in future sex offenses if they were released from custody. Under the enactment of these laws, sex offenders are given an assessment prior to their release from prison for their criminal sex offense conviction. If the offender is deemed sufficiently dangerous, he can be civilly committed to a psychiatric facility upon his release from prison. Once transferred to the psychiatric facility, the offender receives continued treatment while also continuing to be detained for greater public safety issues (i.e., removal from society). While some states do retain the right to civilly commit adjudicated sex offenders to an inpatient psychiatric facility, one state (Texas) only enforces an intensive outpatient civil commitment, whereby the offender is released into the community but is strictly

tracked and monitored while continuing to receive treatment. To date, 20 US states have successfully passed sexually violent predator legislation. The specific requirements for civil commitment of sex offenders differ from state to state; however, the criteria is generally composed of some iteration of the following four criteria: (1) *commitment of a sexually violent offense*, (2) *diagnosis of a mental abnormality or personality disorder that predisposes the offender to engage in sexually violent behavior*, (3) *the predisposition causes the offender to have significant difficulty controlling the sexually violent behavior*, and (4) *the offender is likely to commit sexually violent acts in the future if he is not otherwise detained to a mental health facility*. While the first SVPL was passed in Washington State in 1990, the US Supreme Court upheld the constitutionality of SVPA in 1997 in the landmark case of *Kansas v. Hendricks*. In 2010, the US Supreme Court also upheld the constitutionality of civil commitment for federal prisoners in *USA v. Comstock*.

As a result, the states that have passed SVPA legislation have the relative unilateral right – although there are technically provisions in place for offenders to appeal the state's decision – to civilly commit individuals whom the state believes are a danger to others. Because the offender has already been convicted of committing a sexual offense(s) and has been deemed to be a high risk for continued offending if released into the community, the state acts upon its obligation to protect its citizenry. Once civilly committed, a sex offender is given periodic risk assessments – specific duration between, and frequency of, assessments is determined by legislation passed within the particular jurisdiction – to determine if he is still a threat to society. An offender who may ultimately be able to modify his cognitions and/or offending behavior but was not previously motivated to participate in prison treatment programs for whatever reason(s) may become more motivated during this subsequent treatment phase upon realizing that his freedom is dependent upon successful completion of the civil commitment treatment

program(s). However, an offender who proves he cannot or will not modify his cognitions and/or offending behavior could potentially be housed in the psychiatric facility for the remainder of his life.

Currently, there are over 4,500 sex offenders placed in secure civil commitment facilities nationwide in the USA (Gookin, 2007). Across the 20 states that have passed legislation for indefinite civil commitment for the sex-offending population, there remains a significant trend toward offenders never being fully discharged to the community. Owing partially to this trend, some states are reluctant to enact civil commitment procedures due to the highly inflated associated costs for housing an offender who is civilly committed versus housing an inmate. Depending upon the state in question, the average yearly cost of civil commitment per person can range from approximately two to almost seven times the amount of the average yearly per inmate cost of prison. Some states, therefore, are moving to indeterminate sentencing for sex offenders whereby being released from prison is dependent upon successful rehabilitation.

Conclusion

While policymakers, the media, and the general public have understandably made it clear that their tolerance for sex offenders is nonexistent, such voicing has done little to curb the occurrences of sex offenses. Sex offenders currently comprise approximately 25 % of the total US prison population, and of those offenders, the overwhelming majority of them will eventually be released into the community. Most sentences for sex offenses can be served out either through probation or served in prison and followed by parole. Due to the exorbitant costs incurred under civil commitment legislation, permanent removal from society remains a remote option for nearly all sex offenders involved in the justice system.

Because of these realities, it is necessary that sex offenders receive treatment both during imprisonment as well as throughout the parole process as the offenders attempt to successfully

reenter the community. Successful reentry requires rehabilitative support through ongoing assessments and treatment protocols that are cost-efficient as well as effective. This will necessarily involve collaboration between the criminal justice system, policymakers, therapists, offenders, and the surrounding community.

Cross-References

- ▶ [Cognition](#)
- ▶ [Crime](#)
- ▶ [Justice](#)
- ▶ [Mood](#)
- ▶ [Negative Affect](#)
- ▶ [Neighborhood](#)
- ▶ [Social Support](#)
- ▶ [Transportation](#)

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Sex Segregation of Occupations

► Occupational Sex Segregation

Sex Therapy

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Synonyms

Cognitive-behavioral sex therapy; Psychosexual therapy

Definition

Sex therapy is a form of psychotherapy aimed at the treatment of sexual dysfunctions or other sexual problems.

Description

Sex therapy is distinguished from other forms of psychotherapy by the target of intervention, namely, sexual problems. Unlike other forms of psychotherapy, sex therapy does not have a unified underlying theory or set of practices (Binik & Meana, 2009). Therefore, sex therapy might encompass psychodynamic, cognitive-behavioral, existential, interpersonal, and other psychotherapeutic approaches.

Sex therapy began as a set of interventions directed at the resolution of a few specific and well-defined sexual dysfunctions (Masters & Johnson, 1970). Based on the model of the human sexual response cycle proposed by Masters and Johnson (1966) and revised by Kaplan (1977) and Lief (1977), sexual dysfunctions were distinguished by their disruption of a particular phase of the cycle. Thus, disorders of ► [desire](#) (little or no desire for sex), arousal (erection problems in men and arousal and lubrication difficulties in women), and orgasm (rapid or delayed ejaculation for men, inability to experience orgasm some or all of the time for women), with the addition of genital pain disorders (experienced primarily by women and interfering with vaginal penetration), became the foci of sex therapy.

As it was originally developed by Masters and Johnson (1970), sex therapy was based on the premise that ► [anxiety](#) is at the root of most problems of ► [sexual functioning](#). Performance anxiety marked by *spectatoring* (in which the sufferer takes a disembodied and worried perspective regarding the adequacy of his/her sexual functioning) was thought to interfere with the focus and attention necessary to develop arousal and respond to sexual stimulation. Consequently, Masters and Johnson designed a series of exercises for couples collectively called *sensate focus* involving gradual increments in the level of

sexual stimulation given and received—from sensual and nongenital touching to overt sexual and genital stimulation including intercourse. At each level of sensate focus, specific instructions are given to help foster and maintain focus, enjoyment, and arousal. At the same time, the couple is given directions and guidance regarding communication so that adequate sexual stimulation is offered and experienced. During most stages of sensate focus, there is a ban on intercourse, mitigating the anxiety producing “demands” of sexual performance (e.g., erection, lubrication, orgasm) that would otherwise detract from sexual pleasure. Once a certain level of arousal and sexual response is achieved, sex therapy techniques specific to individual dysfunctions are utilized. These include stop-start or squeeze technique for premature ejaculation, masturbatory retraining for delayed ejaculation and female anorgasmia, vaginal dilation for genital pain disorders (e.g., ► [dyspareunia](#) and vaginismus) in women, and sexual script revisions and masturbation exercises for erectile dysfunction (Binik & Hall, *in press*). These exercises became the mainstays of sex therapy, which was originally administered in an intensive residential setting to heterosexual couples by male and female co-therapist teams. Practical considerations, along with a lack of evidence that residential and co-therapy teams improved therapeutic outcome, led to treatment modifications. Helen Singer Kaplan, a psychoanalytically trained psychiatrist, advocated for the use of psychoanalytic concepts and techniques to be utilized when behaviorally oriented treatment of sexual problems was not effective. Today, sex therapy may incorporate treatment principles and techniques from a wide array of theoretical orientations (e.g., psychodynamic, existential, humanistic, cognitive-behavioral). Sex therapy is almost exclusively practiced on an outpatient basis by a sole therapist, who may treat an individual as well as a couple. Sex therapy has also become more inclusive of gay, lesbian, bisexual, queer, questioning, and transgender clients.

Similarly, the focus of sex therapy has broadened beyond the basic sexual dysfunctions. Treatment of sexual problems, such as

a discrepancy in the level of ► [desire](#) experienced by a couple and dissatisfaction with the quality of the sexual interaction and concerns about ► [sexual orientation](#), gender identity, ► [body image](#), and sexually transmitted infections along with sexual issues related to illness, ► [disability](#), infertility, or the social stigma of membership in a sexual minority bring people to sex therapy. The rise of the popularized diagnosis of sexual addiction or sexual compulsivity is also considered in the purview of sex therapy. To a large extent, the development of sex therapy has followed both research and social changes in what is considered normal, ideal, or problematic sexuality.

Human sexuality is now known to be much more complex than originally described by the linear model of Masters and Johnson and is understood to be a biopsychosocial phenomenon with the biological, psychological, and social/cultural aspects clearly interrelated (Bancroft, 2009). The idea that men and women had similar if not identical sexual response cycles has given way under evidence that men and women respond differently (Leiblum, 2007). Current conceptualizations of the sexual dysfunctions reflect this change, and the distinction between desire and arousal problems for women is being collapsed into a single category of sexual interest and arousal disorder (DSM-5.org). Other models of human sexuality have arisen to account for both normative and dysfunctional sexuality and reflect the empirical evidence that fundamental differences exist in the way men and women respond sexually. Basson’s circular model of sexual response is perhaps most often applied to the understanding of female sexuality. This model proposes multiple pathways for desire and arousal and therefore multiple pathways for intervention, including biological, interpersonal, and intrapersonal factors (Basson, 2007). The New View is a model that grew out of feminist psychology (Tiefer, 2012); this model emphasizes the social and societal factors responsible for sexual problems and suggests that some sexual problems are in reality adaptive ways of responding. This approach encourages sex therapy to move beyond behavioral exercises

directed at sexual function to address etiological factors such as ► [stress](#) from a burdensome workload or conflicts between family of origin and mainstream cultural sexual values. Recognizing the unique contribution of culture to sex and sexual problems has resulted in changes to the practice of sex therapy (Hall & Graham, 2012). These changes include incorporating ► [spirituality](#) and religious and other traditional practices as well as extended family networks into the process of sex therapy. The advent of sexual medicine, following the success of PDE-5 inhibitors (Viagra, Cialis, Levitra) in treating some cases of erectile dysfunction, has led to a collaborative or multidisciplinary approach to the treatment of sexual problems, with sex therapy being but one, albeit important, component.

Although abundant treatment outcome data are lacking, the early high success rates of Masters and Johnson have not since been replicated. Yet, sex therapy remains a well-regarded treatment option and part of a multidisciplinary approach to the treatment of sexual problems. This multidisciplinary is reflected by the diverse professionals who practice sex therapy. Most are professionally trained first in disciplines such as psychology, medicine, counseling, or social work. They bring their professional allegiances and expertise to the field of sex therapy. Professional associations are reflective of this interdisciplinarity, and the importance of culture is seen in the increasingly global and international nature of the organizations. Many of these professional societies are based in North America with an international membership (Society for Sex Therapy and Research, SSTAR; International Society for the Study of Women's Sexual Health, ISSWSH; American Association of Sex Educators, Counselors and Therapists, AASECT) while others, more specifically the World Association for Sexual Health are truly global, with branches in many parts of the world.

Although sex therapy is considered a subspecialty of the practice of psychotherapy, it is based on many of the same principles as other psychotherapeutic approaches. It is perhaps the knowledge of human sexuality and the ability to speak directly about sensitive sexual issues and to

intervene in the sexual lives of clients and patients that distinguish the practice and practitioners of sex therapy. The changing social, political, and scientific landscape surrounding human sexuality ensures that sex therapy will continue to be a dynamic rather than a static psychotherapeutic approach to the treatment of sexual dysfunctions, problems, and concerns.

Cross-References

- [Anxiety](#)
- [Anxiety Disorders](#)
- [Body Image](#)
- [Dating Couples' Sexual Desire Discrepancies](#)
- [Disability](#)
- [Dyspareunia](#)
- [Sexual Arousal Disorder](#)
- [Sexual Dysfunction\(s\)](#)
- [Sexual Functioning](#)
- [Sexual Interest/Arousal Disorder \(SIAD\)](#)
- [Sexual Orientation](#)
- [Sexual Satisfaction](#)
- [Spirituality](#)
- [Stress](#)

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Sex Workers

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Synonyms

SWs

Definition

The term “sex workers” is used to refer to individuals who engage in sex work. Sex work can broadly be defined as the exchange of money or goods for sexual services, either regularly or occasionally, involving female, male, and transgender individuals.

Description

History of the Term “Sex Worker”

Sex work has arguably existed in some form in most countries for so long that it is often referred to as the “world’s oldest profession.” Involvement in sex work activities has been highly stigmatized throughout history, with individuals in sex work pushed to the margins of society. The term “sex worker” is widely attributed to sex work activist Carol Leigh in the 1970s, who coined the term as part of a growing movement

to help destigmatize sex work (Leigh, 2004). The term has since been adopted by non-governmental and community-based organizations, academics, and government and policy agencies, including United Nations bodies and the World Health Organization (WHO).

The terms “sex work” and “sex worker” can be used to cover a very diverse range of transactions, and there is substantial heterogeneity among sex workers and their sex work environments (i.e., the places of sex work, including where sex workers solicit for or provide sexual services to clients). The term “sex worker” brings together a broad array of individuals who work within the sex industry, including women, men, and transgender individuals, those who exchange direct sexual services (e.g., vaginal, oral sex), and those who exchange more indirect sexual services (e.g., strippers, dancers, escorts, porn performers/actors, nude models, professional dominatrices, erotic massage providers, phone sex operators) within the context of commercial transactions. The term “sex work” was adopted to refer to exchange between consensual adults.

In some cases, individuals may be forced or coerced into providing sexual services through violence or debt bondage (defined as trafficking), or forcibly moved within or across countries and continents for the purposes of sexual exploitation; these circumstances are not considered sex work (Guidance Note on HIV and Sex Work, 2009) and therefore not included in this entry. Sex workers themselves may move for economic, social, or political reasons both within and across borders, with a growing number of migrant sex workers in many regions. Some individuals sometimes engage in sex work in the context of extreme poverty and financial need, and/or exchange sex for basic subsistence (e.g., food, water, shelter, protection). Other individuals engage in what is commonly referred to as “transactional sex,” which occurs when something (primarily non-monetary goods, shelter, gifts, or services) is informally provided in exchange for sexual services, but not within a formal or professional commercial transaction. Transactional sex is typically not considered sex work and is not included as such in this entry. However, in some

cases, there may be some overlap between sex work for subsistent need and transactional sex.

Discussion

Legislative Approaches to Sex Work

Legislative approaches to sex work vary substantially across and within geographic settings. In the majority of countries, some or all aspects of sex work are criminalized and sex workers have few legal protections.

Broadly, there are several main legislative approaches to sex work. Sex work can be criminalized, where the buying and selling of sex itself is illegal (e.g., China, many African and Muslim countries), although it is still practiced in some if not all settings (Global Commission on HIV and the Law: Risks, Rights and Health, 2012). Sex work can be quasi-criminalized (e.g., Canada, with the exception of the province of Ontario at the time of publication; India; United Kingdom), where some but not all aspects of sex work are criminalized (Global Commission on HIV and the Law: Risks, Rights and Health; Hindle, Barnett, & Casavant, 2008); this framework effectively makes the practice of sex work nearly impossible without breaking laws. For example, in Canada, sex workers are prohibited from communicating in public for the purposes of prostitution (i.e., the “communicating law”), from living off the avails of prostitution, and from keeping or frequenting a common bawdy house (i.e., brothel; Global Commission on HIV and the Law: Risks, Rights and Health, 2012; Hindle et al., 2008).

In a smaller number of countries, sex work is either decriminalized (e.g., criminal laws prohibiting sex work are removed) or legalized (e.g., sex work is legal and regulated, often in specific contexts; Global Commission on HIV and the Law: Risks, Rights and Health, 2012; Hindle et al., 2008). For example, in New Zealand, sex work has been decriminalized since 2003, as in Senegal, parts of Australia, and, at the time of publication the province of Ontario in Canada. In a decriminalized environment, sex work is regulated by the same laws that

regulate other businesses (e.g., tax, employment laws, occupational health, and safety standards). In contrast, in a legalized environment (e.g., where sex work is legal in brothels, such as Victoria, Australia, and Nevada, USA), sex workers and business owners face substantial regulations and licensing not applied to other businesses (e.g., mandatory HIV/STI testing, requiring sex workers to carry permits (Global Commission on HIV and the Law: Risks, Rights and Health, 2012; Hindle et al., 2008)).

Sex Work Environments

Increasing research has suggested that the work environments of sex workers are diverse. Besides sex workers themselves, madams, pimps, or brothel owners may be present in a sex work environment. Places where sex workers solicit and provide sexual services to clients are context-specific and have included streets or public places (e.g., bus stands, train stations, roadsides, tea stands, truck stops, agriculture-based spaces), formal sex work venues (e.g., brothels, micro-brothels, bars, massage parlors), informal indoor settings (e.g., hotels, homes), and places in which women work independently or self-advertise (e.g., escort). More recently, due to rising availability and use of electronic and mobile technology, cell phones and the Internet have been identified as replacing other “places” where clients are solicited, and in some cases where services are provided (e.g., phone sex).

Gaps in Health, Safety, and Well-Being of Sex Workers

Criminalization and Regulation of Sex Work

In settings where sex work is criminalized or quasi-criminalized, punitive sanctions and enforcement-based policing practices relating to sex work are common. Sex workers may experience police physical violence, sexual assault or rape, forced or coerced sex, harassment (with or without arrest), threat of arrest, forced disclosure of sex work, detainment, arrests, and fines (Global Commission on HIV and the Law: Risks, Rights and Health, 2012). Condoms are sometimes confiscated by police as part of harassment tactics and used as evidence to identify

individuals as sex workers (Crago, 2009). Police harassment and fear of arrest often result in enforced displacement of sex workers who work indoors and outdoors, as well as police raids and crackdowns on indoor settings (e.g., brothels, massage parlors; Shannon & Csete, 2010), placing sex workers further away from health, harm reduction, and safety resources and at higher risk for violence (Shannon & Csete). In settings where sex work is legalized, sex workers can face fines or punitive sanctions when clients do not comply with condom use regulations or for not buying licenses (Global Commission on HIV and the Law: Risks, Rights and Health, 2012). Sex workers have also been subject to mandatory HIV/STI testing (Global Commission on HIV and the Law: Risks, Rights and Health), which can further marginalize sex workers, and foster underground sex work markets where workers are highly vulnerable to violence, HIV/STIs, and reduced health access (Global Commission on HIV and the Law: Risks, Rights and Health).

HIV and STIs

A recent meta-analysis and systematic review compared HIV burden among sex workers in 50 low- and middle-income countries with that of other women of reproductive age. The study found a disproportionately high burden of HIV among sex workers compared to other women (Baral et al., 2012). STI prevalence is similarly high among sex workers globally (Strathdee et al., 2011).

Male condom use is the primary means with which HIV and other STIs can be prevented. Despite high interest in the female condom among sex workers, their uptake has been generally low due to structural barriers such as high cost. Correspondingly, much attention has been given to increasing awareness and education of safer sex practices among sex workers, while very limited focus has been directed toward clients' practices. There has been increasing interest in HIV prevention interventions that address low condom use on a structural level, creating an enabling environment in which condoms can be used within commercial sex transactions, including facilitating increased access and social

acceptance, changing social norms and reducing stigma, and promoting economic and other empowerment for sex workers (Gupta, Parkhurst, Ogden, Aggleton, & Mahal, 2008). Reluctance by clients to using condoms during sex is common, as are demands by clients for sex acts without condoms in exchange for financial incentives. Condom use remains low by intimate and other nonpaying partners of sex workers (Deering et al., 2011).

Violence

As indicated in a recent systematic review, sex workers experience high rates of occupational violence (i.e., violence within the context of sex work) from clients, police, managers (e.g., brothel owners/operators, pimps), other sex workers, and the general public, as well as violence by intimate and other non-paying partners (Deering, Nesbitt, & Shannon, 2010). Physical, sexual, and emotional violence has been reported.

This recent review identified a number of factors that shape sex workers' risk for experiencing violence, including physical features of their working environments; legal policies surrounding the criminalization of sex work and regulation of sex industries; economic constraints and conditions; increased vulnerability from drug and alcohol use; issues relating to gender, power, and social stigmatization of sex work; and sexual exploitation of women and girls, particularly within high-migration settings (Deering et al., 2010).

Economic Disempowerment

Due to the clandestine, stigmatized and criminalized nature of sex work in many settings, sex workers often face limited or no access to bank accounts, formal saving schemes, loans, and legal forms of credit, as well as no access to insurance, pensions, and other employment benefits. Ultimately, this lack of access results in sex workers having limited ability to manage their finances and plan for the future, and may force them to engage with exploitative black market debtors (Guidance Note on HIV and Sex Work, 2009). High interest rates and no legal protections promote a cycle of obtaining new debts to pay off

previous debts. Lack of financial security can lead to sex workers being forced to accept more money for sex without a condom upon a client's demand, doing higher-risk sex acts in exchange for increased earnings (e.g., anal sex), and having increased numbers of sex partners or working in more dangerous settings, leading to increased risk for HIV, other STIs, and violence.

Lack of Access to Health and Social Services

Sex workers continue to face barriers to accessing safe and non-judgmental health services, including long-term services such as primary care, mental and physical health care, drug treatment, and legal and employment services. Occupational stigma has been identified as a major barrier to health services access through concealment of sex work involvement to family, friends, and service providers in global settings (Guidance Note on HIV and Sex Work, 2009). Disclosure of sex work that is associated with previous negative interactions (e.g., disapproval, discrimination) with health care providers can prevent sex workers from accessing health services (Scorgie et al., 2011). The ability of sex workers to access health and social services can be further challenged by enforcement-based policies and punitive sanctions against sex work in settings where sex work is criminalized; for example, fear of arrest or prosecution resulting from disclosure to health care professionals may discourage sex workers from seeking care (Global Commission on HIV and the Law: Risks, Rights and Health, 2012).

Substance Use

In some settings, there is considerable overlap between sex work and drug markets, with high rates of drug and alcohol use among sex workers (Rekart, 2005). Sex workers who use drugs may be at increased risk of violence, HIV, or other blood-borne infection transmission through drug sharing with clients (Shannon et al., 2008). The risks of drug use to sex workers are compounded due to the criminalization of drug use as well as sex work in most settings. Harms of criminalized drug policies to vulnerable subpopulations include enforcement-based policing approaches

toward drug use that increase violence on a community level, as well as displacement of drug users to unsafe drug use spaces and activities (e.g., shooting galleries, drug dealing, scoring and distributing drugs), with supply control remaining resistant to law enforcement efforts (Wood, McKinnon, Strang, & Kendall, 2012).

Gender, Stigmatization, and Discrimination

Sex workers face intense social stigmatization and discrimination, through which they are shamed for contravening gender norms. For women, norms that are contravened include asking for monetary compensation for sex, being overtly and publicly sexual, and expressing female sexuality outside of marital unions. Men who have sex with men and transgender individuals who do sex work violate traditional masculine ideologies and similarly face high levels of stigma and exclusion, particularly in countries where homosexuality is illegal. Sex workers are also stigmatized for being "diseased" or "vectors of disease." Hierarchical gender-based power dynamics in favor of male-identified partners influence male behavior toward both female and transgender sex workers, resulting in lower power for sex workers. For example, male social expectations that condoms should not be used increase demands for condom nonuse by male clients as well as intimate and other nonpaying partners. Stigmatized views toward sex work intersecting with masculine ideologies frame the acceptability and increased rates of violence toward sex workers.

Strategies to Promote the Health, Safety, and Well-Being of Sex Workers

Increasing evidence suggests the critical importance of multipronged approaches in promoting the health and safety of sex workers and reducing harms in the sex industry. While, historically, interventions have been designed "for sex workers" (e.g., with little input from sex workers and sex work groups themselves) and focused narrowly on reducing HIV/STI vulnerability at the individual or behavioral level (e.g., condom promotion and counseling), over the last two decades there has been growing shift to programs

that include both structural and sex worker/community-led approaches. “Sex worker-led” or “community-led” approaches are initiated, developed, and/or implemented by relevant and affected community members (e.g., sex worker organizations and/or sex work collectives). “Structural” approaches address root causes of vulnerability, or structural factors that shape or constrain the behavior of individuals (e.g., discrimination, stigmatization, gender inequality). Structural approaches may include a range of interventions and include sex worker-led strategies, with increasing research documenting the importance of sex worker-led programs implemented at the structural or macro-level in improving the broader health, safety, and human rights of sex workers.

At the structural level, there is growing consensus among international bodies, including the Global Commission of HIV and the Law, Joint United Nations Programme on HIV/AIDS (UNAIDS), and the WHO, of the critical need to remove criminal and punitive sanctions targeting sex workers and clients, and instead promote a public health and human rights approach to reducing harm among sex workers (Global Commission on HIV and the Law: Risks, Rights and Health, 2012; Guidance Note on HIV and Sex Work, 2009; International Labor Organization (2010)). The International Labor Organization, the United Nations body responsible for drawing up and overseeing international labor standards, recognizes sex work as a legitimate occupation (International Labor Organization). If sex work was decriminalized, aspects of sex work could be regulated in a way to protect both sex workers and their customers, with sex workers having access to labor rights, including occupational health and safety standards. As with other occupations, sex workers should be empowered to require safe working practices and work places, including environments that are free of violence, and where paid sex is safe and protected (Global Commission on HIV and the Law: Risks, Rights and Health, 2012). In decriminalized environments, sex workers have more control over their work environments, which can be structured to meet the

health and safety needs of sex workers. Sex workers should also be economically empowered to have nondiscriminatory access to banking and financial institutions, with the same financial services, freedoms, and protections as the general public; as well, they should have the same access to inheritance rights and other civil entitlements, including purchasing/renting housing or utilities, and access to education, justice, or health care (Global Commission on HIV and the Law: Risks, Rights and Health; Guidance Note on HIV and Sex Work, 2009).

Decriminalization is the overarching strategy supported by international organizations to improve the health and safety of sex workers. However, in both criminalized and decriminalized settings, safer indoor work environments remain a critical strategy to promoting the health, safety, and well-being of sex workers. In decriminalized settings, there are many examples of how safer indoor work spaces with supportive management policies and physical security measures have been shown to reduce harm among sex workers and mitigate some of the harms caused by criminalization (Shannon & Csete, 2010). For example, in Canada, unsanctioned indoor sex work environments within low-barrier, supportive housing options for women promoted enhanced control within transactions with clients, including enabling condom use and reducing violent encounters (Krusi et al., 2012). In the Dominican Republic and Nevada, USA, brothels with supportive management policies and physical security measures were shown to promote condom negotiation with clients (Kerrigan et al., 2006). Safer-environment interventions that reach sex workers within their work places (i.e., mobile outreach) also play an important role in modifying environments to improve the safety of sex workers, increase access to condoms, and connect sex workers with health services. However, in the absence of supportive legislation and policies at the macro-level, sex workers may lack full control over their work environment and be subject to arbitrary and, in some cases, coercive or punitive approaches by exploitative managers and business owners. Sex workers’ vulnerability

in contexts where sex work is criminalized highlights the urgent need for the immediate removal of criminal laws surrounding sex work. At the same time, research needs to better document and evaluate features of work environments (e.g., management policies, access to services, licensing) to understand how policies and working conditions can best promote the health, safety, and well-being of sex workers.

There are several key examples of how multi-pronged approaches that include both structural and sex worker-led components can significantly mitigate sex work harms, particularly within environments where sex work remains criminalized. One of the most widely recognized sex worker-led models is the Sonagachi Project (“Sonagachi”), initiated in 1992 to combat HIV/STIs in Kolkata, India. Sonagachi’s approach was to redefine sex work as an occupation and engage sex workers in power roles and in decisions that affected their health and safety (Jana, Basu, Rotheram-Borus, & Newman, 2004). Addressing HIV was seen as the responsibility of the community rather than the responsibility of individual sex workers (Jana et al., 2004). Sonagachi addressed a number of structural barriers to HIV prevention, including literacy (e.g., through peer education), economic empowerment and financial security (e.g., by addressing lack of access to regular financial institutions and providing loan services to sex workers), and collectivization processes (e.g., by establishing a quasi-trade union to support sex workers in exercising collective power and agency; Jana et al.). Another well-known sex worker-led program, modeled after Sonagachi, is the Avahan Indian AIDS Initiative (“Avahan”), an HIV prevention intervention initiated in India in the six states with the highest HIV prevalence in 2003–2004. Evidence suggests that both interventions have been successful in reducing HIV risk, as well as a number of other outcomes relating to the broader health and safety of sex workers (e.g., increased literacy, self-esteem, empowerment, access to health services, reducing violence; Jana et al.; Pickles et al., 2010).

Key to the success of any strategy to promote the health, safety, and well-being of sex workers

is the involvement and leadership of sex workers. Actions by sex workers have brought discussions relating to removing punitive sanctions against sex work to the forefront of public health interventions on a global scale. While there remain critical gaps in the involvement of sex workers in decisions regarding their health, safety, and well-being in many settings, there are also many promising steps forward. Such steps have resulted in sex workers initiating their inclusion as peers, leaders, expert consultants, researchers, and decision makers in government and policy.

Conclusions, Future Research, and Policy Needs

There is a great deal of heterogeneity both within and across sex worker populations, according to sex work environments, legal frameworks surrounding sex work, and health and social vulnerabilities experienced by sex workers. Going forward, there is a critical need to push for evidence-based policies and programs, including sound and ethical science that documents and addresses gaps in health, safety, and well-being of sex workers and strategies to reduce harms. Sex workers’ decisions to continue or exit from sex work should be supported, with sex work vulnerabilities being reframed as occupational health risks. Structural prevention programs aimed at mitigating the social and economic HIV risk environments of sex workers are needed, including innovative models of safer sex work spaces. In particular, evidence from an extensive research base, amidst increasing calls from sex worker organizations globally, strongly suggests that the removal of criminal sanctions on safer indoor work spaces, as well as on public solicitation, could dramatically reduce health and social vulnerabilities faced by sex workers.

Cross-References

- ▶ [Gender and Health](#)
- ▶ [Gendered Work](#)
- ▶ [Health and Violence](#)
- ▶ [Substance Abuse](#)

- ▶ Violence Against Women
- ▶ Violence in the Workplace
- ▶ Women's Employment
- ▶ Women's Empowerment
- ▶ Women's Health

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Sex, Arts, and Verbal Abilities

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Description

There has been significant progress made on most economic indicators of the US standard of living. Family incomes have risen notably since the

1950s, even if there remain significant gaps in the equality of these gains since the 1970s. Not only are living quarters larger, but the amount and variety of technology and appliances in those homes have increased dramatically. Again the diffusion rates remain unequal, but about 80 % of American homes have access to the cornucopia of information on the Internet, more information probably than that available in their local library. Much the same is true for the access and quality of ► [health care](#), as documented by the key indicator of average ► [life expectancy](#). Much of that increase is now spent in retirement years, now largely made easier by social security, annuities, and company retirement packages.

Many of these gains have also been made possible by the gains in another key indicator of societal progress, namely, education level. The proportion of college graduates has risen from less than 10 % in the 1950s to more than 25 % now. Going along with these trends are the gains in more ► [subjective indicators](#), like the level of political and racial tolerance in the country. While again far short of ideal, direct discrimination against minorities has declined – as has expressed intolerance against political minorities (Davis, 1974; Finkle, Sigelman, & Humphres, 1999). Both articles documented dramatically increased public tolerance of communists, racists, and other political minorities compared to levels of tolerance in the classic survey of Stouffer (1955) during the “McCarthy era.” At that time, Stouffer predicted such increased tolerance would occur based on his “generation replacement” hypothesis – that as older less educated cohorts died off, they would be replaced with younger generation with more education.

However, any such gains in progress are unfortunately not supported by other subjective indicators. Perhaps the most well-known and substantial catalog of societal decline was advanced in Putnam’s (2000) “Bowling Alone,” in which virtually all of his indicators of “social capital” in the USA showed signs of less engagement in socially productive encounters across the decades. Among the reasons behind this decline were the increased participation of women in the workforce (generally seen as a sign of social

progress) and increased reliance on television (here usually seen as an indicator of declining life quality, as documented in the research in Kubey & Csikszentmihalyi, 1990).

But Putnam is not alone in seeing the glass as more than half empty. Political scientists have written widely about the decreased participation in voting and political life (Niemi & Weisberg, 2001; Norris, 1998), and Keeter and delli Carpini (1997) have noted how Americans’ level of knowledge about politics had not increased over the years, despite the increase in college education. Many observers of survey evidence also point out how levels of expressed happiness have not increased since the 1960s, despite the consistent finding that education is associated with higher levels of happiness (Stevenson & Wolfers, 2007; Krueger et al., 2009).

Use of Time Indicators: The QOL picture is more mixed on the several indicators of how Americans spend their time. Aguilar and Hurst (2007, 2009) use time-diary data to show an overall increase in the free time available, made possible by declines in paid work time for men and unpaid work for women, as earlier documented by Robinson and Godbey (1999) and Juster and Stafford (1985). This gain has been uneven, however, with college-educated workers showing less gain in free time than the working-class, possibly forcing more unwanted leisure on the latter group (Gershuny, 2000; Aguilar & Hurst, 2007, 2009).

Along with the improvements and equality in daily life implied by women doing less ► [housework](#) and men doing more, social observers generally also have been positive about the notably increased participation of fathers in child care (Bianchi, Robinson, & Milkie, 2006). With increasing mother participation as well, that means that today’s children are receiving more temporal attention from their parents in homes with greater gender equality. Further positive evidence comes from the increased sleeping and relaxing time respondents report in their diaries, as well as the doubling of time spent in fitness activities (Robinson & Godbey, 1999).

In addition to the greater inequality of free time by work status, other activity changes that have raised more alarm include the decreased

time spent in social activities/visiting, in eating, and in reading – particularly reading of newspapers to keep up with matters of interest in their community. Parallel to these aspects of social capital, the proportion of Americans attending religious services has declined (Presser & Stinson, 1998). As noted above, that Americans continue to spend more than half of their free time watching TV has also been of major concern as the negative indicator of Americans' ► **quality of life** noted above.

Sex Frequency

This entry examines several other indicators that when increased connote an increased QOL, in particular *sexual activity*. Sex is a virtually invisible activity in the current diary studies now being conducted by the Americans' Use of Time Survey (ATUS) by the US Department of Labor, since it is combined with several other "private" activities in the ATUS coding scheme. This despite the fact that diary studies that have asked diary keepers to rate their daily activities do find sex at the top of the enjoyment scale (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004, 2006; Krueger et al., 2009; Robinson & Godbey, 1999). This is much as might be surmised as obvious from simple observation of human behavior and the personal, political, and other risks people are willing to take to engage in it. Thus, frequency of sex is an essential missing element in understanding and evaluating the quality of everyday life.

1545. About how often did you have sex during the last 12 months?

% Valid	% All	N	Value	Label
22.2	9.5	5,013	0	Not at all
7.9	3.4	1,786	1	Once or twice
10.4	4.4	2,341	2	Once a month
15.8	6.7	3,578	3	2–3 times a month
17.6	7.5	3,988	4	Weekly
19.9	8.5	4,491	5	2–3 per week
6.3	2.7	1,418	6	4+ per week
	0.2	80	8	DK
	3.1	1,662	9	NA

Data Source: The General Social Survey (GSS) has been monitoring the frequency of sex

in the public since 1989, using questions developed by the pioneering national study of sex by Michael et al. (1994). The GSS is a national probability survey that has been conducted annually or biennially since 1974. Documentation and direct interactive access to the archive of GSS data can be found at www.sda.berkeley.edu.

The GSS frequency question and its response categories are shown in Chart 1.

These responses can then be recoded into appropriate annual rates (e.g., once a month = 12 times annually), which has been generating a population average of almost 60 times a year or just over once a week. More than 20 % of GS respondents report having no sex in the previous year.

While it might be expected that sex is too sensitive a topic area for survey respondents to answer truthfully or reliably, it can be seen in the above tally that less than 7 % of GSS respondents (1,662 out of almost 25,000 total respondents) refused or did not provide an answer. Moreover, there is an impressive array of evidence to indicate the underlying validity and ► **reliability** of responses in the basic tally above, such as:

1. Asking the question directly vs. giving respondents an answer card to be put into a sealed envelope (Michael et al., 1994)
2. Asking the question over the phone vs. in person
3. Asking the question on a monthly vs. yearly basis
4. Finding a basic equality in the responses of married men and married women
5. Finding a basic equality among college student samples and those aged 18–24 in the GSS
6. Comparing the GSS responses with other national surveys (as conducted by AARP in 1998 and 2004 (Jacoby, 2005), which asked more specifically about heterosexual intercourse (rather than the above GSS question which simply asks about sex)
7. Comparing the US results with other Western countries (Gagnon et al., 2001)

In addition, the question elicits quite consistent results from year to year, as further evidence of its basic aggregate reliability (Robinson, 2010).

Predictors and Trends: Age is the major predictor of sexual frequency, being only slightly lower after regression adjustment for the other demographic factors. Contrary to most free-time activities, there are slightly lower participation rates for the college educated and slightly higher rates among the most affluent. Role factors play a pivotal function, particularly the far higher rate among married people. Employed people report more sex, with workers reporting longest workweeks showing little decline with progressively more hours (especially those reporting more than the standard 40-h week). The latter reflects the not-uncommon “Newtonian” or “more-more” pattern in time spent in certain activities (Robinson & Godbey, 1999).

There has been no significant change since the initial 1989 GSS in the annual frequency of sex after adjustment. Thus, people are not using their greater free time or other opportunities to engage in this most enjoyable activity – even if sex is also higher among those working more hours.

Verbal Abilities

A second GSS indicator area examined here is not an activity but a most important national and social resource, namely, a person’s *verbal ability*. Greater verbal ability allows one not only the opportunity to appreciate literature and the arts but to use language to achieve personal goals and to be a more productive worker in today’s “knowledge economy.” Indeed, it is a direct measure of the important indicator of literacy, usually only crudely measured in terms of years of schooling. The measure examined here, a small vocabulary test, has been shown to have almost as much predictive power in surveys as the standard survey questions on education, usually measured simply in terms of years in school. This GSS quiz thus acts as a further necessary indicator of a person’s literacy and cognitive skills.

This direct GSS measure of verbal ability is based on ten GSS vocabulary items, which are asked in usual SAT multiple-choice test-score format, such as giving the respondent the word

“beast” and then asking them to match that word with its most appropriate match on a card they are presented, like:

- (a) Disruption
- (b) Landscape
- (c) Animal
- (d) Lumber
- (e) Police

Respondents are then scored on a 0–10 scale depending on the number of words they correctly match. The overall average since 1974 has averaged about six of the ten items. The matching vocabulary questions were originally developed by Thorndike and Gallup (1944) in the usual SAT test-score format.

Predictors and Trends: Women score slightly higher (6.1) on the word measure than men (5.9), both before and after adjustment. Age differences become even more apparent after adjustment with the higher scores among the elderly probably being boosted because of their lower formal education. The lower scores of blacks and other races are reduced for much the same reason of their lower education, but they remain significant.

Not surprisingly, education remains the strongest predictor of word scores with its correlation reaching 0.50 after adjustment. That seems to largely explain the decline of income’s correlation (from 0.28 to 0.13) after adjustment. As expected, word scores vary little by role factors, although the slightly lower scores among those with four more children and among those working routine 40-h workweeks are noted – as are the slightly lower scores in the south and in both urban and rural areas (rather than the suburbs).

Finally, *word* scores show no increase across time, despite the greater presence of more college-educated people in the population. Indeed, scores have effectively declined given their greater presence. A college education is becoming far less important in predicting word scores than it was 34 years ago. Word scores overall have decreased for all groups but the least educated. That is further reflected in the correlation of education and word score, dropping from 0.54 in the 1970s to 0.44 today.

A Real Recession: Lowest Levels of Many QOL Measures in the 2010 GSS

Variations in levels of QOL measures in the GSS can be detected in the GSS since it began in 1974. However, the 2010 GSS showed dramatic declines unlike those found in any other year. As an example, the 2010 GSS documented that not only did this recession year mark the lowest level of respondent happiness (less than 30 % saying they were “very happy”) but parallel lows in financial satisfaction, concerns about ► [job security](#), and feeling that one’s standard of living was better than their parents. At the same time, levels of marital satisfaction and job satisfaction, and expecting one’s children would be better off, remained stable. There was also a dramatic decline in the proportion of both employed and non-employed respondents claiming their lives were always rushed.

Other QOL Indicators in the GSS

As noted in the separate entry in this volume for the GSS, the GSS contains a cornucopia of QOL-related questions, particularly the above questions on personal and ► [marital happiness](#), along with satisfaction with job, income, community, and several other aspects of one’s life experiences (including the experience of ► [traumatic life events](#), like family death, divorce, job loss, and the like).

Among the less-often cited of these QOL-related GSS questions are:

1. Comparison of whether respondents feel their lives are better off than their parents or that their children’s lives will be better
2. ► [Trust](#) in various institutions or in people in general
3. ► [Social networks](#) and frequency of contacts with family and friends
4. Financial concerns
5. Group memberships
6. Voting and political participation
7. Cultural participation
8. Ability to speak another language
9. Alienation, ► [altruism](#)
10. Equality

Arts Participation

Arts activities can also be highly enjoyable, but they are quite diverse (from opera to museum visits) or are rarely engaged in (or reported) in single-day time diaries, particularly in the level of detail required to examine them as individual social phenomena (e.g., attending jazz vs. classical music concerts). While less than 1 % of diary free time is coded as arts participation (Robinson & Godbey, 1999), the arts are usually considered as the among the most personally enriching of free-time activities, as well as providing an outlet for self expression, appreciation of great skills, insights into the ► [meaning of life](#), and models for personal creativity, among other benefits. In that way, then, the arts are another important activity in daily life almost invisible in diary accounts.

While some questions on arts participation have been occasionally asked in the GSS, the major trend data on the arts come from the Survey of Public Participation in the Arts (SPPA) of the National Endowment for the Arts (NEA), conducted by the US Census Bureau. The SPPA has been conducted at roughly 5-year intervals since 1982 (1985, 1987, 1992, 2002, and 2008).

The SPPA asks more than 70 questions on various forms of arts participation, but only its seven “benchmark” questions (established in the initial 1982 survey) are examined here. These mainly involve direct participation as an audience member at a live performance or as a visitor to an art museum or gallery. The SPPA benchmark questions ask:

Q1A With the exception of elementary or high school performances, did **you** go to a live jazz performance during the last 12 months?

1. Yes
2. No (Scored as 0)

This question format is then repeated for attendance at live performances of:

2. Classical music
3. Opera
4. Musical stage plays
5. Nonmusical stage plays
6. Ballet
7. (Visits to) Art museums or gallery

Respondents who reported “yes” to any of these questions were then coded as 1) attenders, otherwise as 0) nonattenders. The proportion of arts attenders was 39 % in the 1982 SPPA, 41 % in 1992, 39 % in 2002, and then dropped to 35 % in 2008. In other words, after being relatively steady between 1982 and 2002, the proportion of attenders dropped 4 percentage points in 2008 (an absolute drop of about 10 % in overall number of participants).

Women are slightly more likely to attend arts events than men, more so after adjustment. Attendance shows minimal difference by age after adjustment, counter to the initially lower rates among those aged 18–24 and 65+ (perhaps due to education and marital status differences). The initially lower rate among blacks is reduced considerably after MCA adjustment.

Arts participation increases notably among the college educated and more affluent, although income differences are much less prevalent after adjustment. In terms of role factors, far less variation is found after adjustment, so that neither child care or work hour responsibilities seem to inhibit participation; as with sex, arts participation is slightly higher among those working 50 or more hours a week.

Arts participation is no longer staying constant across time, but is now showing some decline, as with verbal ability. In other words, it is no longer getting the boost it should be receiving with the greater influx of college-educated adults into the population or of workers putting in more hours at work.

Equality of Household Division of Labor

The GSS has occasionally asked questions about the fairness of the household division of labor, with 75 % of wives and 80 % of husbands in 1996 replying it was fair to both. Longer time series trend data are available from University of Michigan and University of Maryland time-use surveys on the question asked of wives “Do you wish your husband would share more of the household chores?” In 1965, the proportion of wives answering “Yes” was 18 %. When repeated in 1975, the proportion increased to 28 % and to

37 % in 1985. In the most recent 1998 reading, the proportion had decreased to 27 %, with a follow-up open question revealing little anger or resentment. Despite the recent media concern about “chore wars,” then, it does appear that this commonly heard complaint extends to a large portion of American marriages.

The Quality of Beer

There are more subtle ways than in income in which the quality of foods (or vacations or other experiences) have improved, but it has not been possible to monitor these qualitative factors satisfactorily in publishable or empirical ways. It seems obvious that people in the Western world are now enjoying higher quality meats, vegetables, breads, wines, and ice creams, but no solid documentation of such improvements has been forthcoming.

One possible exception is the improved quality, or at least variety, of beer, particularly as spurred by the microbrewing movement in the USA (now being replicated in Canada, Belgium, and other European countries). At the aggregate level based on sales, micro or craft beers have increased market share to more than 5 % since their initial entry in the 1980s and less than 3 % in the 1990s (Robinson, 1998). This is despite their higher cost and general lack of national advertising.

Consumption of craft beers has been tracked empirically in the National Beer Survey since 1995. At that time, only 12 % of beer drinkers had consumed a craft beer in the previous year. 5 years later, that proportion had doubled to 25 %. In 2009, the proportion remained at about 25 %, but those who were microbrew advocates were now consuming a higher proportion of them, which seems to account for their greater share of the market. In contrast to the mass market or “industrial,” which if anything have reduced the complexity of their beers across time, appreciation of the proliferating variety and complexity of craft beers would seem a sure sign of an increasingly sophisticated taste culture.

With the exceptions of domestic tranquility and beer consumption, then, and despite various

indicators that Americans' economic standard of living has improved over the last 40–60 years in terms of income, ownership of technology, and housing among other indicators, this analysis adds to the list of noneconomic quality of life (QOL) indicators failing to show improved life quality to parallel these economic gains.

The GSS data showing no significant increase in estimated frequency of *sex* since 1989 may be the most troubling of the three indicators, since it represents a public failure to enjoy what appears to be their favorite or most motivated daily activity. The population is aging, and age is the main demographic predictor of *sex*, but age is controlled in these analyses (and those age 65+ show no consistent increase since 1989 either). Moreover, there have been several “marital aids” since 1989 that are thought to have encouraged and enhanced greater sexual participation and enjoyment (in addition to the continual barrage of *sex* content in mass media programs, news, and advertising). Viagra was the first of many products along this line. The proliferation of dating sites on the Internet has been thought to have brought many otherwise single people together. Perhaps without these developments, however, sexual activity might have also suffered the same decline as arts participation and vocabulary level.

Education's main positive influence across time on these subjective indicators then may continue to be reflected in the increased political tolerance of the population, as predicted by Stouffer's (1955) “generation replacement” hypothesis. It does not appear to carry over much to other educated-related behavior and attitudes that one might assume would have led to similar improvements in society. Even here, however, Mueller (1988) has argued the tolerance attitudes in question may not be particularly salient, deep seated, or profound.

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Sexism

- ▶ [Cultural or Ethnic Homogeneity Preference Index](#)
- ▶ [Disadvantaged Populations](#)
- ▶ [General Fair Treatment Index](#)
- ▶ [Heterogeneous Socializing Network Index](#)
- ▶ [Heterogeneous Social Support Index](#)
- ▶ [Index of Inegalitarianism](#)
- ▶ [Personal Fair Treatment Index](#)
- ▶ [Xenophobia](#)
- ▶ [Xenophobia Index: Michalos and Zumbo](#)

Sexist Attitudes

- ▶ [Religion and Sexism](#)

Sexist Behaviors

- ▶ [Religion and Sexism](#)

Sexist Beliefs

- ▶ [Religion and Sexism](#)

Sex-Role Egalitarianism Scale

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Synonyms

[Egalitarianism](#); [SRES](#)

Definition

The sex-role egalitarianism scale (SRES) is a multi-item scale measuring egalitarian attitudes regarding men's and women's roles in society. According to the authors of the scale, sex-role egalitarianism refers to “. . .an attitude that causes one to respond to another individual independently of the other individual's sex. One who possesses this attitude believes that the sex of an individual should not influence the perception of an individual's abilities or the determination of an individual's rights, obligations, and opportunities” (Beere, King, Beere, & King, 1984, p. 564). Compared to other measures of ▶ [gender role attitudes](#), a unique aspect of the SRES is that it considers ▶ [attitudes](#) toward both women's *and* men's social roles.

Description

The SRES consists of four versions: two long forms (Forms B and K) and two short forms (Forms BB and KK). The long forms each consist of 95 items reflective of five role-related domains (with 19 items each): marital, parental, employment, social-interpersonal-heterosexual, and educational. According to the authors, “our original test-development plan called for only one version of the SRES. . . Instead, we were

able to create two alternate [long] forms of the measure. The reason was the availability of a much larger set of good quality items than initially anticipated" (King & King, 1997, p. 73). The later developed short forms each consist of 25 items chosen from the long forms to proportionally represent the five domains (with 5 items each). Items on all forms of the SRES require participants to indicate their agreement or disagreement with various statements using a 5-point ▶ **Likert-type scale** (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree). Examples of items are "A female executive deserves the same respect as a male executive" and "A husband and wife should make family decisions together." Responses are summed to obtain an overall total score (for both short and long forms) and/or individual subscale scores for each of the five role domain subscales (long forms only). Higher scores on the SRES indicate stronger sex-role attitudes of equality: "*individuals who score low on the SRES respond to others on the basis of stereotypical beliefs about their gender, while individuals who score high respond to others independently from their gender*" (Pavlou, Tsaousis, Vryonides, & Vitsilaki, 2008, p. 788).

The intended target audience for the SRES are adolescents and adults with at least a grade 6 reading ability. Although the majority of published research using the SRES has been conducted with college students, the SRES has also been administered to police officers, senior citizens, nurses, business executives, domestic violence offenders (Beere et al., 1984; Scandura, Tejada, & Lankau, 1995), and US marine recruits (Weatherill et al., 2011). Most of these published studies have relied primarily on Caucasian American samples, though more recent research has reported use of various versions of the SRES with African Americans (Berkel, 2004; McGhee, Johnson, & Liverpool, 2001) and Asian Americans (Anderson & Johnson, 2003). The SRES has also been translated into a number of languages including Greek (Pavlou et al., 2008), German (Katenbrink, 2006), Italian (Cammarata, 1986), and Croatian (Raboteg-Saric & Ravlic, 1990).

Reliability

Based on a classical test theory perspective, King and King (1993, 1997) provide extensive evidence for the ▶ **reliability** of the SRES collected during the development phase of the scale using both college- and community-based samples (i.e., police officers, senior citizens). Estimates of internal consistency (i.e., ▶ **Cronbach's alpha**) for the long forms (total score) were .97 and an average of .87 for the domain-specific subscales, with a range of .81–.91. The test-retest and alternative forms reliability coefficients for the total scale scores were both .93. Published translated versions of the SRES (Form B) into Greek (Pavlou et al., 2008) and German (Katenbrink, 2006) also resulted in adequate internal consistency estimates for both the total and subscale scores.

For the short forms of the SRES, strong internal consistency estimates of .94 (Form BB) and .92 (Form KK) were reported with college students (King & King, 1990). In addition, the 3-week test-retest coefficient was .88 for both forms, and the alternate forms reliability was .87. In additional research, Brutus et al. (1993) estimated the internal consistency for Form BB as .94 (college students), and Scandura et al. (1995) reported coefficients of .93 (female managers) and .97 (college students) for Form KK. High internal reliability estimates for both short forms of the SRES have also been reported when used with African American samples (Berkel, 2004; McGhee et al., 2001).

In addition to classical test theory approaches, the SRES has also undergone generalizability analysis and item response theory (IRT) analysis, with both approaches providing additional support for the reliability of the SRES (King & King, 1983; Vreven, King & King, 1994).

Validity

Issues of validity are concerned with the extent to which both theory and evidence support scale score interpretations. For scales such as the SRES, both convergent and discriminant validity are relevant. ▶ **Convergent validity** evidence comes from research reporting moderate to high

correlations between the SRES and other measures of gender-role attitudes, such as the attitudes toward women scale (ATWS) and the MacDonald sex-role survey (MSRS) (King & King, 1997). Conversely, evidence of ► [discriminant validity](#) can be found in research reporting weak correlations between the SRES and measures of gender-related traits (e.g., masculinity, femininity) as measured by the Bem Sex-Role Inventory (BSRI) and the Personal Attributes Questionnaire (PAQ). Additional evidence of discriminant validity comes from research indicating nonstatistically significant associations between several forms of the SRES and various measures of social desirability (King, King, Carter, & Stepanski, 1994; Rubini & Antonelli, 1986; King & King, 1997). See also King and King (1993) for a comprehensive review of the convergent and discriminant validity evidence on all SRES versions.

Additional validity evidence is based on research testing specific hypotheses regarding expected group differences on the SRES. For example, consistent with gender-equality hypotheses, research has generally reported the following subgroups as scoring higher on the SRES: women (compared to men), those with higher educational attainment (compared to lower), college students (compared to community samples of adults), and psychology students (compared to business students) (Berkel, 2004; Katenbrink, 2006; King & King, 1997; Pavlou et al., 2008; McGhee et al., 2001). Although older respondents are expected to score lower on the SRES than younger respondents, mixed results have been reported.

Less conclusive findings regarding the ► [construct validity](#) of the SRES have also been recently reported in terms of the factor structure of the scales. Sex-role egalitarianism attitudes were originally conceptualized by the authors as finding expression in five life domains: marital, parental, employment, social-interpersonal-heterosexual, and educational (Beere et al., 1984). Consistent with the authors' original conceptualization, some research with college students supports a five-factor structure of the SRES

(long form) (Scandura et al., 1995) and a single factor structure of the short forms (King & King, 1990). In contrast, Katenbrink (2006), using a German-language version of the SRES (Form B), reported results which supported a unidimensional factor structure. Finally, two studies, one of college students in North America (King, King, Gudanowski, & Taft, 1997) and the other of college students and community members in Greece (Pavlou et al., 2008), indicate a two-factor solution provided the best fit with the data. In both of these studies, one of the higher order factors appeared to reflect sex-role egalitarian attitudes within personal relationships (i.e., marital, parental, and social-interpersonal-heterosexual roles) and the other in more formal relationships (i.e., educational and employment roles).

Discussion

An extensive body of research points to the reliability of all four versions of the SRES, particularly internal consistency. Although evidence exists in support of the validity of the SRES as a measure of sex-role egalitarianism, research examining its latent structure has produced more conflicted findings. Additional psychometric research is needed, particularly in a cross-cultural context. Further, while King and King (1997) recognized that it would be profitable to “*address the issue of evidence of shifting gender-role attitudes within [American] society across time*” (p. 83), we have been unable to locate any such studies utilizing the SRES.

Cross-References

- [Construct Validity](#)
- [Convergent Validity](#)
- [Cronbach's Alpha](#)
- [Cross-Cultural Validation](#)
- [Discriminant Validity](#)
- [Factor Analysis](#)
- [Gender Role Attitudes](#)
- [Internal Consistency Reliability](#)
- [Item Response Theory \[IRT\]](#)

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Sex-Role Portrayals

- ▶ [Gender-Role Portrayals in TV Advertising](#)

Sexual Activity

- ▶ [Women's Sexual Satisfaction Predictors](#)

Sexual Arousal Disorder

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Synonyms

Erectile dysfunction (ED); Female sexual arousal disorder (FSAD); Sexual dysfunction; Sexual interest/arousal disorder (SIAD)

Definition

Sexual arousal disorders involve the inability to achieve or to maintain an adequate physiological or subjective sexual response during sexual activity (American Psychiatric Association (2000)). This lack of sexual arousal may be persistent or recurring and may be situational or generalized. Insufficient sexual arousal is associated with distress or inability to complete a sexual activity that the individual wishes to engage in and is not better accounted for by substance use or a general medical condition (APA, 2000).

Sexual arousal disorders in women are characterized by the lack of an adequate lubrication-swelling response of the genital region (female sexual arousal disorder, FSAD). It should be noted that sexual arousal and sexual desire are closely related concepts (Laan & Both, 2008) and that difficulties with arousal and desire have high rates of overlap in women (Lutfey, Link, Rosen, Wiegel, McKinlay, 2008). As a result, in the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), FSAD will be subsumed under a new diagnosis termed ► [sexual interest/arousal disorder](#) (SIAD; Brotto, 2010).

In men, sexual arousal disorders are characterized by a lack of an erection adequate for sexual activity (erectile dysfunction, ED).

Description

Sexual Arousal Disorders in Women

Symptoms

In women, insufficient sexual arousal is referred to as female sexual arousal disorder (FSAD). FSAD is characterized by a lack of vaginal lubrication during sexual intercourse or a lack of subjective sexual arousal (Rosen, 2000). Although a woman may complete sexual activities while experiencing absent or low levels of sexual arousal, a lack of vaginal lubrication may result in painful intercourse or genital injuries.

Etiology

Little is known about the etiology of FSAD in women. Potential causal factors include

physiological etiologies (e.g., issues with the vascular or hormonal systems), health-related concerns (e.g., diabetes, hypertension), or psychological difficulties (e.g., low ► [self-concept](#), mood instability, ► [anxiety](#)).

Rates

Due to inconsistencies in the definition of FSAD across studies, reported rates in women are varied. Older women (aged 50 or above) tend to report higher rates of impaired genital responses (24–27 %) compared to women under the age of 30 (11–19 %; Laumann, Paik, & Rosen, 1999). Rates of impaired subjective sexual arousal across the life span have been estimated at approximately 15 % of the British population (Dunn, Croft, & Hackett, 1998).

Impairment

FSAD is associated with negative impacts on women's ► [mood](#), ► [self-esteem](#), and overall ► [life satisfaction](#) (Laumann, Gagnon, Michael, & Michaels, 1994). Furthermore, relationship functioning is diminished; women with arousal disorders report lower levels of physical and emotional satisfaction and lower general happiness with respect to their primary partner compared to women without sexual difficulties (Laumann et al., 2005).

Sexual Arousal Disorders in Men

Symptoms

Sexual arousal dysfunction in men is referred to as male erectile disorder (ED), characterized by the inability to achieve or maintain an erection sufficient for the completion of sexual intercourse.

Etiology

The etiology of arousal disorders in men has received more attention than in women. The causes of ED can be organic or psychogenic in nature (Melman & Gingell, 1999). Organic ED is most commonly associated with vasculature abnormalities but can also be neurogenic, physiological, or hormonal. Psychogenic ED is more common in younger men and is predominantly or exclusively the result of psychological (e.g., performance anxiety, lack of adequate stimulation)

or interpersonal (e.g., communication issues, a lack of intimacy) factors.

Rates

Age has a strong positive correlation with arousal disorders in men (Jenler et al., 1995). In a study of 1,290 men from 11 randomly selected cities in the United States, mild to moderate ED occurred in 17–34 % of the sample of men aged 40–70 years (Feldman et al., 1994). Rates of complete ED (i.e., the total inability to achieve an erection, either in the form of nocturnal penile tumescence or during sexual stimulation) were lower, occurring in 5–15 % of middle-aged men. Approximately 52 % of men over the age of 50 reported some level of ED (Feldman et al., 1994).

Impairment

Men typically respond to sexual arousal disorders with a very high level of ► **distress**. Moderate to complete ED is strongly correlated with self-ratings of depression, independent of mediating factors such as age or ► **health** (Feldman et al., 1994). Sexual arousal difficulties in men are related to impaired relationship functioning, including reduced emotional and physical satisfaction with one's partner (Laumann et al., 1999) and overall lower reports of ► **quality of life** (Jenler et al., 1995). Men whose ED is psychogenic in nature appear to have lower levels of partner and life satisfaction than men with organic ED or no ED (Fugl-Meyer, Lodnert, Bränholm, & Fugl-Meyer, 1997), although it should be noted that the directionality of this relationship cannot be inferred.

Cross-References

- **Anxiety**
- **Distress**
- **Erectile Dysfunction (ED)**
- **Health**
- **Life Satisfaction, Concept of**
- **Mood**
- **Quality of Life**
- **Self-Concept**
- **Self-Esteem**
- **Sexual Interest/Arousal Disorder**

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Sexual Behavior(s)

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Definition

Sex refers to any activity of a sexual or intimate nature and appears to be Americans' favorite activity.

Descriptions

Time-diary studies that have asked diary keepers to rate their enjoyment of their daily activities find sex to be at the top of the enjoyment scale (Krueger et al., 2011; Robinson & Godbey, 1999). This is much as might be surmised as obvious from simple observation of human behavior and the personal, political, and other risks people are willing to take to engage in it. Thus, frequency of sex is an essential missing element in understanding and evaluating the quality of everyday life.

Sex frequency: Sex is a virtually invisible activity in the current diary studies now being conducted by the Americans' Time Use Survey (ATUS) by the US Department of Labor since it is combined with several other "private" activities in the ATUS coding scheme.

However, the ► [General Social Survey \(GSS\)](#) has been monitoring the frequency of sex in the public since 1989, using estimate questions developed by the pioneering national study of sex by Michael, Gagnon, Laumann, and Kolata (1994). The GSS is a national probability survey that has been conducted annually or biennially since 1974. Documentation and direct interactive access to the archive of GSS data can be found at sda.berkeley.edu.

The GSS frequency question and its response categories are shown in [Chart 1](#). These responses can then be recoded into appropriate annual rates (e.g., once a month = 12 times annually), which

Sexual Behavior(s), Chart 1 GSS sex frequency question (total responses since 1989) 1,545. About how often did you have sex during the last 12 months?

% Valid	% All	N	Value	Label
22.2	9.5	5,013	0	Not at all
7.9	3.4	1,786	1	Once or twice
10.4	4.4	2,341	2	Once a month
15.8	6.7	3,578	3	2–3 times a month
17.6	7.5	3,988	4	Weekly
19.9	8.5	4,491	5	2–3 per week
6.3	2.7	1,418	6	4+ per week
	0.2	80	8	DK
	3.1	1,662	9	NA

have been generating a population average of almost 60 times a year or just over once a week. More than 20 % of GS respondents report having no sex in the previous year.

While it might be expected that sex is too sensitive a topic area for survey respondents to answer truthfully or reliably, it can be seen in the above tally that less than 7 % of GSS respondents (1,662 out of almost 25,000 total respondents) refused or did not provide an answer. Moreover, there is an impressive array of evidence to indicate the underlying validity and ► [reliability](#) of responses in the basic tally above, such as:

1. Asking the question directly versus giving respondents an answer card to be put into a sealed envelope (Michael et al., 1994)
2. Asking the question over the phone versus in person
3. Asking the question on a monthly versus yearly basis
4. Finding a basic equality in the responses of married men and married women
5. Finding a basic equality among college student samples and those aged 18–24 in the GSS
6. Comparing the GSS responses with other national surveys as conducted by AARP in 1998 and 2004 (Jacoby, 2005), which asked more specifically about heterosexual intercourse (rather than the above GSS question which simply asks about sex)
7. Comparing the US results with other Western countries (Gagnon, Giami, Michaels, & de Colomby, 2001)

Sexual Behavior(s), Table 1 Differences in three indicators by demographic factors (before and after MCA adjustment for age, education, and other factors)

Sex frequency/year: 1989–2008		
	Before MCA 58.5 times/year	After MCA 58.8 times/year
Total sample		
Birth factors:		
<i>Gender:</i>		
Male	63.5	59.5
Female	54.9	56.0
ETA	.06	.03
<i>AGE:</i>		
18–24	75.4	90.1
25–34	83.5	86.0
35–44	69.6	66.0
45–54	53.0	48.3
55–64	35.8	31.0
65+	17.5	12.0
ETA	.34	.39
<i>Race:</i>		
White	57.4	57.9
Black	64.7	63.0
Other	65.4	56.5
ETA	.04	.04
Status factors:		
<i>Education:</i>		
Some high school	54.2	62.4
High school grad	58.7	59.6
Some college	64.4	60.6
College grad	58.6	55.1
Grad school	52.3	52.5
ETA	.06	.04
<i>(Relative)income:</i>		
Lowest	52.3	69.3
Low	57.6	64.2
Middle	58.7	60.1
High	60.8	54.4
Highest	60.5	62.0
ETA	.06	.04
Role factors:		
<i>Marital status:</i>		
Married	64.3	68.6
Former married	42.3	56.0
Never married	60.1	38.1
ETA	.14	.20
<i>Kids:</i>		
None	57.4	57.9
One	62.5	61.5
Two	60.1	63.3
Three	56.6	66.9

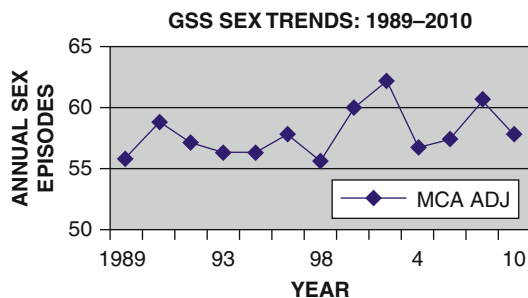
(continued)

Sexual Behavior(s), Table 1 (continued)

Sex frequency/year: 1989–2008		
	Before MCA 58.5 times/year	After MCA 58.8 times/year
Total sample		
Four+	50.4	66.9
ETA	.07	.14
<i>Work hours:</i>		
None	51.7	60.8
1–19	55.8	59.5
20–29	59.8	60.8
30–39	65.3	65.2
40	66.0	66.0
41–49	69.8	68.4
50–59	76.7	69.6
60–69	69.9	69.6
70+	70.0	72.3
ETA	.06	.05
Location factors:		
<i>Region:</i>		
Northeast	57.2	58.4
Midwest	60.1	59.6
South	64.6	64.4
West	63.1	63.0
ETA	.04	.04
<i>Urban:</i>		
Large city	60.1	62.2
Smaller city	62.6	62.8
Suburb, large	60.3	59.6
Suburb, small	64.2	63.5
Other urban	61.2	61.1
Rural	63.5	63.6
ETA	.02	.02

In addition, the question elicits quite consistent results from year to year, as further evidence of its basic aggregate reliability (Robinson, 2010).

Predictors and trends: Table 1 shows the main demographic predictors of sex frequency for the entire period GSS has been asking the sex question. It shows the frequency before and after adjustment for the other predictors. As shown in Table 1, age is the major predictor of sexual frequency, being only slightly lower after regression adjustment for the other demographic factors. Contrary to most free-time activities, there are slightly lower participation rates for the college educated and slightly higher rates among the most affluent. Role factors play



Sexual Behavior(s), Fig. 1 Trends in sex frequency: 1989–2010

a pivotal function, particularly the far higher rate among married people. Employed people report more sex, with workers reporting longest work-weeks showing little decline with progressively more hours (especially those reporting more than the standard 40-h week). The latter reflects the not-uncommon “Newtonian” or “more-more” pattern in time spent in certain activities (Robinson & Godbey, 1999).

Figure 1 shows there has been no significant change since the initial 1989 GSS in the annual frequency of sex after adjustment for age, marital status, and other demographic predictors. Thus, people are not using their greater free time or other opportunities to engage in this most enjoyable of daily activities – even if sex is also a bit higher among those working more hours.

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Sexual Behaviors Desired Frequency

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Definition

Interpersonal perception refers to partners’ perceptions of one another within a dyad (e.g., the perception partner A may have about his or her mate partner B). Within interpersonal perception literature, *similarity* refers to the agreement of partner’s self-ratings, *perceived similarity* refers to the agreement between an individual’s perception of self and partner, and *understanding* refers to the extent to which a partner’s perception of the other corresponds with the other’s self-perception.

Sexual scripts are the internal scripts individuals hold that guide sexual behavior. These scripts refer to the who, what, when, where, and why of sexual behavior and are shaped through prior learning and interactions with others (Gagnon, 1990; Gagnon & Simon, 1973).

Description

Satisfaction within intimate relationships is an important aspect of quality of life and contributes significantly to our sense of self, ► *self-esteem*, and life functioning (Christopher & Sprecher, 2000; Sprecher, 2002). Romantic relationships are based on a shared reality or shared perceptions of the couple’s experiences. Research has demonstrated that not only the interactions themselves but also partners’ perceptions of the interactions that occur between them are important to compatibility, relationship maintenance, and satisfaction (Acitelli, Douvan, & Veroff, 1993; Fletcher, Simpson, & Thomas, 2000; Purnine & Carey, 1997). Within interpersonal perception, three comparisons are of particular interest: *similarity*, the agreement of partner’s self-ratings; *perceived similarity*, the

agreement between an individual's perception of self and partner; and **understanding**, the extent to which a partner's perception of the other corresponds with the other's self-perception.

Researchers have demonstrated the importance of **interpersonal perceptions** to ► **relationship satisfaction** within a variety of contexts, with diverse content (referred to as the "referent"), and within different types of relationships. First, greater **similarity**, **perceived similarity**, and **understanding** in a wide range of contexts (e.g., conflict resolution, economic decision-making, and medical decision-making) are related to greater marital satisfaction (Acitelli et al., 1993; Gaunt, 2006; Heller & Wood, 1998; Lemay, Pruchno, & Field, 2006). Second, greater **similarity**, **perceived similarity**, and **understanding** of many different referents (e.g., personality characteristics, values, and gender roles) are related to greater relationship satisfaction (Gaunt, 2006; Sillars, Pike, Jones, & Murphy, 1984; Stuckert, 1963). Further, these **interpersonal perception** variables are more important for particularly salient issues (Bochner, Krueger, & Chmielewski, 1982), perhaps because issues that are particularly important to satisfaction within a relationship (e.g., gender roles, attitudes) receive more attention and therefore are more clearly perceived than less-salient issues (White, 1985). One particularly salient issue for relationship satisfaction is the sexual relationship – partners' appraisal of their sexual interaction is of fundamental importance to sexual and relationship satisfaction (Fletcher et al., 2000; Lawrance & Byers, 1995; Smith, Becker, Byrne, & Przybyla, 1993). However, few researchers have investigated **interpersonal perceptions** within the context of sexual interaction or pertaining to sexual desires. Third, the majority of research on **interpersonal perception** has focused on married and cohabiting couples (Heller & Wood, 1998; Lemay et al., 2006; Miller & Byers, 2005; Purnine & Carey, 1997; White, 1985). However, Aron, Aron, and Norman (2000) argued that the cognitive comparisons based on **interpersonal perceptions** that partners use to evaluate their relationship are particularly relevant in early stages of

► **dating relationships** because these comparisons are more accessible. Further, White (1985) asserted that the salience of issues varies depending on the stage of the relationship; couples at the beginning of their relationship may place great emphasis on sexual interaction and desires pertaining to this interaction. However, a review of the literature revealed that, prior to Simms and Byers (2008), no studies had examined **interpersonal perceptions** within a sexual context (i.e., intimate relationships), pertaining to sexual content (i.e., sexual scripts) within dating couples exclusively.

Interpersonal perceptions are also related to sexual satisfaction. Specifically, interpersonal perception research in long-term relationships has examined the discordance between partners' cognitions about a topic as well as their perceptions of each other's cognitions regarding the topic. In their 2005 study, MacNeil and Byers found that women's greater understanding of their partner's nonsexual disclosure was related to greater sexual satisfaction for men, and men's greater understanding of their partner's sexual disclosures – particularly their attention to disclosure of sexual likes – was associated with women's greater sexual satisfaction (MacNeil and Byers, 2005). Further, Purnine and Carey (1997) found that greater sexual satisfaction for married men and women was related to men's but not women's greater understanding of their partner's preferred sexual behaviors. However, prior to Simms and Byers (2008, 2009), the relationship between **interpersonal perceptions** of ideal sexual scripts and sexual satisfaction had not been examined exclusively within short-term dating relationships.

Most couples attempt to arrive at a mutually satisfying **sexual script** that consists of behaviors that are both pleasurable for themselves and those that are pleasurable for their partners (i.e., the combination of two idiosyncratic scripts of sexual likes and dislikes). Socialization practices with respect to traditional gender roles lead to "**traditional sexual scripts.**" The **traditional sexual script** for heterosexual dating relationships prescribes an active, instrumental role for males (i.e., responsible for instigating and

maintaining sexual exchanges) and responsive, restrictive roles for women (i.e., responding and reacting to men's sexual advances) (Byers, 1996). These gender differences would be expected to lead to gender differences in similarity, perceived similarity, and understanding of partners' ideal sexual scripts. Socialization and evolutionary theories align with research (Baumeister, Catanese, & Vohs, 2001; Santtila et al., 2008) which suggests that men have more frequent and intense sexual desires than women do. Further, it would be expected that as the traditional sex script prescribes to men's responsibility for both their own and their partner's pleasure, rejections of sexual advances would be especially salient to them and they should have better understanding of their partner's sexual desires than do women. Past research has shown that, compared to women, men perceive greater similarity between their own and their partner's ideals (Buunk & Bosman, 2001) and are more accurate in their understanding of their partner's desired duration of foreplay and intercourse (Miller & Byers, 2005). The present study extended past research by assessing gender differences in the ideal sexual script (i.e., the desired frequency of sexual behaviors) and partners' perceptions (i.e., similarity, perceived similarity, and understanding) of this script within heterosexual dating couples.

Simms and Byers (2008) performed an interdyadic investigation of **interpersonal perceptions** within dating relationships. In this study, 74 heterosexual couples in dating relationships completed measures of ► [sexual satisfaction](#) and communication and relationship variables from their own and their perceptions of their partners' perspective. Results indicated gender differences within **interpersonal perceptions**; the men rated their own and their partner's sexual relationship as being less rewarding and more costly in comparison to their expectations significantly more than did women. Further, men's greater relationship communication and satisfaction significantly predicted greater accuracy of partner perception. This study identified gender differences in daters'

experience of their sexual relationship and underscored the importance of **interpersonal perceptions** to sexual satisfaction within this population. As greater frequency of engaging in sexual behaviors has been shown to be associated with greater sexual satisfaction (McNulty & Fisher, 2008), Simms and Byers (2009) built upon past theory and research to examine gender differences in similarity, perceived similarity, and understanding of dating partners' ideal frequency of sexual activity. They also examined the association between these interpersonal perception variables and each partner's sexual satisfaction. In keeping with theoretical perspectives and previous research, the hypotheses of the study were as follows:

- (H1) Men would desire more frequent sexual activity than would women.
- (H2) Men would perceive less similarity between their own and their partner's ideal sexual frequency for different behaviors than would women.
- (H3) Both men and women would perceive their ideal sexual behavior frequencies to be more similar than they actually were.
- (H4) Men would have greater understanding of their partner's ideal sexual behavior frequency than would women.
- (H5) Higher sexual satisfaction for both men and women would be associated with greater actual frequency of sexual activity, greater similarity of partners' ideal frequency for sexual behaviors, and men's greater understating of their partner's ideal frequency for sexual behaviors.

Ninety-two Canadian undergraduate students in heterosexual dating relationships and their partners completed a questionnaire assessing how frequently they would ideally engage in 61 sexual behaviors from their own and their partner's perspective and a measure of sexual satisfaction. As predicted (H1), comparisons between partners revealed that compared to the women, the men reported they desired to engage in sexual behaviors more frequently. The men also were more accurate in understanding their partner's ideal sexual script than were women

(H4). However, contrary to prediction (H2 and H3), men perceived their ideals to be more similar to their partner's than women did and both men and women underestimated how similar their ideal sexual behavior frequency scripts were. Finally, interpersonal perceptions were not directly associated with men's or women's sexual satisfaction (H5); however, men and women were more sexually satisfied if the male partner's perceived similarity closely paralleled his partner's ideal sexual behavior frequency preferences.

Discussion

Simms and Byers (2009) extended the interpersonal perception literature by showing that men and women differ in the ways in which they perceive their partner's sexual desires. Thus, to arrive at a mutually pleasurable sexual script, men and women must combine their two idiosyncratic scripts of sexual likes and dislikes despite the likelihood that men's and women's desires as well as their perceptions of their partner's desires may differ. Although they found only limited evidence for the importance of interpersonal perceptions to the sexual satisfaction of dating couples, the results nevertheless suggest the importance of individual's perceptions of themselves and their partners in their experience of and satisfaction with their sexual relationship. Future investigation into the role and mechanism of societal influence upon partner perception of sexual desires within dating couples is warranted. These findings will likely have implications for the formation of mutually enjoyable sexual scripts and potentially the sexual satisfaction and sexual well-being of men and women daters.

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Sexual Disorder

- ▶ [Sexual Dysfunction\(s\)](#)

Sexual Drive

- ▶ [Desire, Sexual](#)

Sexual Dysfunction

- ▶ [Sexual Arousal Disorder](#)

Sexual Dysfunction(s)

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Synonyms

[Sexual disorder](#)

Definition

Sexual dysfunction is a diagnostic term that refers to a recurrent and persistent problem within the sexual response that causes significant personal and/or interpersonal ▶ [distress](#). Sexual dysfunctions are included in both the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association [APA], 2000) and the World Health Organization's International Classification of Diseases (ICD-10; World Health Organization [WHO], 1992). Sexual dysfunctions are categorized based on the phase of the sexual response cycle that is affected: desire, arousal, or orgasm. Although they are not associated with a specific part of this cycle, sexual pain disorders are also classified as sexual dysfunctions.

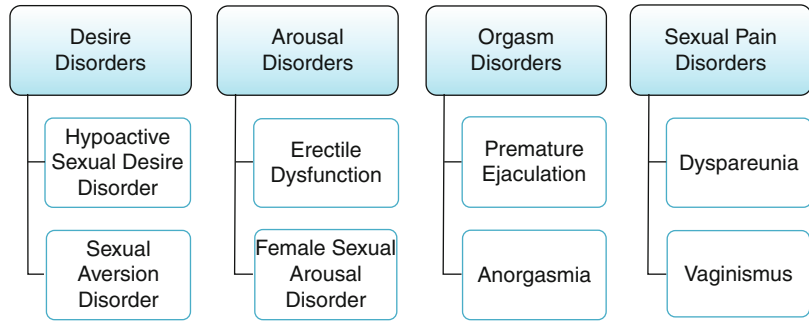
Description

Overview

At the time of writing, the DSM is being revised (see below). However, the current edition, the DSM-IV-TR, includes the diagnoses listed in [Fig. 1](#) (APA, 2000). Sexual dysfunctions are further classified based on their onset (lifelong, acquired) and pervasiveness (generalized, situational). The ICD-10 includes similar diagnostic categories, with slight differences in diagnostic labels (WHO, 1992). Both classification systems differentiate between sexual dysfunction due primarily to physiological versus psychological factors. They also mention that a combination, or interaction, between such factors can

Sexual Dysfunction(s),

Fig. 1 Sexual dysfunctions in the current Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, APA, 2000)



contribute to the development and maintenance of sexual dysfunction.

This latter point is highly relevant in light of current conceptualizations grounded within the biopsychosocial model. Rather than perceiving sexual dysfunction from a dualistic perspective (i.e., as being due to either physiological or psychological factors; see Meana & Jones, 2011), the biopsychosocial model views sexual difficulties as being due to a complex interplay amongst biological, psychological, and social factors. In 2000, a working group of social scientists and clinicians created the New View of Women's Sexual Problems in response to concerns about the medicalization of sexuality, specifically, the DSM-III's focus on genital performance within a linear sexual response model (see Tiefer, 2001). The working group proposed a definition of women's sexual difficulties as "discontent or dissatisfaction with any emotional, physical, or relational aspect of sexual experience" (p. 95). The following four types of factors were highlighted as interrelated aspects of female sexuality from which difficulties may arise: (1) sociocultural, political, or economic factors (e.g., inadequate sexual education); (2) partner and relationship factors (e.g., discrepancy in desire between partners); (3) psychological factors (e.g., past abuse, anxiety); and (4) medical factors (e.g., medical conditions, pregnancy).

DSM

The current emphasis on clinician judgment in the DSM-IV-TR accommodates normative fluctuations in sexual function between and within individuals (APA, 2000). Factors such as age and relationship length impact whether or not an

individual's level of sexual functioning is considered to be clinically significant. Indeed, many individuals experience transient or recurrent sexual difficulties but are not distressed by them, which is a necessary criterion for a diagnosis of a sexual dysfunction in the DSM-IV-TR (APA, 2000).

Proposed revisions for the DSM-V (to be published in 2013) include combining female ▶ **desire** and arousal disorders (▶ **Female Sexual Interest/Arousal Disorder**) and combining the sexual pain disorders ▶ **dyspareunia** and vaginismus (Genito-Pelvic Pain/Penetration Disorder) due to overlap between each set of diagnostic categories in research and clinical practice (Binik, 2010; Brotto, 2010). In addition, increased operationalization of current diagnostic criteria across the majority of diagnostic categories has been proposed. The latter recommendation may aid in standardizing assessment and diagnostic procedures, while putting less weight on clinician judgment.

Prevalence

The above finding regarding distress is highlighted in prevalence research, in which studies that have measured sexual distress along with symptoms of sexual dysfunction have reported lower prevalence rates compared to studies that do not account for distress. One review found that 21–67 % of women experiencing desire, arousal, or orgasm difficulties were distressed by their symptoms (Hayes, Bennett, Fairley & Dennerstein, 2006). A widely cited population-based prevalence study that assessed the presence of sexual problems reported that 31 % of men and 43 % of women had suffered from some form of sexual difficulty over the past 12 months (Laumann, Paik & Rosen, 1999). However, these latter estimates

must be taken in context of some of the methodological limitations of the study. In the Laumann et al. (1999) study, participants answered dichotomous questions about the presence or absence of seven sexual symptoms over the past 12 months, and, as a result, no information about frequency, duration, or distress (among other contextual variables) was obtained.

Etiological Model

Barlow's cyclical model of sexual dysfunction is one etiological framework that has been widely applied to our understanding of these conditions (Barlow, 1986; van den Hout & Barlow, 2000). It theorizes that individuals with sexual difficulties focus on and attend to non-erotic cues when faced with (implicit or explicit) sexual performance demands. Rather than paying attention to erotic cues, they may focus on negative expectations about their performance, body image concerns, and other negative cognitions. Emotions such as ► [anxiety](#) then interact with negative cognitions to inhibit sexual responding. Repeated negative experiences can subsequently lead to avoidance of sexual situations.

Biological, Psychological, and Social Correlates and Quality of Life Effects

In line with the biopsychosocial model, sexual dysfunction has been linked to a number of biological, psychological, and social factors (see Wincze, Bach & Barlow, 2008 for a review). Biological factors include cardiovascular and genitourinary conditions, a number of chronic medical conditions (e.g., cancer, chronic pain, multiple sclerosis, diabetes mellitus), and certain medications (e.g., antidepressants, antihypertensives, and antipsychotics).

Psychological factors have been related to the presence of sexual dysfunction, such as symptoms of ► [anxiety](#) and depression (see Montgomery, Baldwin & Riley, 2002 for a review). The relationship between mental health issues and sexual dysfunction is likely bidirectional in nature. A recent meta-analysis found support for such a bidirectional relationship with depression, whereby experiencing sexual dysfunction was linked to increased risk of clinical depression

and vice-versa (Atlantis & Sullivan, 2012). Relationship difficulties may also co-occur with sexual dysfunction. Inadequate communication and problem-solving within the relationship (including about sexuality), distress about not being able to share a sexual relationship with one's partner, as well as reduced intimacy and affection may all be present in couples where one or both partners experience sexual problems. The relationship between sexual and relationship problems has also been proposed to be bidirectional in nature (e.g., McCabe, et al., 2010).

Assessment and Treatment

It appears that poorer physical, emotional, and relationship well-being are important correlates of sexual dysfunction (e.g., Laumann et al., 1999; Lewis et al., 2004). The examination of predisposing, precipitating, maintaining, and contextual factors in these areas is recommended in the assessment and treatment of sexual dysfunction (McCabe et al., 2010).

In line with Barlow's model and the work of Masters and Johnson (Masters & Johnson, 1970), cognitive-behavioral and behavioral approaches, including ► [sex therapy](#) techniques, have been applied to the treatment of sexual dysfunction. ► [Mindfulness](#) is also increasingly being applied to the treatment of sexual difficulties (e.g., Brotto, 2011). There has also been significant attention paid to the treatment of sexual dysfunction via medical means, such as phosphodiesterase type-5 inhibitors (e.g., Viagra). The medical model has similarly been applied to female sexual dysfunctions in recent years; however, clinical trials for pharmaceuticals aimed at female sexual desire and arousal disorders have not been as fruitful. Consistent with biopsychosocial conceptualizations of sexual dysfunction, it has been recommended that treatment approaches be integrated, with both psychological and medical elements applied (e.g., Meana & Jones, 2011; McCabe et al., 2010).

Cross-References

- [Anxiety](#)
- [Anxiety Disorders](#)

- ▶ [Dating Couples' Sexual Desire Discrepancies](#)
- ▶ [Distress](#)
- ▶ [Dyspareunia](#)
- ▶ [Mindfulness](#)
- ▶ [Mood Disorders and Sexuality](#)
- ▶ [Sex Therapy](#)
- ▶ [Sexual Arousal Disorder](#)
- ▶ [Sexual Functioning](#)
- ▶ [Sexual Interest/Arousal Disorder \(SIAD\)](#)

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Sexual Economics Theory

- ▶ [Sexual Satisfaction and Gender Differences](#)

Sexual Experiences

- ▶ [Sexual Satisfaction and Sexual Costs in Women](#)

Sexual Experiences and Individual Traits

- ▶ [Personal Contributions to Optimal Sexual Experiences](#)

Sexual Functioning

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Synonyms

[Arousal, sexual](#); [Erectile function](#); [Lubrication and sexual functioning](#); [Orgasm](#); [Pain, sexual](#)

Definition

“Sexual functioning” is generally used as an umbrella term to encompass multiple aspects of an individual’s sexual experience. The aspects of sexual functioning are loosely based on the components of the sexual response cycle originally outlined by Masters and Johnson (1970) and expand by Kaplan (1995) and others (Basson, 2001).

Description

Aspects of Sexual Functioning

Sexual Desire: Otherwise known as sexual drive, libido, etc., sexual desire is an individual’s subjective sense of wanting to engage in sexual activity. The inclusion of sexual desire in the sexual response cycle was championed by Kaplan (1995), and initial conceptualizations of sexual desire placed a heavy emphasis on spontaneous desire (beginning *before* sexual activity has begun) and fantasies regarding future sexual contact (e.g., American Psychiatric Association, 2000). More recently, researchers have called for an expansion of our understanding on sexual desire to include desire that is *responsive* or occurring after the initiation of sexual contact (Basson, 2001).

Sexual Arousal: Sexual arousal has traditionally referred to the effects of increased blood flow to the genitals during sexual activity. In men, this process manifests as penile erection whereas the main marker in women is vaginal lubrication, swelling, and tingling. More recent conceptualizations of sexual arousal acknowledge the importance of the distinction between physiological arousal (blood flow to the genitals) and “subjective” arousal, which refers to the degree to which an individual feels “turned on” during sex.

Orgasm: Orgasm has been defined as a “peak sensation of intense ► [pleasure](#) creating an altered state of consciousness usually accompanied by involuntary rhythmic contractions of the muscles... that resolves the sexually induced vasocongestion... usually with an introduction of well-being and contentment” (Meston, Hull,

Levin, & Sipski, 2004). Orgasm is considered the climax of the sexual response cycle, and some women are capable of experiencing multiple orgasms before returning to a baseline level of arousal. In males, orgasm typically involves the ejaculation of semen from the urethral opening of the penis. However, there is some evidence that a small subset of men may exhibit the ability to experience multiple orgasms before returning to baseline arousal and that any orgasms after the first do not include ejaculation of semen.

Sexual Pain: Sexual pain was not initially included as a stage in the sexual response cycle. However, given the relatively high prevalence of sexual pain symptoms in the female population (Hayes, Dennerstein, Bennet, & Fairley, 2008), the construct has been included in most conceptualizations of sexual functioning (Rosen et al., 2000). Sexual pain can occur either during or following intercourse and is sometimes associated with an uncontrollable tightening of vaginal muscles during attempted intercourse. Sexual pain disorders are much more common in women, though pain during intercourse is reported by some men (Laumann, Palik, & Rosen, 1999). Recently, a number of researchers have argued that sexual pain should not be considered an aspect of sexual functioning but rather a specific type of pain disorder (Binik, Meana, Berkley, & Khalife, 1999) and the inclusion of sexual pain within the construct of sexual functioning continues to be controversial.

Nosology of Components of Sexual Functioning

The Diagnostic Statistics Manual (DSM-IV-TR; APA, 2000) of the American Psychiatric Association utilizes these four aspects of sexual functioning to categorize different classes of “► [sexual dysfunction](#).” Sexual dysfunctions outlined in the DSM include hypoactive sexual desire disorder, female sexual arousal disorder, erectile dysfunction, female orgasmic disorder, premature or delayed ejaculation, ► [dyspareunia](#), and vaginismus. In each case, a diagnosis is only warranted when the individual reports both impairment in sexual functioning and significant personal or interpersonal distress.

Currently, dysfunctions in each aspect of sexual functioning are presented as distinct diagnostic categories in the DSM. However, many researchers have questioned whether these aspects of sexual functioning represent distinct phenomena or whether they are interdependent and overlapping, especially in women. In particular, experts have questioned the distinctions between female sexual desire and subjective sexual arousal (Brotto, Bitzer, Laan, Leiblum, & Luria, 2010). Alternatively, much research has suggested the need for additional diagnostic categories, resulting in the recommendations that female sexual arousal disorder be further broken into multiple subtypes to represent the common disconnect between genital arousal and subjective arousal (Basson et al., 2003).

Assessment

Although a comprehensive diagnostic interview including medical and psychological examination is preferred, there are a number of shorter semi-structured interviews available to assess sexual functioning such as the Derogatis Interview for Sexual Functioning (Derogatis, 1997). There are also many validated self-report measures of sexual functioning, the most widely used of which are the International Index of Erectile Function (IIEF; Rosen et al., 1997) and the ► [Female Sexual Function Index](#) (FSFI, Rosen et al., 2000). Both the IIEF and the FSFI include separate subscales assessing sexual desire, sexual arousal, and orgasm. The FSFI also includes two distinct arousal subscales: lubrication (physiological arousal) and subjective arousal.

Sexual arousal is also measurable using direct physiological methods. For women, the most widely used method is vaginal photoplethysmography, which assesses vaginal blood flow by illuminating the inner vaginal wall and measuring the amount of backscattered (reflected) light. The greater the blood flow to the vaginal walls, the greater the amount of backscattered light. For men, the most widely used method is the penile strain gauge, which takes the form of a mercury-filled rubber tube that is placed around the shaft of the penis. As the circumference of the penis grows due to increased blood flow, the

rubber tube will stretch allowing for the measurement of penile growth (more information on the physiological measurement of sexual arousal can be found at www.mestonlab.com).

Prevalence of Impairments in Sexual Functioning

Impaired sexual functioning is quite common in the United States and other countries. Although estimates differ depending on the method of assessment, a number of high-quality epidemiological studies and meta-analyses measuring 12-month prevalence rates have been performed. For women, the most common sexual difficulty appears to be low sexual desire (64 %), followed by difficulties with orgasm (35 %), low sexual arousal (31 %), and sexual pain (26 %) (Hayes et al., 2006). For men, the most common sexual difficulty appears to be premature ejaculation (25 %), followed by erectile dysfunction (7–18 % depending on age), and low desire (16 %) (Laumann et al., 1999). Not all impairments in sexual functioning qualify as “sexual dysfunction” in that they are not associated with significant levels of personal or interpersonal distress (Bancroft, Loftus, & Long, 2003; also see ► [sexual satisfaction and sexual costs in women](#) in the current volume). However, many cases of impaired sexual functioning are very distressing to the individual and his/her relationship, making the treatment of impairments in sexual functioning an important area of continued research (Leiblum, 2007).

Risk Factors for Impairments in Sexual Functioning

Research has identified a large number of risk factors for impairments in sexual functioning. In general, sexual health care providers adopt a “bio-psycho-social” model when outlining the causes of sexual dysfunction as there are multiple, interrelated causal factors in most cases (Leiblum, 2007). Physiological risk factors include heart disease, diabetes, menopause, hormone imbalances (e.g., abnormally low levels of testosterone), chemotherapy, ► [substance abuse](#), a wide variety of medications including selective serotonin reuptake inhibitors (SSRIs), and

a family history of sexual dysfunction. Psychological risk factors include perceived stress, anxiety disorders (e.g., Panic Disorder, Post-Traumatic Stress Disorder), mood disorders such as depression, a history childhood sexual abuse, and cognitive distraction during sexual activity. Social environmental risk factors include negative religious/social messages regarding sex, lack of sexual education, relationship distress, lack of sexual communication, partner's sexual dysfunction, socioeconomic status, and ► [education](#) level.

Cross-References

- [Sex Therapy](#)
- [Sexual Satisfaction](#)
- [Sexual Satisfaction, Self-Esteem, and Assertiveness](#)

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Sexual Identity

- [Same-Sex Behavior and Orientation in England](#)
- [Sexual Orientation](#)

Sexual Impulse Control

- [Compulsive Sexual Behavior Inventory](#)

Sexual Impulsivity

- [Compulsive Sexual Behavior Inventory](#)

Sexual Interest

- [Desire, Sexual](#)

Sexual Interest/Arousal Disorder

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Synonyms

SIAD

Definition

Sexual interest/arousal disorder (SIAD) is a new disorder in the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) to be published in May 2013. It replaces hypoactive sexual desire disorder (HSDD) and female ▶ [sexual arousal disorder](#). It has an expanded definition of low desire that captures the common clinical finding that a more relevant marker of low desire may be the loss of desire to sexual triggers/cues that the woman previously found arousing. This finding is termed “responsive desire.” Women must be experiencing symptoms for a minimum duration of 6 months and experience these symptoms of low or absent sexual interest/arousal as distressing.

Description

The diagnosis of SIAD rests upon a conceptualization of sexual interest/arousal in which sexual response occurs following exposure to sexual stimuli. Therefore, the woman with SIAD must experience some impairment in her ability to respond to effective sexual stimuli. Such difficulties must be present for a minimum duration of six months and must have been present on almost all or all (approximately 75–100 %) sexual encounters. Because fluctuations in sexual interest and arousal may reflect adaptive responses to a particular context or relationship situation, only repeated experiences of sexual interest/arousal

concerns over a prolonged period of time signal the likely presence of SIAD. The rationale for this expanded conceptualization of low sexual desire is reviewed in Brotto (2010) (Graham, 2010).

As reviewed by Meana (2010), there is no single referent, whether physiological, cognitive, or behavioral, that captures the construct of sexual motivation. Sexual motives are independently correlated with sexual behavior (Hill & Preston, 1996), and the SIAD criteria acknowledge that women show tremendous individual variability in how sexual interest and arousal are expressed (Sand & Fisher, 2007). Because sexual desire and arousal frequently coexist and are elicited in response to adequate sexual cues (Laan & Both, 2008), the SIAD criteria recognize that difficulties in desire and arousal often simultaneously characterize the complaints of women (Brotto, 2010; Graham, 2010).

Prevalence

Given that SIAD is a newly proposed disorder for DSM-5, its prevalence is unknown. However, low sexual interest/desire is the most common sexual concern in nationally representative probability studies and is the most frequent complaint in sex therapy clinics (Shifren, Monz, Russo, Segreti, & Johannes, 2008). A SIAD diagnosis requires the woman to experience clinically significant distress or impairment; however, many population-based studies have not adequately measured the distress criterion and instead focus on the prevalence of low desire. This omission has resulted in exaggerated claims such as 43 % of women have a ▶ [sexual dysfunction](#) (Laumann, Paik, & Rosen, 1999). In the “Prevalence of Female Sexual Problems Associated with Distress and Determinants of Treatment Seeking” (PRE-SIDE) study of 31,581 American women aged 18–102 (mean age 49), approximately 10 % of the sample responded “never” or “rarely” to the item “How often do you desire to engage in sexual activity?” and also reported significant sex-related distress (Shifren et al., 2008).

SIAD-Associated Features

There are a number of associated features that go along with a diagnosis of SIAD.

These factors represent the range of variables found to contribute to the development of low sexual interest/arousal. These specifiers include (1) partner factors (e.g., a woman's loss of sexual desire may be secondary to her partner's early ejaculation patterns), (2) relationship factors (e.g., feelings for a partner were found to be the most important predictor of sexual response in large prospective longitudinal studies of women's sexual desire through menopause, e.g., Dennerstein, Leher, Guthrie, & Burger, 2007), (3) individual vulnerability factors (e.g., presence of depressed mood can significantly affect desire for all activities, including sex), (4) cultural/religious factors (e.g., societal expectations about sexual desire set an unrealistic standard against which women feel dysfunctional), and (5) medical/hormonal factors (e.g., reduction in estrogen with menopause may interfere with physical sexual functioning and may negatively impact motivation for sex).

Assessment

The assessment of women with sexual interest and arousal problems is based on three main elements: a structured interview, physical examination, and, to a small extent, laboratory investigation. In evaluating the criteria for SIAD, the clinician must inquire about both frequency and intensity of sexual interest, fantasies/erotic thoughts, pleasure during sex, and physical sensations. The rationale stems from the finding that some women may identify more with how often they do (or do not) experience sexual interest/arousal, whereas other women may recognize changes in the intensity of their experience. The range of sexual stimuli that might elicit a woman's sexual interest and arousal should also be explored, along with her current and past responses to such stimuli.

Treatment

Presently, there are no medications approved by the Food and Drug Administration for the treatment of low desire or arousal. Nonetheless, off-label use of topical testosterone remains widespread, as nearly 4.1 million prescriptions

for off-label testosterone are made annually in the US alone (Davis & Braunstein, 2012). Given the direct causal relationship between low estrogen levels and vaginal atrophy (often associated with negative effects on sexual function), estrogen therapy, unless contraindicated, is the current standard of care for treating vulvovaginal atrophy (Tan, Bradshaw, & Carr, 2012). There has been much interest in centrally acting medications in the treatment of acquired loss of sexual desire (e.g., flibanserin, bupropion,bremelanotide); however, to date, these remain experimental. In the domain of non-pharmacological treatments for SIAD, there is evidence that cognitive behavioral therapy (CBT) strategies that include challenging problematic thoughts and shifting attention allocation through performance-based exercises are effective (Trudel et al., 2001). Following CBT treatment, 74 % of the women no longer met criteria for a sexual desire disorder, and 64 % maintained these improvements at 1-year follow-up. Most recently, a mindfulness-based CBT group treatment has been found effective for low sexual desire and arousal as well as for enhancing genital response (Brotto, Basson, & Luria, 2008).

Impact of SIAD on Quality of Life

Numerous studies have found mood to be affected by sexual desire and arousal concerns. Mood instability and low self-esteem affect the responsivity of the sexual response system, and a history of depression increases the odds of low desire by at least twofold (Laumann et al., 2005). In the "hypoactive sexual desire disorder registry for women" which analyzed cross-sectional data on 1,574 American women living with HSDD, several quality of life parameters were examined (Rosen et al., 2012). In particular, 67.5 % of the sample reported being frequently or always distressed by their low desire, with body image dissatisfaction being reported as a major cause and correlate of women's low desire. However, 69.8 % of the women reported being happy or very happy in their relationship, and 61.8 % reported being satisfied with their level of partner communication.

Cross-References

- ▶ [Sex Therapy](#)
- ▶ [Sexual Arousal Disorder](#)
- ▶ [Sexual Dysfunction](#)

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Sexual Interest/Arousal Disorder (SIAD)

- ▶ [Sexual Arousal Disorder](#)

Sexual Motives and Quality of Life

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Synonyms

[Approach motives, social](#); [Avoidance motives, social](#); [Self-focused approach motives](#); [Self-focused avoidance motives](#); [Sexual scripts](#)

Definition

Until recently, American sexologists generally assumed that young people engage in sexual

activities for one of three reasons (the Big Three): ▶ **love**, a desire for ▶ **pleasure**, and/or a desire to procreate. Recently, however, scholars from a wide range of disciplines have begun to ask: “Why do young men and women engage in sexual liaisons?” and “Why do they avoid such encounters?” As a consequence, we now possess a better understanding of the impact of gender and type of commitment on the motives that spark (or dampen) people’s sexual attitudes and behavior and their impact on participants’ ▶ **quality of life**.

Definitions

Sexual motives can be defined as: “The conscious and subjective reasons that men and women give for participating in sexual activities.” In a comprehensive survey of the scholarly literature, psychometricians have crafted more than 50 test batteries and scales designed to assess people’s motives for engaging in sex and for avoiding sexual encounters. Among the most common sexual motives are love, pleasure, relief from ▶ **stress**, dominance, submission, providing nurturance, partner approval, self-affirmation, recognition, conformity, experimentation/exploration, ▶ **spirituality**, financial gain, jealousy-induction, revenge, and procreation.

Scholars have also assessed peoples’ motives for avoiding sex. These include such things as fear of (a) exposure, (b) abandonment, (c) angry attacks, (d) loss of control, (e) one’s own destructive impulses, and (f) losing one’s individuality or being engulfed. There are other deterrents, too. Many religions consider sex outside of marriage to be immoral. Men and women may worry that if they flout community prohibitions, they may acquire a poor reputation or risk community and family reprisals. Young people may worry about unwanted pregnancies. Sexual encounters can arouse negative emotions such as guilt, shame, ▶ **anger**, regret, and disappointment – especially if sex occurs in the context of coercion and abuse. People contemplating sex may fear disease (contracting STIs and AIDS) if they engage in high-risk behavior, and they are right to be fearful. ▶ **Casual sex** with multiple partners, whether

heterosexual or homosexual, without adequate protection, *is* associated with disease.

Description

Let us now discuss the relationship of gender and commitment on sexual motives, sexual attitudes and behavior, and quality of life.

The Impact of Gender on Sexual Motives

Theorists agree that for cultural, social, and biological reasons, men and women sometimes possess somewhat different sexual motives (Hatfield, Luchhurst, & Rapson, 2010). Cultures promote very different “sexual scripts” for men and women (Hatfield & Rapson, 2005). Men are taught to think of themselves as sexual beings, primarily concerned with physical gratification. Women are taught that premarital sex violates social taboos; they are expected to be the sexual “gatekeepers,” refusing sex until marriage. They are taught that love and commitment should be a major concern. They should be more concerned with their partner’s ▶ **happiness** than their own. There appears to be a grain of truth in these stereotypes.

There is some support for the notion that – be they gay, lesbian, or “straight” – women are often motivated by love and a desire to get psychologically close to another, while men are often more motivated by lust (such as the “She was too hot to resist,” “It felt good,” “I was feeling horny”) in making sexual decisions.

In a recent study, men and women at the University of Hawai’i kept sexual diaries. Immediately after having partnered sex or masturbating, they were asked to fill out a questionnaire indicating why they had chosen to engage in sex on that occasion. The author found that, consistent with predictions, the majority of men indicated that pure pleasure was their primary motive for engaging in sexual activity. A desire to relieve sexual tension and stress and a desire for conquest came next. For the majority of women, a desire for pure pleasure was also their main reason for engaging in sex. Nonetheless, as predicted, they were also slightly more likely to focus on their

partners' needs during sexual encounters. The desire to express emotional closeness, please partner, and partner wanted to were high in the list of motives. We should stress, however, that to the extent that gender differences exist, they are generally far smaller than "common sense" would suggest. There are more similarities than differences between men and women, and gender differences are becoming smaller all the time (see Oliver & Hyde, 1993; Petersen & Hyde, 2010).

Gender and Motives to Avoid Sex. Cultural scripts mandate that men should initiate sexual activity, while women should limit it by saying "No." Not surprising, then, is the fact that young men and women differ somewhat in their reasons for clinging to virginity and refusing to participate in sexual encounters. Men often fail to "make a pass" at women because they fear rejection. Women more often cite a concern with morality and reputation – or (infrequently) a lack of interest or a failure to enjoy sex – as reasons for avoiding sex.

Sexual Motives Change as Relationships Deepen

Men's and women's sexual motives are known to change as casual sexual encounters and affairs turn into more committed relationships and then move into marriage. A young man's goals on a Saturday night in a bar, for example, will differ greatly from his goals after a 50-year marriage and the rearing of a family.

The Young: Casual Sexual Encounters. In one study, Pamela Regan and Carla Dreyer asked college men and women to write an essay describing their motives for participating in casual sexual encounters, such as one-night stands and hookups. Generally, men's and women's reasons for engaging in casual sex were identical. Both emphasized intraindividual factors (e.g., sexual desire, sexual experimentation, physical pleasure, as well as alcohol and drug use) and factors associated with the casual sex partner (e.g., attractiveness and possessing a "sexy" or "hot" persona) as reasons for their short-term sexual encounters. There were a few differences, however. Men were more likely to emphasize social environmental reasons

(e.g., increased status and popularity, conformity to peer group ► norms), whereas women cited interpersonal reasons for casual sex (e.g., hoping their casual fling would evolve into a serious romance).

As Casual Encounters Move to Intimate Ones. As people grow older and/or commit themselves to more loving and committed relationships, their motivations change. Pleasure and a desire for intimacy began to shape their sexual encounters. They also worry less about fear of rejection and fear of STIs and AIDS than do their peers.

As Couples Age. Researchers interviewed couples ranging in age from 22 to 57 years of age. They found that love (as measured by the selection of "I want to show love for my partner" as a reason for engaging in sexual intercourse) began with young women endorsing it more than did men. By 35–40, however, things had begun to change, and by 46–57, men were endorsing that sentiment more than were women. An opposite change occurred for the item "I want a physical release." From youth onward, men endorsed that motive more than did women. In the oldest age group, however, that difference disappeared. The gender differences in desire for love versus pleasure and sexual release seemed to fit the stereotypes. They did, that is, until people got older; by middle age, the gender differences disappeared.

Practical Consequences

Adolescent sex can be a wonderful or a terrible experience. Although a minority of college women (28 %) found their *first* sexual experience to be psychologically or physically satisfying, almost two thirds (61 %) of them rated their more recent sexual experiences as either perfect, very good, or good. What contributes to men and women's ► sexual satisfaction or lack thereof? Researchers argue that two constructs – sexual ► self-concept and the reasons or motives that guide decisions to engage in sex with a partner – are of primary importance. Young women make a distinction between acts taken in pursuit of pleasure ("I was in love, It was romantic, I was ready") and those taken to avoid negative and painful experiences (avoiding conflict,

giving in to a partner's nagging, etc.). Not surprisingly, young women who possess positive self-concepts and who participate in sex for positive reasons are far more likely to feel sexual satisfaction than are their peers.

Willingness to Engage in Risky Sexual Behavior

A few researchers have investigated the relationship between various sexual motives and risky sexual behavior. They ask: "Are sexual motives related to a willingness to risk casual sex with strangers? To a failure to use contraception? To a failure to practice safer sex?" There is compelling evidence that people's sexual motives do matter and that motives do shape people's sexual choices and experiences in theoretically meaningful ways.

Lynne Cooper and her colleagues (2011) proposed that "people use sex to achieve different goals, and that these differences shape the experience and expression of their sexuality" (p. 2). They argued for a four-motive typology:

1. *Self-focused approach motives* (such as having sex to enhance emotional or physical pleasure)
2. *Self-focused avoidance motives* (such as having sex to cope with threats to ► **self-esteem** or to deal with ► **anxiety**, depression, or fear)
3. *Social approach motives* (such as having sex to express love or to get closer to a loved one)
4. *Social avoidance motives* (such as having sex to avoid peer censure or partner anger)

Those who have sex for approach reasons are, by definition, seeking a positive or rewarding outcome – be it a physically enjoyable experience or a closer connection with their partner. Consistent with this logic, love, intimacy, and relationship enhancement motives have been found to be associated with positive feelings about sex, frequent intercourse, and higher levels of sexual satisfaction. In contrast, people who have sex for avoidance reasons are, by definition, seeking to minimize, avoid, or escape such unpleasant feelings as a bad ► **mood**, feelings of inadequacy, or feared rejection by those they care about. Such a negative orientation toward sex

has been found to take a toll on the quality of social interactions and to inhibit the development of intimate bonds. Not surprisingly, then, avoidance motives are strongly associated with negative responses to sex and are (often) correlated with low frequency of sex and low levels of sexual satisfaction.

Avoidance motives are also likely to lead to maladaptive promiscuous and risky sexual behavior. Cooper and her colleagues, in a study of community-residing adolescents and young adults, found that young people who were high in coping motives (using sex to manage unpleasant emotions) had more sex partners, had more casual liaisons, and engaged in more risky sex than did their peers. Those who were high in partner approval motives (having sex to placate partners) reported more casual and risky sex partners, a greater failure to use reliable birth control methods, and higher rates of unplanned pregnancies. All of which, the authors assumed, were a consequence of their fear of asserting themselves and risking their partner's wrath.

These same people were interviewed 1½ years later (along with their partners). The typical couple had been together for an average of 2½ years. The authors found that men who were high in a composite measure of avoidance motives were more likely to "cheat" on their partners, had more casual and risky extra-pair sex partners, and employed more coercive sexual tactics with their partners. Women who were high in self-affirmation (avoidance) motives also reported significantly more casual and risky extra-pair sex partners.

The Cooper team has also found that self-versus social motivations provoke different kinds of choices. People who are primarily motivated by intimacy needs tend to view sexual contact as appropriate only in the context of an emotional relationship and thus generally restrict themselves to a single, committed sex partner. The authors also find that in general high-intimacy motive people are less promiscuous and less risky than their peers. They drink alcohol less often in conjunction with sex, use more effective birth control, and experience (marginally) lower rates of unplanned pregnancies.

What about those who choose to have sex out self-focused enhancement motives? These are people who report stronger thrill and adventure-seeking needs, more unrestricted attitudes toward sex (as evidenced by their greater willingness to have sex with casual, uncommitted partners), and have more sex partners, especially casual sex partners, than their peers. In fact, such people engage in a pervasive pattern of sexual risk-taking. They drink more often in conjunction with sex and are less likely to use condoms, birth control pills, and IUDs, relying more on rhythm methods, withdrawal, and no protection at all, in spite of the fact they have more casual sex partners. Finally, and not surprisingly, they also have higher rates of both STIs and unplanned pregnancies.

Individuals high in internal avoidance measures (those who, say, have sex to reassure themselves that they are desirable or assuage their anxiety) tend to be ambivalent about sex – they both desire and like it, but also experience a host of negative emotions in conjunction with it. In contrast, those who are high in social avoidance motives do not appear to find sex rewarding, but use it primarily as a way to avoid social costs.

Conclusions

When scanning the research literature, it is evident that scholars are often unaware of other theorists' work. This is not surprising. The researchers we have cited hailed from a variety of disciplines, possessed a diversity of theoretical models, posed a variety of questions, attempted to answer them in very different ways, and published their results in different journals. It is hoped that this review may help facilitate a conversation between present-day researchers and ease attempts to bring some unity to their competing theorizing, constructs, measures, and reporting styles. There is actually a great deal of research on sexual motives in the literature.

There is yet another reason why, on first glance, the scholarly research described here may feel a bit overwhelming in its complexity. These days, the United States, like the rest of the world, finds itself swept up in breathtaking historical and social changes. No surprise then that

attitudes and beliefs about sexuality are in flux and thus difficult to summarize. Thumb through an *Introductory History* book, and you will be struck by the social revolutions that have transpired – they started slowly and then gathered speed. For example, many (r)evolutions in the 1500s and 1600s impacted sexuality: the Protestant Reformation; the Catholic Counter-Reformation; the Age of Enlightenment; and the “invention” of marriage for love rather than family or practical reasons.

And in more recent times: Margaret Sanger offering families information about family planning. Alfred Kinsey providing Americans with a glimpse into the realities of sexual behavior. A Jewish émigré, Carl Djerassi, inventing the birth control pill. (For the first time men and women could engage in sexual activity without worrying about pregnancy.) Gloria Steinem and Betty Friedan's promoting the Women's Liberation Movement. The Sexual Revolution of the 1960s and 1970s, young people chanting: “Make love, not war.” The global village created by worldwide communication, computers and satellites, information exchange, travel, and trade. The appearance of AIDS and the STIs, casting a pall over the idea of casual sex.

What do all these changes mean for men and women's sexual activities, feelings, and behavior? How do they affect the complexity of the results we have reported?

1. American's ► **values** seem to be in such flux. Many traditionalists still cling to the old values; modern-day pioneers are embarking on new adventures. Young people seek pleasure and get hurt; they resolve to do things differently the next time; they do or they do not. No surprise then that today a confusing array of values exists out there. People may embark on sex for one reason in their 20s, discover that their life does not suit them, and seek out other gratifications (and attempt to avoid other pains).
2. Men and women's sexual values and motives seem to be becoming increasingly similar.
3. People seem to possess a surprising array of reasons for participating in sexual activity – far more reasons for choosing to engage in

sexual activity than in former times. They do in fact participate in more sexual activity than heretofore.

4. Sexual activity may be in process of becoming demystified. Instead of the mystery, fear, anxiety, and sacralization that have surrounded sexual activity for so many centuries, that activity seems to have become “no beeg teeng,” as we say in Hawai’i. What that means for society and for individuals is anyone’s guess. And the exponential growth of cybersex and pornography further clouds the crystal ball.

At this stage, we conclude by saying that the expansion of possible motives for having sex probably *is* a big thing and that we are well advised to take that expansion seriously and try to come to grips with it, to understand it as one of our planet’s most important new developments and one of the most important influences on quality of life.

In this review, we discovered that men and women may indeed choose to engage in sexual activities for a plethora of reasons. Hopefully, a knowledge of people’s sexual motivations can assist scholars in gaining an understanding of sexual fantasy, masturbation, and sexual activity in general and the contribution of these motives to one’s quality of life. An awareness of one’s partner’s sexual motives may also facilitate communication. Given differences in the meanings that people assign to sex, misunderstandings are inevitable. An understanding of the diversity of sexual motives may help reduce conflict in romantic relationships. Finally, information as to how gender, personality, and sexual motives effect sexual behavior – especially risky sexual behavior – may assist ► [public health](#) officials in crafting messages and programs designed to reduce young people’s risky sexual behavior.

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Sexual Offender

- [Sex Offender\(s\)](#)

Sexual Orientation

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Synonyms

[Bisexual](#); [Gay persons](#); [Heterosexual](#); [Homosexual](#); [Lesbian](#); [Minority status, sexual](#); [Same-sex attraction](#); [Sexual identity](#); [Preference, sexual](#)

Definition

A basic definition of sexual orientation is the preferred sex of our sex partners, whether of the same sex (homosexual, gay, or lesbian), opposite sex (heterosexual), or both (bisexual) (Levay, 2011). A broader definition of sexual orientation includes three components: romantic attraction, sexual behavior, and sexual orientation identity (Savin-Williams, 2006).

While related to one another, these three components of sexual orientation are not perfectly correlated.

Description

The relation between sexual orientation and psychological well-being is a topic of long-standing and controversial interest. Indeed, Freud himself famously wrote a letter reassuring a mother that her son's homosexuality was not a sign of psychological dysfunction, although he indicated that psychoanalysis could help homosexuals cope with problems adjusting to their sexual orientation. While Freud's position on this topic was nuanced, early investigations typically assumed that psychological dysfunction was either a precursor to or an inevitable consequence of same-sex attraction (e.g., Bieber et al., 1962). More recent investigations hypothesize that reduced psychological well-being among sexual minorities is not inherent or inevitable, but rather, it is a consequence of societal prejudice against sexual minorities (e.g., Meyer, 2003). To provide an overview of the history and current status of theory and research on the relation between sexual orientation and psychological well-being, we first outline definitions of sexual orientation, then examine theories about how and why sexual minority status might be associated with reduced well-being, and then review research findings from population-based investigations of the association of sexual orientation with well-being. Finally, although most research on the well-being of sexual minorities has focused on documenting harm and challenges, we examine a growing body of evidence that examines how coping resources, sources of support, and resilience factors can buffer sexual minorities from the negative effects of stigma.

Definitions of Sexual Orientation

A basic definition of sexual orientation is the preferred sex of our sex partners, whether of the same sex (homosexual, gay, or lesbian), opposite sex (heterosexual), or both (bisexual) (Levay, 2011). A broader definition of sexual orientation

includes three components: romantic attraction, sexual behavior, and sexual orientation identity (Savin-Williams, 2006). While related to one another, these three components of sexual orientation are not perfectly correlated.

When evaluating research on sexual orientation, it is important to consider how sexual orientation is operationalized. While heterosexuality is, by far, the most common sexual orientation, the prevalence of sexual minorities (i.e., gay, lesbian, bisexual) can differ dramatically depending on how sexual orientation is measured. In population-based research that focuses on sexual orientation identity, 1–3 % identify as a member of a sexual minority (Mosher, Chandra, & Jones, 2005), numbers which increase to 4–6 % if questions address rates of same-sex sexual behavior or to as high as 20 % if questions address romantic attraction (Savin-Williams, 2006). The broad range of operationalization stems from consideration of sexual orientation in terms of biological factors (Bem, 1996; Levay, 2011), social factors (Bem, 1996), and gendered patterns (Diamond, 2003).

In the last century, same-sex attraction and behavior were thought to represent an immature form of sexuality reflecting stunted psychological development (Bem, 1993), and, until 1973, homosexuality was listed as a mental illness in the Diagnostic and Statistical Manual of the American Psychiatric Association. Although recent research reviews document higher rates of mental health problems and lower levels of well-being among sexual minorities compared to heterosexuals (e.g., Hatzenbuehler, 2009), sexual minority status is not considered a mental disorder. Current research on the association of sexual minority status with well-being focuses on the consequences of ► [stigmatization](#) and ► [prejudice](#) for the well-being of sexual minorities (e.g., Meyer, 2003).

Theory: Sexual Minority Status, Stigmatization, and Well-being

Theory suggests numerous potential contributors to negative attitudes about sexual minorities. For example, nonheterosexual identities threaten cultural norms of dichotomous gender classification

(i.e., gender polarization) and patriarchy (i.e., androcentrism), leading to defensive backlash against those identifying with nonheterosexual identities (Bem, 1993). Other factors, such as specific moral beliefs, fear or misunderstanding of sexuality, and a lack of contact with sexual minority individuals, are also associated with negative attitudes toward sexual minorities (Herek, 2000). These negative attitudes have been referred to as homophobia, although more recent theorizing has suggested a shift to a social psychological perspective, focusing on the stigma and prejudice of these attitudes (Herek, 2004).

Stigmatization of sexual minority status can be experienced across the lifespan, from childhood and adolescence (D'Augelli, Pilkington, & Hershberger, 2002) to older adulthood (Brotman, Ryan, & Cormier, 2003). Experiences of stigmatization may also differ by sex, as prejudice against sexual minority men tends to be more severe than toward sexual minority women (Kite & Whitley, 1998).

Sexual minority identity is considered a concealable stigma, in that it is not as visually salient as race or gender, and can therefore be hidden and selectively disclosed. Given the stigma associated with sexual minority identity, concealment may seem adaptive. However, the vigilance required to conceal a stigmatized identity can lead to preoccupation and anxiety about the negative consequences of disclosure (Pachankis, 2007). This preoccupation can be cognitively taxing with negative consequences for health and well-being.

The stigma of sexual minority identity can be considered at distal levels (e.g., sexually prejudiced policy or cultural norms; Hatzenbuehler, 2011), proximal levels (e.g., negative interpersonal interactions), and at levels in-between (e.g., hate crime victimization that enforces cultural norms through interpersonal violence; Herek, Gillis, & Cogan, 1999). The minority stress model (Meyer, 2003) outlines how these distal and proximal processes act on an individual to create stress related to sexual minority identity. For example, persistent negative societal cues that sexual minorities are

inferior contribute to a sense of alienation from society (i.e., anomie). Consistent with symbolic interaction theory, negative evaluation expressed in personal interaction becomes internalized and leads to negative self-evaluation. These distal and proximal processes are internalized as a negative self-concept as a sexual minority, often referred to as internalized homophobia.

Stable interpersonal relationships and belongingness are fundamental for psychological well-being and physical health, and these fundamental needs are undermined by the negative self-image associated with internalized homophobia and the sense of isolation created by sexual stigma. Substantial evidence reveals that internalized homophobia has a negative impact on social integration and well-being, with higher rates of anxiety, depression, and suicidality among sexual minorities compared to heterosexuals. Those with higher levels of internalized homophobia are less likely to disclose their sexual orientation, feel less connected to the sexual minority community, and have worse mental health than those with lower levels of internalized homophobia (Herek et al., 1997).

To summarize, stigmatization of sexual minority status stems from negative attitudes with multiple sources and occurs across the lifespan. Sexual minority individuals are faced with the added challenges of coping with a concealable stigma. The minority stress process is the result of chronic and acute external events that create expectations for further negative experiences and which lead to the internalization of negative social attitudes (Meyer, 2003) and, ultimately, decreased well-being.

Research: Reduced Well-being in Sexual Minority Adults

Drawing on a population-based sample of men in the United States between the ages of 17 and 39 years ($n = 3,348$), the association of sexual minority status with suicidality (e.g., suicidal thoughts, attempts) and affective disorders (e.g., depression, mania) has been examined (Cochran & Mays, 2000a). Sexual minority status was assessed as having had any male sex partners (3.6 %). Compared to heterosexual men, sexual

minorities had higher rates of suicidality (e.g., 19 % of sexual minorities, compared to 3 % of heterosexuals, reported attempted suicide). The two groups did not significantly differ in affective disorder prevalence.

In another study with a population-based sample of both men and women aged 18 years and older ($n = 9,908$), behaviorally defined sexual minority status (i.e., same-sex sex partners; 2.4 % for men and 1.6 % for women) was associated with higher rates of experiencing any psychiatric condition (e.g., major depression, panic attack, drug dependency). The authors emphasize that over 70 % of the sexual minority participants experienced no psychiatric conditions (compared to approximately 85 % of heterosexual participants who experienced no conditions) (Cochran & Mays, 2000b).

Perceived discrimination was examined as a potential explanatory factor in the association between sexual minority status and mental health disorders (Mays & Cochran, 2001). In addition to increased psychiatric disorder in the past year, worse self-reported mental health, and higher levels of stress, compared to heterosexual adults, sexual minority adults were also more likely to report higher levels of lifetime and day-to-day discrimination. This association between sexual minority status and worse mental health was mediated by perceived discrimination (Mays & Cochran, 2001).

In sum, research with population-based samples (which overcome the methodological limitations of studies drawing on clinical and convenience samples) suggests higher rates of distress among sexual minorities as compared to heterosexuals. Discrimination has been shown to play a role in this association. Although there are risk factors for sexual minorities, these are likely associated with the consequences of stigmatization; the well-being of most sexual minority adults is not significantly different from heterosexual adults.

Enhanced Well-being of Sexual Minority Adults: Coping, Support, and Resilience

In contrast to research on the negative impact of stigmatization on well-being, most sexual

minorities are resilient and successfully adapt to the challenges they may face. Greater attention is being focused on protective factors for sexual minority youth and adults, including supportive policies, social support from friends and family, disclosure of sexual identity, and individual difference factors like self-esteem.

Policy that supports the relationships of sexual minority adults has improved their well-being. In a study of 239 adults in same-sex relationships, those with legal recognition of their relationships in the form of a domestic partner registry were less affected by the negative impact of stress on life satisfaction than those without legal recognition of their relationships (Fingerhut, & Maisel, 2010). Other policies, such as workplace antidiscrimination policies supportive of sexual minority employees and endorsed by upper management, promote job satisfaction, reduce job stress, and lead to less negative work-home spillover for sexual minority employees (Day & Schoenrade, 2000).

Having a stronger sense of belonging to the gay and lesbian community has been shown to buffer sexual minorities against perceived stigma (Fingerhut, Peplau, & Gable, 2010). Close and supportive friendships are often as strong as kin relationships and defined as *fictive kin* or *families of choice* (Muraco, 2006). In addition to friendships, coworkers, and other social ties, romantic relationships are an important source of well-being for sexual minorities: a longitudinal study of heterosexual and same-sex couples showed that gay men were no different from heterosexual couples in their levels of intimacy, but lesbians had higher levels of intimacy and greater equality in their relationships (Kurdek, 1998).

In another study of over 80 sexual minority men and women, disclosure of sexual identity was associated with greater life satisfaction due to greater perceived social support (Beals, Peplau, & Gable, 2009). Although sexual minority youth who disclose their sexual identities to family sometimes experience rejection, research has shown that when families are accepting there are improvements in well-being and physical health (Ryan, Russell, Huebner, Diaz, & Sanchez, 2010).

A study of over 500 sexual minority adults showed that they found that their experiences of successfully dealing with marginalization gave them a unique perspective and helped develop empathy, sense of self, and commitment to social justice (Riggle, Whitman, Olson, Rostosky, & Strong, 2008).

In sum, although research over the past few decades has outlined the challenges and harm experienced by sexual minorities, there is growing evidence of resilience, sources of support, and factors that enhance well-being.

Cross-References

- ▶ [Prejudice](#)
- ▶ [Sexual Behavior\(s\)](#)
- ▶ [Stigmatization](#)

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Sexual Orientation and Mental Health

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Synonyms

Health status measurement and sexual orientation; Homosexuality, health aspects; Mental health and sexuality; Suicidal behavior; Surveys on sexual issues; Youth

Definition

In the past 15 years, many large-scale, random probability, and representative health surveys have been adding sexual orientation items to their questionnaires. Using data from those surveys, studies have examined the association

between sexual orientation and mental health. That research has reached a strong conclusion: Sexual minorities (persons who are attracted to the same sex, have romantic or sexual behaviors with the same sex, and/or self-describe themselves with a nonheterosexual sexual identity) are more likely to experience mental health problems than heterosexuals.

Description

Research on ► [sexual orientation](#) and mental health in the past 15 years has been focused on establishing whether sexual minorities (persons who are attracted to the same sex, have romantic or sexual behaviors with the same sex, and/or self-describe themselves with a nonheterosexual sexual identity) are more likely to experience mental health problems compared to heterosexuals. Two methodological improvements have occurred that allowed researchers to firmly establish that sexual minorities indeed experience higher rates of mental health problems than heterosexuals.

The first methodological improvement is that sexual orientation questions were incorporated in epidemiological surveys with random probability designs. The earliest health survey that had a random probability design and asked sexual orientation questions was the 1987 Adolescent Health Survey in Minnesota. Remafedi and colleagues (1998) found that sexual minority youth reported higher rates of suicide intents and attempts compared to heterosexual youth.

Many state-level and nationwide health surveys with random probability designs in the 1990s and 2000s started to add sexual orientation questions to their survey instruments. Studies analyzing data from these surveys revealed sexual orientation differences in mental health problems. In studies that used adolescent samples, sexual minority youth are more likely to experience mental health problems such as suicide thoughts and attempts and illegal drug use than heterosexual youth. In studies that use adult samples, sexual minority adults are more likely to experience mental health disorders such as

mood, anxiety, and drug addiction problems compared to heterosexual adults. The vast majority of these studies used samples from the United States. Very few studies used samples outside the United States, such as in Mexico, Norway, the Netherlands, or the United Kingdom.

The second methodological improvement in the study of sexual orientation and mental health is obtaining large samples of sexual minorities. While random probability designs in many early epidemiological surveys helped obtain more representative samples of sexual minorities, the number of sexual minorities in these surveys was very small, with many studies reporting less than 100 sexual minorities. Large-scale surveys like the National Longitudinal Study of Adolescent Health, the National Epidemiologic Survey on Alcohol and Related Conditions, and the California Health Interview Survey provide samples of 1,000 sexual minorities or more, which are more representative of sexual minorities in the United States compared to smaller samples of sexual minorities in earlier epidemiological surveys. In utilizing data from these large-scale surveys, studies in the 2000s and 2010s found with greater confidence that sexual minorities report more mental health problems like depression, posttraumatic stress disorder, and drug dependence compared to heterosexuals.

Studies analyzing data from health surveys with random probability designs and large samples of sexual minorities have firmly concluded that sexual minorities experience higher rates of mental health problems compared to heterosexuals. The next step in research is to identify the risk factors that contribute to sexual orientation differences in mental health problems. It would be ideal that the identification of risk factors would be conducted in health surveys with random probability designs and large samples of sexual minorities. But considering the expense of adding more questions to large-scale surveys, the process of identifying risk factors that explain sexual orientation differences in mental health problems may take a longer time than the process of establishing rates of mental health problems between sexual orientation groups. Few risk factors have been identified using ideal health

surveys with random probability designs and large samples of sexual minorities. Sexual minorities are more likely to experience childhood maltreatment and adult victimization than heterosexuals, which puts sexual minorities at greater risk for drug problems and posttraumatic stress disorder (Hughes, McCabe, Wilnsack, West, & Boyd, 2010; Roberts, Austin, Corliss, Vandermorris, & Koenen, 2010). Sexual minorities report lower levels of social support from parents than heterosexuals, which puts sexual minorities at greater risk for depression than heterosexuals (Needham & Austin, 2010; Teasdale & Bradley-Engen, 2010; Ueno, 2005). These very few studies of risk factors highlight the need for more health data and analyses that could identify more risk factors that could explain sexual orientation differences in mental health problems.

Cross-References

- ▶ [Child Maltreatment: Sexual Abuse](#)
- ▶ [Health Status Measurement](#)
- ▶ [Post-traumatic Stress Disorder \(PTSD\)](#)
- ▶ [Sexual Orientation](#)

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Sexual Satisfaction

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Synonyms

Health, sexual; Sexual functioning; Sexuality

Definition

Sexuality represents a significant part of human living, which entails both biological and psychosocial parameters (Amidu, Owiredu, Gyasi-Sarpong, Woode, & Quaye, 2011; Hansen, Mann, McMahon, & Wong, 2004). The term is not limited to the capacity for sexual intercourse and reproduction but describes a broader experience, which also includes the development of an integrated ► [body image](#), gender identity and self-identity, and the ability to form satisfying, reciprocal relationships (Hordern & Street, 2007). The World Health Organization defines sexual health as “the experience of the ongoing process of physical, psychological and sociocultural well-being related to sexuality” (Pan American Health Organization & World Health Organization. Promotion of sexual health: recommendations for action, 2000). It becomes apparent that normal sexual functioning is a multidimensional construct that entails physiological processes such as lubrication, orgasm, erection, and ejaculation and more complex emotional-cognitive concepts including sexual desire, arousal and satisfaction, and the interpersonal context of sexual

intimacy. In this respect, sexual satisfaction can be conceptualized as a physiological condition of physical enjoyment and an emotional state of major fulfillment as a result of sexual activity or fantasy. Given that sexual activity in humans can be motivated by factors other than the purely physical sexual instinct, the presence of an active sexual life and a high frequency of sexual intercourse do not always reflect a high level of sexual satisfaction (Stephenson, Ahrold, & Meston, 2011). People frequently emphasize the presence of intimate, secure relationships as the base of a satisfied sexual life. Although not identical, the terms sexuality, sexual health, and sexual functioning are frequently used interchangeably.

Description

Despite its great significance, until recently, sexuality was rather neglected in the field of modern science and research. At the dawn of the twentieth century, Sigmund Freud was the first to systematically address sexuality issues in a thorough, scientific manner, and his writings emphasize their critical role as a primary human instinct and a fundamental motive of human behavior (Freud, 1905). However, his work was dealt with a great amount of skepticism by his contemporaries, and for many decades, the study of human sexuality remained at the boundaries of formal science. It seems that the discussion around sexuality has traditionally triggered deep-rooted social prejudice, along with strong, hard to deal with feelings of guilt and embarrassment.

In the last decades, in the field of medicine and the other human sciences, there is a growing awareness that sexuality represents a promising yet unexplored field for research. Data from physiological studies have revealed that sexual satisfaction is influenced by complex neuroendocrine processes which include neurotransmitters, sex hormones, and limbic and higher-order cortical functions (Buvat et al., 2010; McKenna, 2001). The presence of physical illness seems to disrupt these processes and lead to sexual

dysfunction. Several investigations have linked sexual dysfunction to diabetes mellitus and other endocrinopathies, cardiovascular disorders, inflammatory bowel disease, neurological disorders, kidney and liver disease, obesity, and cancer and to adverse effects of certain medical treatments (Umanskiy & Fichera, 2010; Verschuren, Enzlin, Dijkstra, Geertzen, & Dekker, 2010; Chen, Zhang, & Tan, 2009; Clayton & Ramamurthy, 2008). In addition, psychosocial parameters such as emotional states, beliefs and perceptions, social influences, and ► [sexual orientation](#) appear to play a role in sexual health (Belfield, 2007). Low levels of sexual satisfaction are commonly reported by patients suffering from psychiatric morbidity such as affective and psychotic disorders, ► [substance abuse](#), and personality disorders (Zemishlany & Weizman, 2008). These findings suggest that sexual dysfunction may constitute sign or symptom of a chronic physical or mental illness that could guide diagnosis and should not be discarded in the clinical practice as useless or irrelevant (Zemishlany & Weizman, 2008; Jeffery et al., 2009).

Research has repeatedly correlated sexual functioning with patients' well-being and quality of life (QoL), and sexual health emerges as a distinct parameter of quality of life that merits special attention (Basson, 2010). Given that QoL represents an end point of major significance both for research and clinical practice, healthcare professionals begin to acknowledge sexual morbidity as a target of investigation and possible intervention (Blagbrough, 2010; Audette & Waterman, 2010). When treatment strategies are currently evaluated, not only their efficacy in relieving symptoms and increasing survival is assessed but also their impact on sexual health. For example, the treatment of prostate, breast, and gynecological cancer has been linked to sexual dysfunction and poor QoL (Jeffery et al., 2009; Audette & Waterman, 2010; Vrzackova, Weiss, & Cibula, 2010). In a similar vein, psychotropic medications commonly have a negative impact on patients' sexual desire which may limit their clinical usefulness, especially in young populations (Serretti & Chiesa, 2011). In this respect, the effect of treatment modalities on

sexual health should always be considered when designing therapeutic strategies.

Given that sexuality is a complex phenomenon, its accurate and objective assessment represents a rather challenging task. Several instruments have been used to address the various dimensions of sexual functioning, including visual analogue scales, self-report questionnaires, and semi-structured interviews. There are gender-specific and disease-specific instruments addressing unique patterns of sexual functioning and generic instruments that allow comparisons between different patient populations (Verschuren, Enzlin, Dijkstra, Geertzen, & Dekker, 2010; Rizvi, Yeung, & Kennedy, 2011). In a recent review, Rizvi, Yeung, & Kennedy, 2011 give a detailed account of all available sexual assessment tools and their psychometric properties. Data from numerous studies agree that the associations between the multiple dimensions of sexual functioning and clinical and demographic variables are not uniform. For example, women commonly present with a circular sexual response, they appear more vulnerable to sexual dysfunction, and their satisfaction is largely correlated with interpersonal factors, while men report a linear sexual response, mainly determined by biological parameters (Amidu, Owiredu, Gyasi-Sarpong, Woode, & Quaye, 2011; Rosen & Barsky, 2006). Moreover, elderly individuals report lower levels of sexual desire and satisfaction and higher rates of sexual dysfunction (Rizvi, Yeung, & Kennedy, 2011; Lindau, Gavrilova, & Anderson, 2007). For this reason, research is currently focusing on the development of well-designed, sophisticated tools to detect these subtle, yet clinically significant differences.

Recent investigations in various clinical populations, including cancer patients and elderly individuals, have shown that most patients are deeply concerned of sexuality issues and attribute great importance to being able to discuss them openly with healthcare personnel (Jeffery et al., 2009; Lindau, Gavrilova, & Anderson, 2007; Mick, 2007; Wilmoth, 2007). However, they rarely do so spontaneously, if not properly encouraged by their physicians or

nursing staff. An earlier study of cancer survivors revealed that addressing sexual problems as part of a standard clinical evaluation is associated with lower sexual morbidity (Lindau, Gavrilova, & Anderson, 2007). In addition, in other relevant studies, chronic patients report great dissatisfaction with services received for sexual health, despite their own eagerness to discuss their sexual difficulties (Hordern & Street, 2007; Lindau, Gavrilova, & Anderson, 2007; Stead, Brown, Fallowfield, & Selby, 2003). Healthcare personnel are often reluctant to ask patients about sexual health due to lack of time, feelings of embarrassment, and lack of expertise knowledge (Stead, Brown, Fallowfield, & Selby, 2003). This is especially true in the case of elderly patients and sexual minorities such as homosexuals. As a consequence, patients' sexual needs are ignored, sexual problems remain undetected, and patients are deprived of appropriate care. Researchers on the field of sexual health and QoL strongly encourage healthcare professionals to become familiar with all health-related aspects of sexuality and incorporate sexual assessment in their routine clinical practice during patients' evaluation and decision making (Hordern & Street, 2007; Blagbrough, 2010).

Most researchers and clinicians agree that the management of sexual dysfunction should be based on the ► [biopsychosocial model](#). Several therapeutic strategies have been tested and yielded promising results both for men and women, including medications, surgical interventions, psychotherapy sessions, lifestyle modifications, and alternative treatments. However, in most cases, there is a need for a combined, integrated treatment which would address both medical and psychosocial aspects of the problem in order to optimize outcomes (McCabe et al., 2010).

In conclusion, sexuality is a significant parameter of QoL strongly associated with physical and mental health. Satisfaction with sexual life is determined by an interplay of biological, psychological, and sociocultural factors. Chronic patients appear vulnerable to low levels of sexual satisfaction and increased rates of sexual dysfunction, thus making sexual assessment and

intervention an essential component of everyday clinical practice. In recent years, researchers are focusing on the study of sexuality in an attempt to further delineate its correlates, clarify possible etiological mechanisms, and devise proper interventions.

Cross-References

- [Body Image](#)
- [Sexual Dysfunction](#)
- [Sexual Functioning](#)
- [Sexual Orientation](#)
- [Sexuality](#)

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Sexual Satisfaction and Gender Differences

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Synonyms

[Distress, sexual](#); [Sex differences](#); [Sexual economics theory](#); [Well-being, sexual](#)

Definition

Sexual satisfaction has been defined as an “affective response arising from one’s subjective evaluation of the positive and negative dimensions associated with one’s sexual relationship” (Byers, 1999, p. 98). The question of how sexual satisfaction differs between men and women has been addressed by numerous scientific studies in a variety of ways. Most straightforwardly, a number of researchers have examined mean differences between men and women’s sexual satisfaction scores based on self-report questionnaires. In essence, do men or women report being more satisfied with their sex lives? An equally important and more complicated question is whether there are gender differences in the predictors of sexual satisfaction. In other words, do men and women differ in the factors that determine their level of sexual satisfaction?

Description

Several studies assessing a wide range of populations have examined simple gender

differences in ► [sexual satisfaction](#). While some researchers have found no difference between genders in terms of satisfaction levels (Byers, Demmons, & Lawrance, 1998; Henderson-King & Veroff, 1994), many studies have shown that women tend to report higher levels of sexual satisfaction than men on average. This finding has been replicated in multiple countries including the United States (Purdon & Holdaway, 2006), Great Britain (Dunn, Croft, & Hackett, 2000), and France (Colson, Lemaire, Pinton, Hamidi, & Klein, 2006) and across a variety of samples including undergraduates (Sprecher, 2002) and representative population samples (Dunn et al., 2000). Theorists have offered a number of potential reasons for these gender effects including differences in sexual entitlement and expectations (McClelland, 2010), but there is little scientific research that explicitly tests these factors and whether they account for gender differences in sexual satisfaction.

In addition to simple gender differences, a number of studies have examined the predictors of sexual satisfaction and whether these predictors differed by gender. In general, researchers have found that women's sexual experiences tend to be more dependent on the relational context than are men's (Petersen & Hyde, 2010). As such, it is not surprising that relational factors tend to be a strong predictor of sexual satisfaction for women, often more so than for men. For example, ► [marital satisfaction](#) tends to be highly predictive of sexual satisfaction in women (Hurlbert & Apt, 1994), and factors such as marital equity (Henderson-King & Veroff, 1994) and communication (Bridges, 2000) have been found to be more predictive of sexual satisfaction for women than men. However, large-scale reviews suggest that sexual and marital satisfaction are at least as strongly related for men as for women (Karney & Bradbury, 1995), suggesting that the relational context of sex is strongly connected to sexual satisfaction for both genders.

However, another interesting finding is that in heterosexual relationships, variables related to women's experiences tend to be better predictors

of sexual satisfaction for both women *and* their partners than do variables related to men's sexual experiences. For example, Habke, Hewitt, and Flett (1999) found that wives' perfectionism had a negative effect on both wives' and husbands' sexual satisfaction, whereas husbands' perfectionism was unrelated to either. Similarly, Larson, Anderson, Holman, and Niemann (1998) found that wives' ► [self-esteem](#) and communication were the best predictors of sexual satisfaction for both wives and their husbands. These findings are generally in line with theories such as sexual economics theory (Baumeister & Vohs, 2004), which conceptualize women in heterosexual relationships as sexual "gatekeepers" who exercise relatively greater control over the frequency and quality of sexual interactions than do their male partners.

One recent study by Stephenson, Ahrold, and Meston (2011) exemplifies the overall pattern of findings described above. In this study, data from 544 male and female undergraduates were analyzed to determine which types of sexual motivations (i.e., reasons for engaging in sexual activity) were predictive of sexual satisfaction and whether these motives differed by gender. In general, female participants reported slightly higher levels of sexual satisfaction than did males. Though this difference was not statistically significant, it was consistent across three separate measures of subjective sexual well-being. Also, a number of sexual motives were associated with sexual satisfaction for both men and women. Importantly, sexual motives related to improving the quality of the overall relationship were predictive of higher sexual satisfaction for both men and women, with the effect being slightly stronger for men. However, a wider range of sexual motives predicted sexual satisfaction for women as compared to men. Additionally, the relationship between sexual motives and satisfaction was more consistent in women. These findings reflected wider trends in the literature by showing (a) a slightly higher level of sexual satisfaction in women, (b) the general importance of the wider relationship to predicting the sexual satisfaction of both genders, and (c) the relatively greater importance of variables related

to women's experiences in predicting sexual satisfaction.

Discussion

There is some indication that men and women may differ in both their level of sexual satisfaction and the factors that determine how satisfied they are. Future research that examines proximal causes of these differences would be helpful in answering the question of *why* men and women differ in these ways. Additionally, research in a wider range of cultures and in the context of nonheterosexual relationships will be essential in determining whether these differences are a function of gender or of western heterosexual cultural norms or some combination of the two.

Cross-References

- ▶ [Personal Contributions to Optimal Sexual Experiences](#)

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Sexual Satisfaction and Sexual Costs in Women

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Synonyms

[Distress, sexual](#); [Interpersonal exchange model of sexual satisfaction \(IEMSS\)](#); [Sexual experiences](#); [Subjective sexual well-being](#)

Definition

The term “sexual satisfaction” has often been used as an umbrella term to refer to many distinct constructs over the past 50 years including aspects of subjective sexual well-being and physical aspects of sexual experiences such as orgasm (Lorenz, Stephenson, & Meston, 2011).

Currently, ► **sexual satisfaction** is understood as “an affective response arising from one’s subjective evaluation of the positive and negative dimensions associated with one’s sexual relationship” (Byers, 1999, p. 98). This concept is similar, but not analogous, to terms such as subjective well-being regarding one’s sex life and sexual distress (Stephenson & Meston, 2010a).

“Sexual costs” are a component of the Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers, 1992) which refer to aspects of one’s sexual experiences that are “costly” or detrimental to the individual’s sense of satisfaction with his/her sex life.

Description

Worldwide, ► **sexual satisfaction** has been rated as a very important aspect of people’s lives (Mulhall, King, Glina, & Hvidsten, 2008) and is related to ► **self-esteem** (Hally & Pollack, 1993), depression (Zajecka et al., 2002), ► **anxiety** (Minnen & Kampman, 2000), ► **relationship satisfaction** (Byers, 2005), and marital stability (Karney & Bradbury, 1995). But, despite its importance, scientists know relatively little regarding the factors that determine an individual’s level of sexual satisfaction. While a number of correlational studies have been published (e.g., Dunn, Croft, & Hackett, 2000; Haavio-Mannila, & Kontula, 1997), there are relatively few organized theories of sexual satisfaction (and sexuality in general), making it difficult to integrate findings across studies.

One potentially useful model of sexual satisfaction is the Interpersonal Exchange Model of Sexual Satisfaction (IEMSS) which posits that sexual satisfaction is a function of (a) the balance of sexual rewards and sexual costs in

the relationship, (b) the way that sexual rewards and costs compare to one’s expected level of sexual rewards and costs, (c) the perceived equality of sexual rewards and costs between partners, and (d) the quality of the nonsexual aspects of the relationship (Lawrance & Byers, 1992). The authors of the model include the following instructions for conceptualizing sexual rewards and costs:

Think about your *job*.

If you’re like most people, you can give concrete examples of positive, pleasing things you like about your job. These are “rewards.”

Most people can also give concrete examples of negative, displeasing things they don’t like about their job. These are “costs.”

Now, instead of thinking about your job, think about the rewards and costs associated with your sexual relationship with your partner.

The IEMSS has been supported in a number of studies (Byers & MacNeil, 2006; Lawrance & Byers, 1992), however, relatively little research has identified the specific aspects of one’s sexual experiences that are most rewarding/costly and for whom.

One of the most important sexual costs may be impaired sexual functioning (Lawrance & Byers, 1995). ► **Sexual functioning** includes sexual drive/desire, sexual arousal, orgasm, and sexual pain (Rosen, Brown, Leiblum, Meston, & Shabsigh, 2000). Despite the general importance of sexual functioning (Hurlbert, Apt, & Rabehl, 1993), a number of recent studies have highlighted the fact that many instances of impairments in sexual functioning (e.g., low sexual desire, difficulty reaching orgasm) are not clinically distressing for women (Ferenidou et al., 2008). In fact, a number of studies suggest that the association between sexual functioning and subjective sexual well-being is quite complex, with the two being strongly associated in some cases and weakly associated in others (Stephenson, Hughtan, & Meston, 2012). These findings suggest that impaired sexual functioning may represent an important sexual cost for some women, but not others.

For example, Stephenson and Meston (2010b) found that low sexual desire was significantly

associated with distress only for women who exhibited low levels of adult attachment anxiety (i.e., the degree to which an individual fears abandonment in his/her romantic relationships). In general, it seemed that nonsexual aspects of the relationship, such as emotional intimacy, were more important than sexual functioning for women with higher levels of attachment anxiety. Given these findings, Stephenson and Meston (2011) utilized the IEMSS theoretical framework and hypothesized that impaired sexual functioning would represent an important sexual cost for women who exhibited low levels of attachment anxiety, but not for those who exhibit high levels of attachment anxiety. They tested this hypothesis using a sample of 200 undergraduate women at The University of Texas at Austin. Using a conditional indirect effect model (Preacher, Rucker, & Hayes, 2007), they found that sexual functioning accounted for the association between sexual costs and sexual satisfaction for women with low and average levels of attachment anxiety, but not for women with high levels of attachment anxiety. These results are in concordance with their 2010 study suggesting that sexual functioning may be less influential in determining levels of sexual satisfaction for anxiously attached women. In IEMSS nomenclature, the findings suggest that while difficulties with sexual functioning may represent a key cost that is detrimental to sexual satisfaction for many women, some women may be less concerned with impaired sexual functioning. For anxiously attached women especially, the quality of the nonsexual aspects of relationships may far outweigh the more physical components of sexual interactions.

Discussion

The Stephenson and Meston (2011) study represents only a first step in outlining the complex association between sexual functioning and sexual satisfaction in women but suggests that the IEMSS framework may be useful in integrating various findings regarding this

association. Given the fact that many therapeutic interventions meant to improve the quality of one's sex life focus on improving sexual functioning (e.g., cognitive-behavioral therapy, testosterone injections), it is essential to improve our understanding of when improvements in sexual functioning may improve subjective well-being and when they may not. Two recent studies highlight the importance of understanding this relationship. Stephenson, Rellini, & Meston (2013) found that relationship satisfaction moderated the association between changes in sexual functioning and changes in sexual distress over the course of cognitive-behavioral sex therapy. Specifically, women who were satisfied with their overall relationships at pretreatment experienced improved subjective well-being in response to improved sexual functioning, while women who were dissatisfied with their relationships at pretreatment experienced *increased* distress regarding sex when their sexual functioning improved. In other words, women in dissatisfying relationships did show improved levels of sexual desire, sexual arousal, and orgasm over the course of treatment, but these women were actually worse off in terms subjective well-being as a result. A separate study suggested that treatment-induced improvements in levels of sexual arousal were not necessarily viewed positively by women with a history of childhood sexual abuse (Berman et al., 2001), suggesting that treatments aimed primarily at increasing sexual arousal may be less appropriate for this population.

These findings underscore the fact that impaired female sexual functioning, while very important in many cases (Hurlbert et al., 1993), is not necessarily the primary factor influencing levels of sexual satisfaction for all women. In the language of the IEMSS, difficulties with sexual functioning may represent a key sexual cost only for some women. For other women, the sexual costs that make their sexual interactions unsatisfactory may include lack of emotional intimacy, impairments in their partner's sexual functioning, or any number of other factors.

Given the complexity of the association between sexual functioning and sexual satisfaction, a theoretical model outlining this relationship would be useful. This model would ideally not only explain when sexual functioning and sexual satisfaction are strongly related, but why. In other words, a model of the association between sexual functioning and sexual satisfaction would account for both the moderators of this association (the contexts in which sexual functioning and well-being are strongly or weakly linked) and mediators of this association (the mechanisms through which sexual functioning affects subjective well-being). A number of moderators have already been identified. While correlated on average, sexual functioning and subjective sexual well-being appear to be weakly related in a number of contexts:

1. In relationships characterized by high levels of intimacy, especially for women who are anxiously attached (Stephenson & Meston, 2010b)
2. For women with a history of childhood sexual abuse (Stephenson, Hughan & Meston, 2012)
3. For older women as compared to younger women (Rosen et al., 2009; Stephenson & Meston, 2012)

To fully utilize these findings regarding moderators of the association between sexual functioning and subjective well-being, we must understand the mechanisms through which they function. Research is needed examining potential mechanisms including the immediate consequences of impaired sexual functioning on sexual experiences (e.g., decreased pleasure, negative partner affect) and attributions regarding the impaired sexual functioning (e.g., Is the impairment viewed as permanent or temporary?). The ultimate goal of this research is the construction and validation of a theoretical model that will allow us to predict when and how impairments in sexual functioning are detrimental to an individual's sexual satisfaction and quality of life. In the language of the IEMSS, we hope to discover not only when impaired sexual functioning is an

important sexual cost but, more generally, to outline how impaired sexual functioning and other factors come to be interpreted as costly.

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Sexual Satisfaction in Rheumatoid Arthritis Patients

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Description

Sexual health is a state of physical, emotional, mental and social well-being related to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and ► [violence](#). For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled (World Health Organization, 2001).

Sexuality is a basic human right and a fundamental part of a full and healthy life (World Association for Sexual Health, 2008). Sexuality or ► [sexual functioning](#) are broad terms encompassing social, emotional, and physical components which also include ► [self-esteem](#) and ► [body image](#). For most healthy men and women, sexuality is central to their lives and contributes to their personal and relational ► [quality of life](#) (Laumann et al., 2005). Sexuality can be influenced by the interaction of biological, psychological, social, economic, political, cultural, ethical, legal, historical, religious, and spiritual factors (World Health Organization, 2001). Byers study (2005) demonstrated that related to ► [sexual satisfaction](#), ► [relationship satisfaction](#), and communication, and Carvalho and Leal (2008) stated that in healthy women the most important determinants of sexual satisfaction were (a) to feel desired for the partner, (b) to received attention of the partner, (c) to be able to satisfy the partner.

Chronic diseases, with their biological, psychological, and social effects, affect not only patients' bodily functions but also their lifestyle. Sexual problems are also one of the problems

which can develop in cases of chronic disease. A great deal of research has been conducted on sexual problems and dysfunction, and results show that sexuality can be influenced by chronic conditions, such as multiple sclerosis (Akku & Duru, 2011), various types of cancer (Can, 2004), and rheumatic diseases (Akkus, Nakas, & Kalyoncu, 2010). From recent literature it can be assumed that sexual problems within this group are more prevalent than among healthy participants, caused directly by sexual dysfunction because of the disease or its treatment, or indirectly by adjustment problems, resulting in lower levels of sexual esteem, sexual satisfaction, mutual sexual activity, and higher levels of sexual depression (Sipski & Alexander, 1997).

Such as many chronic diseases, rheumatic diseases affect a person's sex life, and studies demonstrated that rheumatoid arthritis, ankylosing spondylitis, scleroderma, sjögren syndrome, and systemic lupus erythematosus affect sexual life negatively (Akkus et al., 2010; Knafo, Haythornthwaite, Heinberg, Wigley, & Thombs, 2011; Tristano, 2009). The reasons for disturbing sexual functioning in rheumatic diseases are multifactorial and comprise disease-related factors as well as therapy (Tristano). The physiological and psychological aspects of these factors include ► **pain**, ► **fatigue**, stiffness, functional impairment, depression, ► **anxiety**, negative body image, reduced libido, hormonal imbalance, and drug treatment.

Changes in the skin may also cause patients to develop a negative body image. Sexual problems created by both the physical changes of the illness and its attendant emotional distresses affect not only people with rheumatic diseases but also their partners (Tristano).

Rheumatoid arthritis (RA) is a systemic autoimmune disease characterized by chronic inflammation of the synovial joints leading to progressive joint destruction, disability, pain, fatigue, loss of work, and psychological ► **distress** (Helland et al., 2005), and also RA has a negative impact on many aspects of affected individuals' lives by severe to slight (Ovayolu et al., 2012). Currently, with ever more effective anti-inflammatory and disease-modifying

treatments available, it is unfortunate that the available treatment options do not completely treat RA. It leads to various degrees of disability and ultimately has a profound impact on the social, economic, psychological, and sexual aspects of the patient's life (Ehrlich, 1983).

The percentage of patients with RA who experience sexual problems ranged in various studies from 21 % to 62 % (Abdel-Nasser & Ali, 2006; Akku et al., 2010; Helland, Dagfinrud, & Kvien, 2008; Hill, Bird, & Thorpe, 2003; Kobelt et al., 2012). RA causes problems for both men and women, but it may cause more problems for men (Hill et al., 2003). RA can influence sexual function due to several reasons, like other chronic diseases. Sexual health difficulties due to RA can include decreased sexual arousal, decreased sexual desire, and decreased satisfaction (Josefsson & Gard, 2010). Studies of factors that influence sexuality in patients with chronic diseases have distinguished primary effects, that is, sexual difficulties related directly to the disease process itself; secondary effects, in which the symptoms of the disease cause sexual difficulties; and tertiary effects, related to the psychological and social impact of the disease (Clayton & Balon, 2009). Primary sexual problems may appear in the form of pain, changes in immune response due to the nature of the disease, hormonal changes, and a decrease in the woman's libido due to drugs (methotrexate). Additional problems include a decrease in vaginal lubrication, orgasm intensity and frequency, satisfaction, erection problems, and changes in ejaculation in men (Heikkila et al., 1998; Østensen et al., 2004). Secondary problems may develop due to fatigue (Garip, Eser, Aktekin, & Bodur, 2011), limitations in movement, difficulty in changing position, and side effects of drugs (Abdel-Nasser & Ali, 2006; Tristano, 2009). Tertiary problems related to psychosocial, emotional, and cultural reasons may include negative body image, depression, anger, isolation, guilt, and distress at becoming dependent upon others. Kraaimaat et al. (1996) found that physical disability, pain, and depression all contribute to the intrusiveness of RA on sexuality. The Akku et al. (2010) study determined that sexual satisfaction of RA patients in the

post-disease period decreased, and sexual satisfaction decreases as disease activity increases. Kobelt et al. (2012) stated that RA patients' age, gender, living alone, ► [physical function](#), and mood were significant predictors for being sexually active for patients. Ylmaz et al. (2012) found that presence of depressive symptoms with RA and increased disease severity increase the degree of sexual dysfunction. Helland et al. (2008) stated that higher levels of fatigue, mental distress, functional limitations, lower levels of ► [self-efficacy](#), and male gender were independently associated with perceived problems with sexual activity. In addition, drugs such as methotrexate, cyclophosphamide, chlorambucil, and leflunomide and women's fear of pregnancy may cause sexual problems. Some drugs such as naproxen and diclofenac may affect male libido, and methotrexate and naproxen may affect ejaculation (van Berlo et al., 2007).

The Østensen et al. study (2004) found that since the sexual problems of individuals with rheumatic diseases responded well to treatment, more attention can and should be given to providing patients with solutions to the problems they experience in this important area of their lives. As with other chronic diseases, the sexual problems for RA patients are often not correctly evaluated and diagnosed by health-care professionals. (Ryan & Wylie, 2005). In fact, it is most unfortunate that many health-care personnel do not or cannot acknowledge the fact that individuals with chronic disease may have a sexual life (Gill & Hough, 2007). These same beliefs are also held by many patients, their spouses, and relatives (El Miedany, El Gaafary, El Aroussy, Youssef, & Ahmed, 2012). However, while being given health-care service, there is consensus about handling the patients' sexual choice (Haboubi & Lincoln, 2003). Therefore, training in human sexuality and sexual counseling training should be a priority and a requirement for health-care professionals. Furthermore, the sexual problems and sexual satisfaction levels of RA patients should be evaluated regularly by health-care service providers.

There is not a standard measurement tool to measure and assess sexual problems and sexual

satisfaction in RA patients; however, the literature indicates that many measurement tools are available. The Sexual Health Inventory for Men and Female Sexual Function Index for Women (El Miedany et al., 2012) and the Health-Related Quality of Life (HRQoL) instrument 15D (Helland et al., 2008), with four ascending scores ranging from complete ability to complete inability to engage in sexual intercourse (Abdel-Nasser & Ali, 2006), have been used to evaluate sexual satisfaction using the Visual Analog Scale (Akkus et al., 2010). Questions were also prepared to help assess patients' sexual problems. We suggest that specific scales need to be developed to evaluate both sexual satisfaction and sexual difficulties in RA patients.

Since there seems to be no consensus on how to determine the existence of sexual problems in RA patients, there is also no fully developed program for treating these issues. Examination of the literature reveals that RA patients with sexual problems are counseled in the same way as patients with other chronic diseases.

In evaluating changes in a patient's sexual life, consideration should be given to the fact that sexual problems may have existed before the onset of the illness. During the evaluation a suitable environment should be provided so that the patient and spouse may freely express their feelings about their sexual relations and problems. Psychological distress and ► [social support](#) are additional predictors of marital and sexual satisfaction in RA patients and their spouses (Lankveld et al., 2004). Therefore, couple support should also be provided for RA patients. A sexual history should be obtained after the patient's routine evaluation and after the medical history of the patient has been taken. In order to open communication with the patient, certain questions can yield important information. These questions could include the following: "has RA put a strain on your relationship"; "have you had any difficulty with pain in your sexual relationship"; and "have you and your spouse discussed the effects of arthritis on sexual or other relations?" (Bands, 2007; Ruffing, 2006).

The complex topic of sexuality encompasses not only physiological but also psychosocial aspects, which make it very difficult to diagnose

and discuss sexual issues with individuals suffering from chronic diseases. Studies have shown that health-care professionals have difficulties in dealing with the topic of sexuality as related to the patients in their care (Dyer & das Nair, 2012). Reasons for this include a lack of accurate information, their own attitudes which consider the topic as too personal or as a taboo, and feelings of embarrassment. This becomes even more complicated when patients are not willing to share their own feelings about sexuality (Dyer & das Nair, 2012).

To effectively help RA and other patients in their care, health personnel should examine their own beliefs and ► **attitudes** about sexuality, and they should cultivate a nonjudgmental attitude when discussing this sensitive topic with their patients.

Open communication in the early phases of RA can help patients to overcome fears and accept possible solutions to any sexual problems in their lives. Patients can feel more at ease when they understand that sexual problems are very common. During communication, the health-care provider can present the issue as follows: “many people with arthritis experience sexual problems. Have you ever experienced any problems affecting your sexual relations?” (Bands, 2007; Ruffing, 2006).

Evaluating sexual problems in patients is missing as a part of holistic care. It should be stressed that the patients should be encouraged to continue to enjoy an active and a satisfactory sexual life, and this should be considered a very important part of their overall health.

Adapted from Ruffing (2006) and Bands (2007).

Box 1 A Rheumatoid Arthritis Patient’s Guide to Improving Sexual Function

1. Open communication between partners:
 - Be honest with your partner about feelings, desires, and sexual needs.
 - Address each other’s fears of physical harm.
 - Discuss each other’s willingness to redefine intimacy through new

positions, sexual aids, and different techniques.

It has been explained that sexuality isn’t only sexual intercourse, also kissing and touching are a part of sexuality.

2. Use tactile communication:

Kissing, caressing, petting, or massage may help restore lost intimacy and assist in helping both partners relax.

Some couples may want to try using the hands or mouth to help achieve orgasm.

Making of foreplay.

3. Environmental factors:

Plan blocks of time within your regular schedule when both of you are relaxed and comfortable.

Make sure that you get rest ahead of time. Avoid cold temperatures by taking a warm bath or shower before sex.

Warm the bed by replacing cotton sheets with flannel sheets, or turn on an electric blanket for a few minutes before getting into bed.

Notice about clothing, appearance, and hygiene.

Use suitable preservation methods not to abstain from sexuality due to being afraid of pregnancy.

Take precautions about avoiding infections before and after sexual relations because the likelihood of infections may increase due to drugs.

4. Medications:

Take pain medications at least 30 min before sexual activity.

Discuss any possible sexual side effects of medications with a health-care professional.

Water-based lubricants may be helpful given the presence of vaginal dryness.

Using of sildenafil on men.

5. Pain:

Sexual intercourse shouldn’t be practiced in this period because there may be pain in the active periods of the disease.

Support the joints with towel or pillows in the form of rolls.

Use relaxation methods to reduce pain.

Decide the most suitable position that will not increase pain with couples.

The partner is being more active because movement increases pain.

Some information can be given about surgical methods to reduce pain.

6. Other suggestions:

Providing of fluid intake on the patients having vaginal dryness during intercourse.

During intercourse, making respiratory and coughing exercises to both prevent respiratory problems and provide relaxation.

Because of the drugs such as steroid and nodules, body image and skin integrity can be deformed. Therefore, the partners shouldn't make hard activities and be thoughtful for the patient.

Making time for relaxation after sexual activity.

Cross-References

- ▶ [Components of Optimal Sexual Experiences](#)
- ▶ [Lessons About Optimal Sexual Experiences from Remarkable Lovers](#)
- ▶ [Mood Disorders and Sexuality](#)
- ▶ [Personal Contributions to Optimal Sexual Experiences](#)
- ▶ [Relational Contributions to Optimal Sexual Experiences](#)
- ▶ [Relationship Contingency and Sexual Satisfaction](#)
- ▶ [Sexual Behavior\(s\)](#)
- ▶ [Sexual Satisfaction](#)
- ▶ [Sexual Satisfaction and Gender Differences](#)
- ▶ [Sexual Satisfaction and Sexual Costs in Women](#)
- ▶ [Sexual Satisfaction, Self-Esteem, and Assertiveness](#)
- ▶ [Women's Sexual Satisfaction Predictors](#)

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Sexual Satisfaction, Self-Esteem, and Assertiveness

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Synonyms

Communication, sexual; Pleasure, sexual; Sexual functioning; Well-being, sexual

Definition

Sexual satisfaction is usually defined as the degree of concordance and satisfaction in a person's sexual relationship. Sexual assertiveness is a specific aspect of sexual communication defined by a person's ability to communicate sexual needs and initiate sexual behaviors with a partner. Sexual self-esteem has been defined as a person's affective reactions to the subjective appraisals of his or her sexual thoughts, feelings, and behavior.

Description

The experience of ► [sexual satisfaction](#) within a romantic relationship is associated with an

increased sense of well-being (Taleporos & McCabe, 2002) and better physical health (Whipple, Knowles, Davis, Gianotten, & Owens, 2007). Greater levels of sexual satisfaction are also positively correlated with higher ► **relationship satisfaction** (Byers, 2005; Cupach & Comstock, 1990), which is itself associated with better health and well-being for both partners (Horwitz, White, & Howell-White, 1996). However, to date, a significant proportion of the research on sexual satisfaction has been devoted to identifying the factors that detract from or reduce this experience (e.g., illnesses, injuries, sexual dysfunctions) rather than promote it. However, a few factors that contribute to sexual satisfaction have been identified at both the individual and relational levels. Greater sexual satisfaction has been correlated with higher ► **self-esteem** in women (Larson, Anderson, Holman, & Niemann, 1998). Sexual satisfaction within romantic relationships shows strong, positive correlations with good communication about nonsexual subjects (Byers & Demmons, 1999; Cupach & Comstock, 1990), good sexual communication (Bridges, Lease, & Ellison, 2004; Byers & Demmons, 1999; Ferroni & Taffe, 1997; Haavio-Mannila, & Kontula, 1997; MacNeil & Byers, 1997), and high satisfaction with sexual communication (Cupach & Comstock, 1990).

Researchers studying the connections between sexual satisfaction and sexual communication have tended to equate sexual communication with sexual self-disclosure, usually defined as the degree to which a participant has disclosed his or her preferences regarding specific sexual techniques (e.g., kissing, oral sex, intercourse) to his or her partner (e.g., Byers & Demmons, 1999; MacNeil & Byers, 1997). However, self-disclosure represents one very specific aspect of sexual communication. Sexual assertiveness, defined as a person's ability to communicate sexual needs and initiate sexual behavior with a partner (Shafer, 1977), has not been investigated in conjunction with sexual satisfaction. Instead, research on sexual assertiveness has tended to focus on its role in negotiating safer sex behaviors.

Some research suggests that greater sexual assertiveness may be associated with greater

sexual ► **pleasure**. For women, higher levels of sexual assertiveness correlate with greater satisfaction with sexual intercourse (Bridges et al., 2004; Ferroni & Taffe, 1997), greater number of orgasms experienced (Ferroni & Taffe, 1997), as well as greater frequency of sexual activity and higher sexual excitability (Hurlbert, 1991). Only one study has investigated the relationship between these variables in a mixed sample (Haavio-Mannila & Kontula, 1997), with results showing an association between sexual assertiveness and finding intercourse pleasurable for both men and women. Given the connections that exist between sexual assertiveness and variables related to sexual satisfaction, it seemed likely that higher levels of sexual assertiveness would predict greater sexual satisfaction.

Despite research showing the importance of sexual communication for sexual pleasure and satisfaction, very little research has been done to identify the contributors to sexual communication for pleasure. Instead, research has focused on variables that contribute to sexual communication for the purposes of safer sex behaviors. However, there are distinct differences between sexual assertiveness for the purpose of safer sex behaviors (e.g., "Please use a condom.") and sexual assertiveness for the purpose of pleasure (e.g., "I like it when you do that, please do it more.").

Sexual self-esteem has been defined by Zeanah and Schwarz as one's affective reactions to the subjective appraisals of one's sexual thoughts, feelings, and behavior (1996). As with sexual satisfaction, previous research tends to focus on how sexual self-esteem can be negatively impacted by certain life experiences (e.g., physical disabilities, illness, infertility). A few studies have suggested that there might be a positive correlation between sexual self-esteem and sexual adjustment (Hale & Strassberg, 1990) or sexual functioning (Mona et al., 2000). However, there had been no research focused specifically on the relationship between sexual self-esteem and sexual satisfaction.

Sexual assertiveness involves being able to go beyond disclosing a sexual preference to actively making requests from a partner and initiating behaviors, an act that by its very nature incurs

much greater interpersonal risks (i.e., rejection) than disclosure alone. Therefore, it seems logical that individuals who feel greater sexual self-esteem are more likely to show higher levels of sexual assertiveness, a finding that has been demonstrated empirically by Oattes and Offman (2007) who found an association between these variables in a community sample.

Given the connections in the literature between higher levels of sexual assertiveness and greater satisfaction with orgasms and intercourse as well as between higher levels of sexual self-esteem and greater sexual adjustment, a study was conducted to elucidate the relationship between sexual self-esteem and sexual satisfaction and to determine how sexual assertiveness affects that relationship (Ménard & Offman, 2009). The choice of sexual assertiveness as a mediator between sexual self-esteem and sexual satisfaction was informed by findings from longitudinal studies, which suggest that improved sexual communication leads to greater sexual satisfaction (Markman, Renick, Floyd, Stanley, & Clements, 1993).

The research sample consisted of 71 community volunteer participants, 25 men and 46 women, who were recruited via poster announcements and e-mail flyers sent to organizations of interest. Participants ranged in age from 19 to 56 years ($M = 27.65$, $SD = 9.22$); most identified themselves as Caucasian (91.5 %) with a minority identifying themselves as being of African descent (2.8 %), Asian descent (2.8 %), or "other" (2.8 %). There was a fairly even balance between those who were "not currently dating but had had a serious relationship in the past" (19.7 %), those who were "casually dating" (19.7 %), and those who were "seriously dating but not living together" (22.5 %). The remaining participants were "seriously dating and living together" (12.7 %), "married" (14.1 %), or "married with children" (11.3 %).

Individuals who wished to participate were mailed a package containing a questionnaire booklet and return envelope (with postage prepaid). The booklet contained a one-page informed consent form explaining the purpose of the study and its requirements as well as a guarantee of

anonymity/confidentiality. A one-page debriefing form was provided at the end of the booklet. Sexual satisfaction was operationalized using the *Index of Sexual Satisfaction* (Hudson, Harrison, & Crosscup, 1981) which assesses the level of sexual satisfaction within a romantic relationship. Sexual assertiveness was measured using the *Sexual Assertiveness Scale* (Shafer, 1977). The sexual self-esteem scale employed in the present investigation was the *Sexual Self-Esteem Inventory* developed by Zeanah and Schwarz (1996) to measure sexual self-esteem in women, a scale has also been validated for use with male participants. Previous research had established that each of these measures showed good psychometric properties in terms of ► [reliability](#) and validity.

The results of independent sample *T*-tests showed no significant differences in scores on any measure between men and women, except for one subscale of the sexual self-esteem measure, the moral judgment subscale, on which women were likely to achieve higher scores than men. Strong correlations were observed between all three variables of interest: sexual self-esteem and sexual assertiveness ($r = .60$, $p < .01$), sexual ► [self-esteem](#) and sexual satisfaction ($r = .58$, $p < .01$), and sexual assertiveness and sexual satisfaction ($r = .62$, $p < .01$). A ► [mediation analysis](#) was conducted to determine whether sexual assertiveness mediates the relationship between sexual self-esteem and sexual satisfaction. Results supported a partial mediation effect whereby individuals who experienced greater sexual self-esteem also demonstrated higher levels of sexual assertiveness, which led to greater sexual satisfaction. However, sexual self-esteem remained a strong predictor of sexual satisfaction even once its contribution to sexual assertiveness has been accounted for; therefore, the relationship between these two variables is not purely accounted for by the effect of sexual self-esteem on sexual assertiveness. An alternative mediation analysis was conducted; results showed that sexual self-esteem acted as a partial mediator in the relationship between sexual assertiveness and sexual satisfaction, meaning that individuals with higher sexual assertiveness also demonstrated

greater sexual self-esteem, and, in turn, greater sexual satisfaction. There was still a relationship between sexual assertiveness and sexual satisfaction once sexual self-esteem has been considered.

Discussion

Results from Ménard and Offman (2009) suggested that individuals who feel better about themselves as sexual beings may feel more able to assert themselves sexually with a partner, which increases their experience of sexual satisfaction. However, it also appeared to be the case that being able to assert oneself with a partner leads to feeling better about oneself sexually, which leads to greater sexual satisfaction. In both mediation models, sexual assertiveness and sexual self-esteem remained independent predictors of sexual satisfaction even once the relationship to each other had been accounted for. Altogether, these results suggest that there may be a significant and beneficial “ripple effect” for someone who experiences an increase in either their sexual self-esteem or their sexual assertiveness. Longitudinal research would be necessary to clarify the direction of causality between these variables. It might also be valuable to conduct experimental research in which participants could be randomly assigned to educational groups that would focus on increasing either sexual self-esteem or sexual assertiveness.

In both cases, the proportion of variance accounted for by the correlation between these two variables was quite high, suggesting an important relationship between sexual self-esteem and sexual satisfaction and between sexual assertiveness and sexual satisfaction. Results showing a strong, positive correlation between sexual self-esteem and sexual satisfaction corroborate previous research that showed a connection between sexual self-esteem and sexual adjustment (Mona et al., 2000) and between sexual self-esteem and sexual functioning (Hale & Strassberg, 1990). The results of these investigations suggest that there is a strong connection between sexual self-esteem and sexual satisfaction that may hold true across the spectrum of sexual self-esteem (i.e., from

low to high). The correlation between sexual assertiveness and sexual satisfaction supported findings from previous investigations in the area of sexual communication and satisfaction, which showed a positive relationship between sexual communication and sexual satisfaction (e.g., Bridges et al., 2004; Byers & Demmons, 1999; Larson et al., 1998; MacNeil & Byers, 1997).

The results of this investigation have important implications for researchers, clinicians, and sex educators. Future research on sexual assertiveness and sexual self-esteem should not be limited to considerations of their relationship with safer sex behaviors but should also address their contribution across the entire continuum of sexual functioning (i.e., from dysfunctional to optimal). It would also be valuable to identify and describe additional factors that may contribute to or promote greater sexual self-esteem and sexual assertiveness. Clinicians would be encouraged to use interventions designed to increase sexual self-esteem and improve patients' capacities for sexual assertiveness. Similarly, sex educators could help clients to define and develop their own sense of what it means to assert themselves with a sexual partner and feel good about themselves sexually.

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Sexual Script Theory

- ▶ [Pornography, Sexual Socialization, and Satisfaction](#)

Sexual Scripts

- ▶ [Sexual Motives and Quality of Life](#)

Sexual Scripts Overlap Scale (SIOS)

- ▶ [Pornography, Sexual Socialization, and Satisfaction](#)

Sexuality

- ▶ [Sexual Satisfaction](#)

Sexually Explicit Material

- ▶ [Pornography, Sexual Socialization, and Satisfaction](#)

Sexually Transmitted Infection(s)

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Synonyms

STI(s)

Definition

Sexually transmitted infections (STIs) involve bacterial or viral infections of the male or female genitals and reproductive organs, which may be symptomatic or asymptomatic.

Description

Sexually transmitted infections (STIs) are prevalent and consequential bacterial or viral infections that are transmitted from an infected to an uninfected individual during sexual contact that may involve hand-genital, mouth-genital, or genital-genital contacts. Bacterial STIs such as chlamydia and gonorrhea may be cured with antibiotic treatment, and viral STIs, such as herpes simplex virus (HSV), human papilloma-virus (HPV), and human immunodeficiency virus (HIV) cannot be cured, but they can be controlled to a lesser or greater extent by way of a variety of medical interventions. One very common STI – HPV – is vaccine preventable (Fisher & Steben, *in press*).

STIs may affect the sexual health, reproductive health, relationship health, and mental health of infected and affected individuals. The impact of STIs on these dimensions of quality of life stems from the direct effects of infection on the individual, from the direct and side effects of treatment of STIs, from concern about transmission to or from others, and from relationship disturbances that may occur in the wake of an STI diagnosis. STIs affect those who experience acute acquisition of such an infection as well as those who experience chronic carriage of a viral STI that cannot be cured and which must be managed over the long term. STIs can also affect the quality of life of uninfected individuals, including the “worried well,” whose sexual and relationship quality of life may be impaired by fear of acquiring an STI, and including uninfected but affected individuals whose quality of life is impaired when a sexual partner acquires an STI (Fisher & Holtzapfel, *in press*).

One example of the impact of an STI on multiple dimensions of quality of life involves

sequelae of HPV infection which may result in genital warts or in precancerous changes of the cervix. HPV is exceedingly prevalent in both men and women (Dunne et al., 2007; Giuliano et al., 2011); it is often rapidly acquired soon after one’s sexual debut (Winer et al., 2008), and while most individuals spontaneously clear HPV infection, low-risk HPV types may persist and cause genital warts and high-risk HPV types may persist and cause precancerous and cancerous changes to the cervix. What is more, HPV DNA testing will replace Pap tests as the primary means of cervical cancer screening for women over the age of 30 in western countries within the coming 5–10 years, and a very large number of women will thus learn that they are HPV-infected and become candidates for quality of life impairment as a result of what is soon to become routine testing for this STI (Centers for Disease Control and Prevention, 2012).

Research indicates that women who are infected with HPV infection often experience infection-related stigma (“I feel the need to hide the fact that I have HPV”), shame (“I am ashamed of having HPV”), and self-blame (“With HPV, I feel that I am paying for past behaviors”). HPV-infected women may also experience anger, anxiety, worry, stress, and shock and develop feelings that “my body is disgusting to me” and “unclean” (Daley et al., 2010). Women with HPV infection may experience sexual disturbances including reduced sexual desire, sexual frequency, sexual arousal, and orgasm, as well as greater physical discomfort and more negative feelings about sexual intercourse (Campion et al., 1988). Women infected with HPV also report relationship disturbances, including negative feelings about their current sexual partner, their past sexual partners, and the prospect of future sexual relationships, compared to uninfected women (McCaffery et al., 2004). What is more, the physical pain occasioned by HPV-related genital warts, the physical discomfort involved in their treatment, and the lack of definitive treatment may contribute to disturbances in the physical dimension of quality of life among those infected with HPV.

Recent prospective studies of men and women diagnosed with HPV-related anogenital warts indicate that this STI-linked condition has a significant negative impact on general quality of life, mental health, and sexual health (Drolet et al., 2011a). The negative impact of anogenital warts on these factors dissipated among those whose warts cleared during a prospective arm of study but remained impaired among those whose warts had not cleared. Women with HPV-related abnormal Pap tests have been found to experience significant negative impact on quality of life and mental health as well as negative impacts on their sexuality and concerns about their partners and HPV transmission (Drolet et al., 2011b).

It is noted that STI infection can provoke concerns about impaired fertility and about transmission of infection not only to or from sexual partners but to infants during childbirth. Chlamydia and gonorrhea infection can progress to pelvic inflammatory disease and scarring of the fallopian tubes and pose danger to fertility and associated impairment of quality of life. Individuals may also be concerned about mother to child transmission of HSV or HIV during childbirth and experience quality of life impairment associated with these concerns (Fisher & Steben, in press).

It is also noted that, in addition to the direct and indirect impact of curable STIs on infected and affected individuals, chronic carriage of viral STIs that must be managed across the life span can pose long-standing costs to quality of life. For HIV-infected individuals, for example, complex and side-effect laden antiretroviral therapy regimens represent absolutely lifesaving medical management (The Antiretroviral Therapy Cohort Collaboration, 2008) and improve quality of life compared with symptomatic HIV-infected individuals. At the same time, lifelong dependence on complex and occasionally toxic antiretroviral regimens may have its own quality of life costs in relation to acquiring and maintaining ongoing access to these medications, engineering discrete settings for medication taking, experiencing social stigma in the event that awareness of one's dependence on antiretroviral

therapy occurs, etc. What is more, with the current emphasis on relatively aggressive HIV testing and subsequent HIV treatment, the enormous quality of life improvements of antiretroviral therapy, together with the lesser but nontrivial associated quality of life costs of adherence to this therapy across the life span, will be experienced by a growing number of individuals (Fisher & Holtzapfel, in press).

Chronic carriage of viral STI such as HIV, HSV, and HPV poses additional quality of life challenges. HIV-infected individuals may find themselves in serodiscordant relationships with individuals who are not HIV-infected, posing the need for adaptations of the sexual relationship and accompanying potential for personal relationship stress. HIV-infected individuals who are not in relationships may find establishing such relationships particularly challenging, and all HIV-infected individuals will likely suffer from social stigma and rejection. Similarly, individuals with HSV may find themselves in serodiscordant relationships or in relationships in which the threat of transmission during a symptomatic or asymptomatic episode of viral shedding poses challenges to the emotional and physical health of the individual and a partner. The increased visibility of HPV infection due to HPV DNA testing for routine cervical screening would also seem to pose challenges to an increasing number of infected and affected individuals.

In addition to the foregoing, lesser known issues – STI infection and impaired quality of life among the “worried well” concerned about avoiding infection, STI infection, and chronic carriage of viral STI that must be managed medically and in relationships across the life span – and the more familiar quality of life costs of the discovery of an STI within a relationship will continue to be an enduring focus of concern (Fisher & Holtzapfel, in press). As marriage in western nations comes at a later age, while sexual debut continues to occur in the late teens, patterns of serial sexual monogamy accompanied by the silent accumulation of STI risk and STI infection will occur. Individuals will likely experience shock and anger at an STI diagnosis, they will want to know who gave them the STI, and

they will often have to deal with the unsatisfying reality that they may never know who infected them or who they have infected. The crisis of STI infection within a relationship may represent a long-latent infection that occurred decades ago or a recent extradyadic excursion, but in either case, individuals or couples will likely experience some quality of sexual and relationship distress and need to accommodate to a new biobehavioral reality (Fisher & Holtzapfel, in press).

Cross-References

- ▶ Anger
- ▶ Anxiety
- ▶ Dating Relationships
- ▶ Fertility Plans/Intentions
- ▶ Marital Conflict and Health
- ▶ Men's Health
- ▶ Premarital Sex, Young People's
- ▶ Relationship Satisfaction
- ▶ Sexual Satisfaction and Sexual Costs in Women
- ▶ Stress
- ▶ Women's Health
- ▶ Women's Sexual Satisfaction Predictors

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Sexual-Prejudice

- ▶ Homophobia and Transphobia

SF-12v2

- ▶ Short Form 12 Health Survey (SF-12)

SF-36

- ▶ Symptomatic Gallstone Disease and Quality of Life in Taiwan

SF-36 Health Survey

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Synonyms

Medical outcomes study (MOS) 36-item short form health survey; Medical outcomes study SF-36; MOS SF-36; MOS SF-36 health survey; MOS-36; SF-36v2; Short form health survey 36; Short form-36; Short form-36 general health survey

Definition

This is a proprietary 36-item, 8-scale general health status assessment tool with physical and mental health component summary measures.

Description

The SF-36 Health Survey (SF-36) is a generic measure designed to examine perceived health status. Eight scales are derived from 35 of the 36 items. An item on self-reported health transition is not included in the derivation. Ware and Shelbourne (1992) describe the development of the SF-36 and list the questions and response choices from the original version. The physical health summary component comprises the physical functioning, role limits due to physical health, bodily [▶ pain](#), and general health scales. The mental health summary component comprises the vitality, mental health, role limits due to emotional problems, and social functioning scales. Items are scored using 3–6 response levels. SF-36v2 scoring software using norm-based algorithms is available from the proprietor.

Reliability

Published [▶ internal consistency](#) and [▶ test-retest reliability](#) of the 8 scales and 2 summary components have typically exceeded 0.70 (Ware &

Gandek, 1998). Internal consistency (Cronbach's alpha) in a sample of 177,714 elderly and disabled was found to be 0.83–0.93 for the 8 scales, 0.94 for the physical health summary score, and 0.89 for the mental health summary score (Gandek, Sinclair, Kosinski, & Ware, 2004). Similarly, internal consistency ranged from 0.75 to 0.91 for the 8 scales in a large sample of arthritis patients (Kosinski, Keller, Hatoum, Kong, & Ware, 1999).

Validity

[▶ Construct validity](#) has been shown to be high for each of the eight scales and the two summary components (Ware & Gandek, 1998). Analysis of SF-16 data from 10 countries also found the instrument to have good construct validity with regard to the physical and mental health summary measures (Ware et al., 1988). Structural equation modeling on general population data from 10 countries confirmed the 8 first-order factors. In addition to physical and mental health, and a general third-order factor, it also identified a third second-order factor labeled “general well-being” (Keller et al., 1998). The quality of [▶ factor analysis](#) in exploring or confirming the factor structure of the SF-36 has been criticized (de Vet, Adèr, Terwee, & Pouwer F, 2005).

Discussion

The standard form of the SF-36 was first available in 1990 and version 2 introduced in 1996 (Ware, 2000). The SF-36 has been used for “monitoring population health, comparing the burden of different medical conditions, [▶ health care](#) policy research, economic evaluation, and other health services research, and for purposes of measuring [▶ health outcomes](#) in clinical trials” (Ware, 2008). It has been evaluated in hundreds of papers and is the most widely reported measure in randomized control trials (Garrett, 2009). The SF-36 has been translated in more than 40 countries (Ware, 2000) and used as an outcome measure in thousands of studies.

Cross-References

- [▶ Construct Validity](#)
- [▶ Factor Analysis](#)

- ▶ [Health Care](#)
- ▶ [Health Outcomes](#)
- ▶ [Internal Consistency Reliability](#)
- ▶ [Pain](#)
- ▶ [Physical Functioning \(PF\)](#)
- ▶ [Randomized Clinical Trial](#)
- ▶ [Randomized Controlled Trial \(RCT\)](#)
- ▶ [Test-Retest Reliability](#)

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SF-36v2

- ▶ [SF-36 Health Survey](#)

SF-8™ Health Survey

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Synonyms

[Self-assessed overall health](#); [Self-rated health](#)

Definition

The SF-8™ is an abbreviated version of an original 36-item health survey (▶ [SF-36 Health Survey](#)). It contains psychometrically based physical and mental health summary measures. The eight domains include general health, physical functioning, role physical, bodily pain, vitality, social functioning, mental health, and role emotional.

Description

SF-8™ is a generic multipurpose short-form ▶ [health-related quality of life](#) instrument and was developed by the RAND Corporation and the Medical Outcomes Study (MOS) in the 1980s, which was originally a short-form health survey with 36 questions. The SF-8™ was developed primarily for use in large surveys of general and specific populations, for comparing the burden of diseases across different age, disease, and treatment groups. The SF-8™ has been shown to be effective monitoring population health and large-scale outcomes studies.

The SF-8™ has been translated in over 30 different languages and is used in many countries (Campolina, Pinheiro, Ciconelli, & Ferraz, 2011; Lefante et al. 2005; Roberts, Browne, Ocaka, Oyok, & Sondorp, 2008; Tokuda et al., 2009; Valles et al., 2010).

Eight questionnaire items (response categories) include:

- Overall health (six categories: very poor, poor, fair, good, very good, excellent)
- Physical functioning capacity (five categories: could not do physical activities, quite a lot, somewhat, very little, not at all)
- Role physical or difficulties with daily work because of physical pain (five categories: could not do daily work, quite a lot, some, a little bit, none at all)
- Bodily pain (six categories: very severe, severe, moderate, mild, very mild, none)
- Vitality (five categories: none, a little, some, quite a lot, very much)
- Social functioning (five categories: not do social activities, quite a lot, moderately, slightly, not at all)
- Mental health or emotional problems (five categories: extremely, quite a lot, moderately, slightly, not at all)
- Role emotional or absence from daily activities because of emotional problems (five categories: could not do daily activities, quite a lot, somewhat, very little, not at all)

In addition to the SF-8™ single-item scales, Physical Component Summary (PCS) and Mental Component Summary (MCS) measures are calculated by weighting each SF-8 item using a norm-based scoring method given in the instrument guidelines. Higher summary PCS and MCS scores indicate better health. The physical functioning, role physical, and bodily pain correlate highest with the PCS summary measure, while social functioning, role emotional, and mental health items correlate highest with the MCS summary measure. The correlation between PCS-8 and MCS-8 summary measures is typically lower than 0.30 (Ware, Kosinski, Dewey, & Gandek, 2001).

SF-8™ single-item scales and PCS/MCS measures can be scored on the same metrics as the SF-36 scales and summary measures. The development, validation, and norming of the SF-8™ health survey forms, including standard (4-week recall), acute (1-week recall), and 24-h recall versions, are documented (Ware et al., 2001). SF-8™ scales are scored using norm-based scoring methods (NBS “50/10” referring to means of 50 and standard deviations of 10); means, variances, and regression weights come from studies in the general US population conducted in 2000. The standardization process allows meaningful comparison with other scales.

Validity of the SF-8™ has been reported to be quite high in various settings; among the US population, test-retest reliability for the eight scales ranged from 0.59 to 0.70, and test-retest reliability for PCS-8 and MCS-8 was 0.73 and 0.74, respectively (Ware et al., 2001). Test-retest reliability of the SF-8™ was reported in northern Uganda ($n = 1,206$); the intraclass correlation results were 0.61 for PCS and 0.68 for MCS showing good agreement over a period of time (Roberts et al., 2008). The Spanish version of the SF-8™ was tested ($n = 2,991$), and Cronbach’s alpha of 0.92 was reported (Valles et al., 2010). Findings of the SF-8™ from 908 male workers in South Korea reported Cronbach’s alpha of 0.86 (Eum et al., 2007).

Overall the SF-8™ provides a brief and feasible method of measuring general physical and mental health in large population surveys.

Cross-References

- ▶ [Medical Outcomes Study Short-Form 36-Item Questionnaire](#)
- ▶ [Quality of Life \(QoL\)](#)

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SFA

- ▶ [Spiritual Fitness Assessment](#)

SFE

- ▶ [Supercritical Fluid Extraction as a Green Technology](#)

SF-MPQ

- ▶ [McGill Pain Questionnaire](#)

SF-MPQ-2

- ▶ [McGill Pain Questionnaire](#)

SGRQ

- ▶ [St. George's Respiratory Questionnaire](#)

SGRQ-C

- ▶ [St. George's Respiratory Questionnaire](#)

SGRQ-I

- ▶ [St. George's Respiratory Questionnaire](#)

Shanty Towns in South Africa

- ▶ [South African Township Transformation](#)

Shared Disadvantage of Space

- ▶ [Sharing Space in the Contemporary City](#)

Shared Territories

- ▶ [Sharing Space in the Contemporary City](#)

Shared Values

- ▶ [Sharing Space in the Contemporary City](#)

Sharing of Household Responsibilities

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Synonyms

Divisions of household labor; Gender equity; Household labor; Housework; Housework conflict

Definition

The sharing of household responsibilities among household members. This may include the division of housework and childcare between spouses, among children, relatives, and roommates and outsourcing to third parties (market, housecleaners, nannies).

Description

Introduction

For many couples, the division of household labor is a source of conflict. Dividing ► [housework](#) is a highly gendered process whereby women perform a larger share than men regardless of their individual-level resources. Although women's time spent in housework has declined and men's increased from 1965–1995, women still account for the majority of the housework (Bianchi et al., 2000). What is more, while women in more egalitarian countries account for less housework than those in more traditional countries, these women still perform more housework than their partners (Fuwa, 2004; Treas & Drobnic, 2010). Finally, although women's employment histories and earnings are associated with men's greater housework participation, few achieve gender equality in housework (Gupta, 2006, 2007). Taken together, these studies indicate that women experience a greater housework

burden than do men net of individual and structural resources. From this research, the question remains: Does this gender inequality affect marital quality and more broadly one's quality of life?

Housework Conflict and Unfairness

The Individual-Level Context

A growing body of research addresses this question by focusing on two subjective housework measures: unfairness and conflict. These have important consequences for quality of life as housework disagreement is associated with marital dissatisfaction, ► [stress](#), and depression (Glass & Fujimoto, 1994). Specifically, many wives prefer their husbands to share housework more equally and on a daily basis rather than intermittently. Indeed, Kluwer, Heesink, and Van De Vliert (1996) find that conflict over housework is tied exclusively to wives' dissatisfaction to housework allocations. What is more, wives are more likely to use destructive (compared to constructive) conflict tactics when they were dissatisfied with their housework divisions (Kluwer, Heesink, & Van De Vliert, 1997). Taken together, these studies indicate that housework conflict has serious consequences for couples marital quality and overall ► [well-being](#).

To better understand these relationships, housework conflict and unfairness have been theorized at the individual level. One area of research applies traditional housework theories – relative resources and doing gender – to explain reports of housework unfairness. Briefly, the relative resources perspective builds on the bargaining models (Becker, 1991) to argue that individuals use their resources as bargaining tools to negotiate divisions of housework. Expanding this to perceptions of unfairness, those with more resources are better able to bargain for a “fair” divisions of labor. According to the “doing-gender” perspective, individually held gender role ideologies condition expectations for an equitable division of housework (Berk, 1985; West & Zimmerman, 1987). Accordingly, women who hold more traditional expectations for the gendered division of labor are less likely to contend an unequal division of housework.

In this respect, these approaches to dividing housework more generally also explain housework conflict and unfairness more specifically.

Others have provided theories specifically aimed at explaining the subjective experiences of housework. Thomson (1991) theorizes the distributive justice approach which identifies three mechanisms that influence perceptions of housework equity: outcomes, comparative referents, and justifications. Outcomes are the objective divisions of household labor between partners. As expected, those with more unequal divisions of housework report greater unfairness and conflict over these divisions. Comparative referents measure between and within-gender housework comparisons. Specifically, men/women may compare their housework contribution to that of other men/women to assess whether they are contributing their “fair” share (within-gender comparison). Or men/women may compare their housework contribution to other women/men to assess equity (between-gender comparison). Comparisons can also be inter- or intragenerational in as much as wives/husbands compare their partner’s contributions to those of their father/mother. According to the distributive justice perspective, these comparisons condition perceptions of equity between partners.

The comparative referents component of the distributive justice perspective is the most intriguing yet under measured component of this theory. Major (1987) finds that women who compare their housework to that of other women or compare their husbands’ housework to other men report less housework conflict. By contrast, women who make between-gender (men to women) comparisons tend to report greater unfairness (Nordenmark & Nyman, 2003). These studies indicate a dynamic process of evaluation through which individuals determine the fairness of their divisions of household labor based on the gender of their reference group. Unfortunately, these types of measures are absent from large cross-national and longitudinal data sets and thus are not included in many housework conflict studies (Ruppanner, 2008, 2009). A wider sampling on these measures and collecting repeated measures over time would

provide a more detailed understanding of this component of the theory.

The final component of the distributive justice perspective mirrors the doing-gender perspective discussed above. Justifications refer to one’s ideological traditionalism that conditions subjective expectations of fair or unfair divisions of housework. For example, traditional women are more likely to view an unequal division of housework as “just” because housework symbolically demonstrates “caring” for one’s family within heterosexual unions (Berk, 1985). In this respect, traditional gender role ideologies can justify unequal divisions of housework as fair.

At the individual level, these theoretical approaches help explain how individual resources and characteristics condition expectations for sharing household responsibilities. While individual characteristics play a central role, a growing body of research is investigating these relationships in multilevel and cross-national contexts (see Treas & Drobnic, 2010).

The Macrolevel Context

As housework unfairness and conflict have serious deleterious individual-level consequences, a growing body of comparative research has investigated conflict and unfairness within the macrolevel context. Indeed, this research builds directly on a growing body of comparative research that documents ► [gender equality](#) at the country level encourages gender equality in housework at the individual level (Fuwa, 2004; Hook, 2006). Braun, Lewin-Epstein, Stier, and Baumga (2008) find that women report more unfairness in countries where women’s earnings are more similar to those of men and where gender inequality in housework is greater. Ruppanner (2009) finds that gender empowerment at the country level is associated with housework conflict at the individual level. What is more, Ruppanner (2012) finds women report more housework conflict in countries where divorce is more widely available and women are on better economic footing.

Taken together, these studies indicate that gender empowerment and access to resources outside of marriage play a central role in

structuring marital dynamics around housework. As Braun et al. (2008) conclude “in countries that promote ► [gender equality](#), where women’s employment is highly supported and where they are able to achieve economic independence, inequality in the household division of labor is not tolerated by women and could consequently influence the quality of their marriage and its stability (p. 1155).” Country-level gender equality is associated with couples’ more equal divisions of housework largely through men’s greater participation (Fuwa, 2004). In this context, policies aimed at empowering women should not only promote gender equality in the labor market but also encourage gender equality in the household which may ultimately discourage marital conflict.

Conclusion

In summary, the literature on sharing of household responsibilities documents a complex inter-relationship between individual-level attributes and attitudes and country-level indicators of gender empowerment. From this research, policy makers should draw two essential lessons: (1) encouraging more equal divisions of household labor can have important positive effects for citizens’ quality of life and (2) couples’ divisions of housework are structured by a complex inter-connection between individual attributes and attitudes and structural characteristics of nations. Thus, to create an effective social policy to encourage gender equality within families, governments should work to encourage men’s participation in housework and to improve women’s ► [human capital](#) at the individual level and gender equality in access to resources at the country level. Through this dual approach, governments could play a central role in improving its citizens’ quality of life.

Cross-References

- [Cross-Classified Hierarchical Linear Modeling](#)
- [Cross-Cultural Comparison](#)
- [Family Conflicts](#)
- [Family Stress](#)

- [Gender and Health](#)
- [Gender and Wealth](#)
- [Gender Equity Index](#)
- [Gender Role Attitudes](#)
- [Gender-Related Development Index \(GDI\)](#)
- [Household Work](#)
- [Human Capital](#)
- [Perceived Fairness](#)
- [Quality of Life](#)
- [Social Policy](#)

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Sharing Space in the Contemporary City

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Synonyms

[Collective urban practices](#); [Contemporary anti-urbanism](#); [Emerging territories](#); [New Urbanism](#); [Shared disadvantage of space](#); [Shared territories](#); [Shared values](#); [Spontaneous urban practices](#); [Temporary urban practices](#)

Definition

Sharing is a practice that recomposes a social group around advantages or common uneasiness, through irregular gestures or continuous engagement, to deposit memories, to leave traces of use trajectories, or to transform a portion of territory.

Description

Introduction

Sharing is a practice that recomposes a social group around advantages or common uneasiness, through irregular gestures or continuous engagement, to deposit memories, to leave traces of use trajectories, or to transform a portion of territory.

Sharing has a twofold implication; it can be inflected both in inclusive and exclusive forms. This happens because what has instigated the phenomenon will not be universally but intersubjectively valid within a social group that is homogeneous in terms of needs, values, advantages, and partaken uneasiness.

It is interesting to note that, as sharing is inflected into different forms and ways, depending on the conditions that it has sprung from, there is an end to both exacerbated individualism and community obsession. Contemporary society rediscovers the right to its own private dimension and also the right to share ideals, practices, and needs.

Whenever the private sphere flows within the public one, whenever the limit between two conditions is lost, then humans rediscover themselves as “social animals.”

Sharing is exchange – repeated and not casual – of knowledge, popularization of values and lifestyles, and promotion of rhetoric within strategies (at times) to the limit of the self-referring. In this social engagement, new forms of living are delineated and new ways of “being” together are discovered. In this case, the intention of the operation finds the necessary support within a basic institutionalized level, such as an associative net or a district committee.

Sharing is also a convergence of affairs and claims of rights toward spaces, augmented by spontaneous practices, appropriations, and temporary reuses in the name of material necessity; an initially parasitic and deregulated approach that precedes a collective dimension.

Giving a name to a place, taking care of it within an uncertain and discontinuous temporal horizon, and defining the character of a place through its use are apparently harmless operations that somehow stain a territory with memory and potentiality.

With the functionalist perspective unhinged and upset, we can speak of the space of sharing as a physical place, permeable to ► [social interactions](#), which are intermittent because they are defined by light and impermanent practices that stratify on the ground. Without falling into the trap of the sentimentalism that recognizes or seeks only the gathering of virtuous practices,

sharing is also the overlap of divergent affairs; it is conflict; it is exclusion.

Sharing Inflections

Widening the search for a complete discussion about the space of sharing to the contemporary city allows the description of new forms of sociality and sharing and avoids a reductive and unrepresentative approach based on the public/private dichotomy or one that only seeks positive aspects in urban practices. This is a cognitive exercise that reflects the complexity of the contemporary city, and it is tool that can drive or direct the urban project. Perhaps through matters transversal to a kaleidoscopic reality that is not lent, neither it requires, categories of reading.

Facing an increasing number of new living models, what is necessary is the ability to see commonalities in different projects and an ideology that recognizes the true dimension of the phenomenon beyond the particular actors and the projects' permanence in space and time.

Contemporary Anti-Urbanism

It is permissible to speak of a contemporary anti-urbanism where that which holds together the heterogeneous experience is a living style where ownership and the conditions of use of the space are rewritten. A reaction to the canons of traditional living for persons with financial and

cultural means proposes an alternative in which the actors identify themselves. To be more precise family with children build bonds of ► **solidarity** and ► **trust**, dividing risks and problems without losing sight of the advantages. This entails more spacious lodgings and, above all, neighborhood relationships that are more interesting than traditional ones. There is a continuous pull toward the anti-conventional, beginning with the communities' tools for sustaining themselves.

Helmond, a city in the Netherlands, is on the extreme outskirts of a deindustrialized area. Here, sharing (of spaces, practices, and values) has assumed a character of radical choice. The objective of the Helmond Farmer Community was to found a commune that could host a varying number of people able to assume collective responsibility and to deal with the necessary duties for survival of the structure. The activities of settlement are several. Self-subsistence practices tied to the use of the soil can be found, such as biodynamic agriculture, permaculture, and responsible breeding. In addition, workshops for children and events for families are held, such as annual celebrations of spring, summer, autumn, and winter, silence, and the sun. These events sensitize the near-city inhabitants to these themes and are emblematic of the entrepreneurial character of the initiative (Fig. 1).

Sharing Space in the Contemporary City,
Fig. 1 Helmond Farmer Community (Photo by Alessandra Conticini)



Sharing Space in the Contemporary City, Fig. 2 At the bonfire (Photo by Alessandra Conticini)



Sharing Space in the Contemporary City, Fig. 3 Workshop for children organized by the community (Photo by Alessandra Conticini)



While some inhabitants of the commune take care of the children, parents gather around a bonfire, where they drink and talk, and bonds are tightened and consolidated season after season. At the end of the day, everyone meets inside the ceremonial tent. The inhabitants of the commune, and some curious passers-by, join together for songs and dances. This commune promotes living with less, a subsistence economy, and cultivating the earth, and it administers entrepreneurial activities, makes posts to social media

(<http://www.twitwheel.com/praktijkdeweide>), and distributes visitor tickets. Once a vaguely hippie commune littered with old, abandoned sheds, the inhabitants today purchases land from closed industries and converts it to fields that are cultivated by new urban farmers (Figs. 2 and 3).

New Urbanism

The new urbanism that takes root inside empty spaces, abandoned but not marginal to the urban context, often proposes an alternative reuse of it

Sharing Space in the Contemporary City,

Fig. 4 URS 127 – A traditional three-storey building hosting an exhibition center (ground floor), conference and meeting rooms (first floor), and shared office space (second floor) (Photo by Alessandra Contincini)



Sharing Space in the Contemporary City,

Fig. 5 Art exhibition at URS 127 (Photo by Alessandra Contincini)



in reaction to imminent speculative plans. Citizens are recycling these discontinuous places as a strategy for strengthening their city.

This occurs thanks to collective initiatives that are not turned into *enclaves*, but are open to all citizens by producing services and sociality, dividing resources and affairs, and providing the bases for new bonds of ► [solidarity](#).

This widening inclusion, which counters the exclusiveness of other forms of sharing, is exemplified by the Urban Renewal Strategy (URS) project in Taipei. Taipei has seen 30 years of

economic progress, but this has not produced the sharp social gap typical of other Asian metropolises. This huge capital grew rapidly in a small amount of time and space, and the lack of consideration given to this development has caused present-day leaders of the Taipei to question the way it has operated and to reorganize the plans for the city around new forms of citizenship ([Figs. 4, 5, and 6](#)).

Every URS takes its name from the street number of the building it is hosted by. This because no functional program is previously

Sharing Space in the Contemporary City,

Fig. 6 Shared office space for young architects inside URS 127 (Photo by Alessandra Conticini)



Sharing Space in the Contemporary City,

Fig. 7 URS 155 is a traditional three-story building. It hosts a communal living room, a space where one can eat and share a meal brought from home or prepared inside the shared kitchen. URS 155 also organizes workshops on home arts such as cooking and sewing (Photo by Alessandra Conticini)



stipulated. Inside, one can find collective kitchens, zero-cost workspaces for beginning architects, sewing studios, exposition space, an art school, or simply a bed. Whoever wants to use the space defines it through its use, simply advancing a proposal, no matter whether as a citizen or as a member of an association. Inside this dimension, hierarchical relationships are not present (Figs. 7 and 8).

The objective is to promote urban regeneration on the local scale, from mobile and itinerant stations up to the buildings whose ownership is sometime public, sometimes private. These are pockets of new sociality that produce effects even after their disappearance, like ripples in a pond.

The URS occupy an intermediary position between offering physical space and supporting a practice. They define themselves as a network



Sharing Space in the Contemporary City, Fig. 8 The communal tailoring corner in URS 155 (Photo by Alessandra Conticini)

for ► [urban renewal](#), a support base for creativity, and a point of reference for basics needs like cooking a meal, staying overnight, finding a space to meet friends, or practicing a hobby. In other words, they provide space for those activities that do not find space inside a typical small housing unit. This space for everything makes possible a mutual trespass of the private dimension into the collective one.

Emerging Territories

There is a form of sharing that transforms a space, turning it from marginal to public in the contemporary sense of the term. This configures a new value attribution to grounds that have no value but are still able to attract mechanisms of appropriation and care due to the supported relationships system. An example of this can be found in the history of Gleisdreieck Park in Berlin.

At the end of the 1990s, Gleisdreieck was a vast, abandoned trainyard located near the Berlin city center. This polluted site was heavily bombed during the Second World War. Once abandoned, it evolved into a surreal landscape; a Siberian forest, grown from seeds carried by trains from Russia, sprung from the soil ([Fig. 9](#)).



Sharing Space in the Contemporary City, Fig. 9 Gleisdreieck Park: the restoration of the old railway into a pedestrian path (Source: findingberlin.com)



Sharing Space in the Contemporary City, Fig. 10 Main points of interest of the park's functional program: 2 "Children's Place" playground, 5 Möckern promenade, 7 Kreuzberg meadow, 8 Main square, 9

Information point, 11 Railway museum, 12 Multifunctional asphalt, 13 Wood, 15 Skate park, 16 Area of ecological succession, 19 Intercultural garden (Source: <http://www.gruen-berlin.de/>)

The German railroad's claim for the park's ownership aroused the reaction of the local inhabitants, who, in order to avoid privatization of the park, in 1980 founded the AG Actiongroup. The goal was to preserve the ecosystems and the practices that had been depositing on these soils over 35 years of deregulated use.

While the spontaneous vegetation was naturally decontaminating a compromised ground, some economically underprivileged social groups colonized and fenced some spaces, exploiting them as subsistence kitchen gardens placed side-by-side to their residences.

The actors who have defended the maintenance of an unauthorized dimension range from associations of immigrants, such as Südost Kultur, and environmental associations, such as Ökowerk Berlin, to artists' collectives, such as "A-wetter." Berlin's community garden organization lead an information campaign that has given voice to the project and coordinated the AG, composed of ten architects and landscape designers (Fig. 10).

In 1997 together they forced the municipality to announce a public design contest and 5 members of AG were admitted to the discussion. This was the beginning of a legal and media battle for the maintenance of the park as an ecological asset and as a place of relationships, of microeconomies, of production of services, and of culture in an area that had been deprived of it.

The park, which was completed in 2005, includes intercultural gardens and playgrounds alternating with bands of wild vegetation growth, exposition spaces, and urban kitchen gardens to support the local economy. It is a place of the aggregation that reflects the needs of self-management of a post-industrial society.

Nothing could be further from the twentieth-century concept of (public) space.

Cross-References

- ▶ [Confucianism](#)
- ▶ [New Urbanism](#)
- ▶ [Social Interaction](#)
- ▶ [Solidarity](#)

- ▶ [Taiwan](#)
- ▶ [Trust](#)
- ▶ [Urban Areas](#)
- ▶ [Urban Design](#)
- ▶ [Urban Renewal](#)

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Sheltered Housing

- ▶ [Housing and Quality of Life](#)

Shopper Satisfaction

- ▶ [Customer Satisfaction](#)

Shopping Life

- ▶ [Consumer Well-Being, Shopping Satisfaction](#)

Shopping Satisfaction

- ▶ [Consumer Well-Being, Shopping Satisfaction](#)

Shopping Well-Being

- ▶ [Consumer Well-Being, Shopping Satisfaction](#)

Short DFS

► [Flow Scales](#)

Short Form 12 Health Survey (SF-12)

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Synonyms

[SF-12v2](#)

Definition

The SF-12[®] Health Survey (SF-12) (Ware, Kosinski, & Keller, 1996) is a 12-item questionnaire used to assess generic health outcomes from the patient's perspective. Generic patient-reported outcome (PRO) measures like the SF-12 assess general health and well-being [or health-related quality of life (HRQOL)], including the impact of any and all illnesses on a broad range of functional domains. The SF-12 consists of a subset of 12 items from the ► [SF-36[®]](#) Health Survey (SF-36) (Ware & Sherbourne, 1992; Ware, Snow, Kosinski, & Gandek, 1993) covering the same eight domains of health outcomes, including physical functioning (PF), role-physical (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role-emotional (RE), and mental health (MH). Version 2 of the SF-36 (Ware et al., 2007, 2008) and SF-12 (Ware, Kosinski, Turner-Bowker, & Gandek, 2002) measures the same domains but contains improvements in wording and response choices to cover a wider range of health. The SF-12 and SF-36 are part of the "SF family" of patient-reported outcome measures for adults, which also include the SF-8[™] Health Survey

and DYNHA[®] Generic Health Assessment [a dynamic or computerized adaptive test (CAT)]. These generic tools are cross-calibrated and scored on the same norm-based metric to maximize their comparability.

Description

Background

The conceptual framework for the SF-36 and SF-12 measures was developed in two large-scale studies: the RAND Health Insurance Experiment (HIE) (Brook et al., 1983; Newhouse, 1993), an experimental study of health-care costs, utilization, and outcomes in the United States, and the Medical Outcomes Study (MOS) (Tarlov et al., 1989), an observational study designed to understand how variations in patient outcomes are affected by components of the US health-care system and to develop more practical tools for the routine monitoring of patient outcomes in clinical practice. These studies demonstrated the value of self-administered surveys for the reliable and valid assessment of functional health and well-being. The SF-36 emerged from this research as a more practical tool, offering reduced response burden and ease of use (Ware & Sherbourne, 1992). The eight health domains represented in the SF-36 (PF, RP, BP, GH, VT, SF, RE, and MH) were selected from 40 domains that were included in the MOS. The selected domains represented those most frequently found in widely used health surveys and considered to be most affected by disease conditions.

The ► [SF-36](#) is the most widely used generic health outcome instrument throughout the world due to its sound psychometric performance and usefulness in measuring and monitoring health outcomes for both general and disease-specific populations. However, the SF-36 has been considered too long for some applications. The SF-12 was developed as a short form alternate form to the SF-36 that retains strong measurement properties and may be administered as a one-page survey in less than two minutes on average.

Scales and Component Summaries

SF-12 scales and component summaries are described below:

Physical Functioning (PF). The PF scale was developed to assess limitations in physical activity due to health problems. The SF-12 includes two PF items that measure health limitations on moderate physical activities (e.g., pushing a vacuum cleaner, bowling) and more physically demanding activities (e.g., climbing several flights of stairs). The PF items capture both the presence and extent of physical limitations using a three-level response continuum (“Yes, limited a lot” to “No, not limited at all”).

Role-Physical (RP). The RP scale was developed to assess limitations in usual role activities due to physical health problems. The SF-12 includes two RP items that measure diminished work productivity and limitations in the kind of work or activities conducted as a result of physical problems, using a 5-point Likert-type response scale (“All of the time” to “None of the time”).

Bodily Pain (BP). The BP scale was developed to assess the presence of pain and limitations due to pain. The SF-12 includes one BP item measuring the extent to which pain interferes with normal work activities, using a 5-point Likert-type response scale (“Not at all” to “Extremely”).

General Health (GH). The GH scale was developed to assess a rating of general health. The SF-12 includes a single GH item to self-evaluate general health using a 5-point Likert-type response scale (“Excellent” to “Poor”).

Vitality (VT). The VT scale was developed to assess energy level and fatigue. The SF-12 includes a single VT item measuring energy level using a 5-point Likert-type response scale (“All of the time” to “None of the time”).

Social Functioning (SF). The SF scale was developed to assess limitations in social activities due to physical or emotional problems. The SF-12 includes a single SF item measuring the extent to which physical or emotional problems interfere with social activities (e.g., visiting friends and relatives) using a 5-point Likert-type response scale (“All of the time” to “None of the time”).

Role-Emotional (RE). The RE scale was developed to assess limitations in usual role activities due to emotional problems. The SF-12 includes two RE items that measure diminished work productivity and quality as a result of emotional problems, using a 5-point Likert-type response scale (“All of the time” to “None of the time”).

Mental Health (MH). The MH scale was developed to assess psychological distress and well-being. The SF-12 includes two MH items assessing mood (e.g., peaceful, depressed) using a 5-point Likert-type response scale (“All of the time” to “None of the time”).

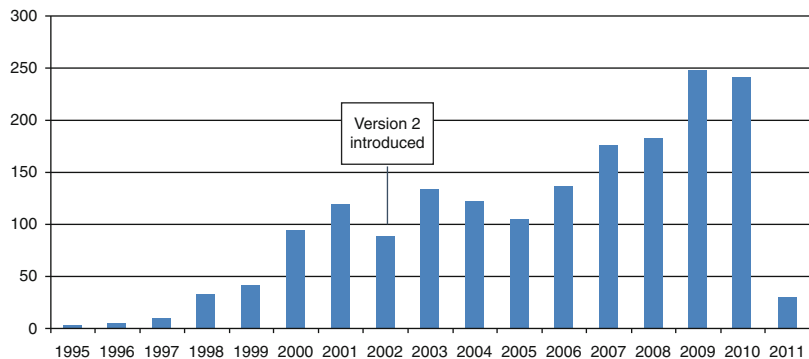
Physical Component Summary (PCS) and Mental Component Summary (MCS). The aggregate of the scales is referred to as “component” summaries because they were derived and scored using principal components analysis. Although they reflect the two broad components or aspects of health-physical and mental, *all* items are used to score *both* component summary measures.

Scoring

SF-12 scales and summary measures are scored so that a higher score indicates a better health state. The SF-12 yields norm-based scores for PCS and MCS only, while the SF-12v2 yields norm-based scores for PCS, MCS, PF, RP, BP, GH, VT, SF, RE, and MH. Norm-based scoring (NBS) linearly transforms the scales and summary measures to have a mean of 50 and standard deviation of 10 based on US general population data. Because standard deviations for each scale are equalized at 10, it is easier to see exactly how far below or above the general population mean a score is in standard deviation units, and comparisons of health domain scale and component summary measure scores can be made directly. NBS also enables direct comparisons between scores from the SF-36, SF-36v2, SF-12, SF-12v2, SF-8, and DYNHA Generic Health Assessment.

Furthermore, like the SF-36, the SF-12 can provide a preference-based health utility index (SF-6D) for economic evaluations. This index (scored on a 0–1 range) weighs both physical

Short Form 12 Health Survey (SF-12),
Fig. 1 SF-12 publication over time (1999–April, 2011, cumulative total = 1,771)



and mental dimensions of health based on utilities assigned to different health states.

Scoring software that provides scores for the eight health domains, summary measures, health utility, missing score estimation, response consistency and other data quality evaluations, and medical expense prediction is available from the instrument developer (<http://www.qualitymetric.com/>).

Reliability and Validity

The reliability and validity of the SF-12 and SF-12v2 has been evaluated and is summarized in user manuals (Ware, Kosinski, & Keller, 1995; Ware et al., 2002) and numerous peer-reviewed publications. Much of the research focused on the original version (SF-12); however, since item content was retained across forms, most results from evaluations of the SF-12 generalize to the SF-12v2.

Applications and Use

Due to several improvements (e.g., simplified questionnaire wording, revised layout to improve comprehension and reduce missing responses, and revised response scales), the SF-12v2 has been recommended over the original SF-12 for all new studies, including population surveys, clinical trials, outcomes and effectiveness research, and clinical practice applications. The SF-12v2 may be used for comparing general and specific populations, comparing the relative burden of diseases, differentiating the health benefits produced by a wide range of different

treatments, screening and monitoring individual patients, and predicting health-care costs, mortality, and other important outcomes.

The SF-12v2 is available in standard (4-week recall) or acute (1-week recall) forms and has been translated into more than 100 country/language versions. The SF-12v2 may be self- or interview-administered by paper and pencil, telephone, electronically via the Internet, personal digital assistant (PDA), tablet PC, or interactive voice response (IVR).

At the time of this publication, the SF-12 was cited in close to 1,800 articles and other publications (see Fig. 1). Although this number is large in comparison with the number of publications about many health status measures, it is modest in relation to the approximate 14,000 publications about the SF-36. This may be an important consideration if the objective of a survey or study is narrow in focus and benchmarks from the published literature are crucial.

Additional information regarding the SF-12[®] is available from www.qualitymetric.com.

Cross-References

- ▶ [Burden of Illness](#)
- ▶ [Data Quality](#)
- ▶ [Health-Related Quality of Life \(HRQOL\)](#)
- ▶ [Medical Outcomes Study SF-36](#)
- ▶ [PROMs, Patient-Reported Outcome Measures](#)
- ▶ [SF-36 Health Survey](#)

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Short Form Health Survey 36

- ▶ [SF-36 Health Survey](#)

Short Form PGWBI

- ▶ [Psychological General Well-Being Index \(PGWB\)](#)

Short Form-36

- ▶ [SF-36 Health Survey](#)

Short Form-36 General Health Survey

- ▶ [SF-36 Health Survey](#)

Short FSS

- ▶ [Flow Scales](#)

Shyness

- ▶ [Introvert/Introversion](#)

SIAD

- ▶ [Sexual Interest/Arousal Disorder](#)

Siblings, Overview

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Synonyms

[Sisters](#)

Definition

Sibling relationships can take many forms, but often are between two people that identify

as being closer than a peer or friend. Typically, a sibling is a biologically related person (i.e., a brother or a sister). However, there is a wide diversity of siblings including half-brothers/sisters, step brother/sisters, and adopted brothers/sisters.

Description

The sibling relationship is an enduring bond that has a profound influence throughout a person's lifetime, often being cited as one of the longest lasting relationships that humans experience, allowing for a longer time of accumulated shared experiences (Cicirelli, 1995; Goetting, 1986). Relationships between brothers and sisters are often the longest connection that people have with a person of similar social and cultural background. This includes shared memories and personal experiences (McHale & Gamble, 1989; Seligman & Darling, 1997). Sibling relationships can be intense, complex, and long-lasting. Siblings do not choose to be related, but they will always be family. Because siblings are often the first and most intense peer relationships that children encounter, they learn many social skills from their sibling interactions such as sharing, collaborating, resolving differences, and compromising (Sanders, 2004). Through sibling interactions, children build a foundation for personality development and later learning. During play, siblings teach and learn from each other (Gallagher et al., 2006). Sibling relationships are significant throughout the life of most individuals (Cicirelli). They have a major influence on one another's behavior, development, and learning throughout their lives. Therefore, siblings greatly impact each other (Cicirelli; Banks & Kahn, 1997; McHale & Gamble, 1989; Seligman & Darling, 1997). Thus, there is a wider range of sibling relationship experiences. Sibling relationships can also be an important connection for people with disabilities as families get older.

In the early part of the twentieth century, a general assumption among parents and

professionals was that a child with disabilities would be detrimental to the development of nondisabled siblings (Stoneman, 2001). During this era, it was generally assumed that having a brother or sister with a disability represented an increased risk of emotional stress, adjustment problems, or other caregiving burden. This assumption underpinned the rationale for institutionalizing children with disabilities. With deinstitutionalization in the 1960s, more people with disabilities were being raised in family homes and growing up with their siblings (Scheerenberger, 1977). With present day emphasis on community living, siblings have a better chance at building a lasting relationship with each other over the life course.

Siblings are in a position to naturally become the next generation of caregivers when parents are no longer able to fill this role. Siblings of people with developmental disabilities have been called the "club sandwich generation" due to their multiple caregiving roles (Meyer, 2009; Meyer & Vadasy, 1994). There is a challenge for siblings to juggle the needs of their aging parents, their own families, and also the needs of their sibling with disabilities.

While community living has influenced the opportunities to build sibling relationships, another factor, life span of people with disabilities, is also shaping families. People with disabilities are increasingly living longer than their parents, and it is becoming more common for responsibilities to transition to siblings (Heller & Kaiser, 2007). This is forcing researchers, policymakers, and advocates to notice/acknowledge the important role that siblings play in the provision of support for aging persons with I/DD (Heller, 2000; Heller & Factor, 1991, 1993; Heller & Kramer, 2006; The sibling leadership network, 2008). Whereas previous research has focused on the adjustment and/or emotional difficulties that can sometimes be present in a sibling relationship of a person with I/DD, newer research focuses on the long-term impact of siblings trying to provide care for each other in an era of shrinking government and social support (The sibling leadership network, 2008).

Cross-References

- ▶ Care, Residential
- ▶ Developmental Disabilities
- ▶ Down Syndrome
- ▶ Education, Special
- ▶ Family Quality of Life
- ▶ Institutionalized People
- ▶ Intellectual Disability
- ▶ Parent-Child Relationship(s)

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Sickness Impact Profile (SIP)

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Definition

The Sickness Impact Profile (SIP) is a behaviorally based health status measure developed in the 1970s by Marilyn Bergner, Betty Gilson, Ruth A. Bobbitt, and colleagues to measure the extent to which health and illness affect daily life and functioning. It has been shown to be a reliable and valid measure that discriminates among groups with different levels of health and is sensitive to changes in health over time. The SIP has the advantage of having no floor effect and is able to discriminate among very low levels of health, including death. It does have a ceiling

effect and is not ideal for discriminating among healthy people. Since it is behaviorally based, it is amenable to use with proxy respondents. To date, the SIP remains one of the best theoretically grounded and most rigorously developed patient-reported outcome measures available.

Description

The instrument consists of 136 items describing activities commonly associated with everyday living. Respondents endorse each of those that describe them that day and are related to their health. Each item has a numeric scale value that reflects its degree of dysfunction. Scoring is based on the sum of the weights of the items endorsed. An individual's total SIP score is the sum of scale values of endorsed items divided by the total possible score and multiplying by 100. The score can range from 0 to 100, where 0 indicates no dysfunction and 100 represents maximal dysfunction (death).

Scores are also generated at the level of dimensions and categories. There are 12 categories representing different types of activity (Table 1). To score an individual category, the scale values for all endorsed items in that category are divided by the total possible score for the category and multiplied by 100. Seven of the categories are aggregated to two dimensions, psychosocial and physical.

Conceptual Framework

The relationship between behavior, and sickness and health is defined as a continuum. At one end, the individual is healthy and performs behaviors without limitations, while at the other the individual is sick and exhibits limitations (dysfunction). A dysfunctional behavior can be a modification or impairment in performance of an activity or a replacement of a usual behavior with another, such as walking more slowly.

Development and Testing

The SIP was developed and underwent initial testing in a series of studies and field trials over

Sickness Impact Profile (SIP), Table 1 Dimensions and categories for the Sickness Impact Profile

Dimension	Category
Physical	Ambulation
	Mobility
	Body care and movement
Psychosocial	Communication
	Alertness behavior
	Emotional behavior
	Social interaction
Independent categories	Sleep and rest
	Eating
	Work
	Home management
	Recreation and pastimes

the course of a decade (Bergner, Bobbitt, Carter, & Gilson, 1981). The steps were as follows:

1. A survey of 1,100 health professionals, patients, caregivers, and healthy persons provided statements describing health-related dysfunctions. Additional statements were drawn from existing catalogs of illness-related behavioral dysfunction. The resulting lists were sorted into categories, each describing a common activity. This process resulted in 312 items within 14 categories (Bergner et al., 1976a).
2. Scale values for each item were constructed in a category rating scale exercise, using an 11-point rating scale to establish weights for items within each category and a 15-point rating scale to establish the relative weights of the different categories. Raters were drawn from health-care professionals and health administration students (Bergner et al., 1976a).
3. Initial testing of feasibility and content validity involved 246 patients in outpatient, inpatient, walk-in, or in-home care settings (Bergner et al., 1976a). Content analysis produced a shortened and revised instrument of 189 items.
4. In a preliminary validation exercise, scale values were found to be highly correlated ($r \geq 0.85$) with independent judges' ratings (Carter, Bobbitt, Bergner, & Gilson, 1976).

5. Reliability of the SIP was tested using samples of rehabilitation inpatients and outpatients, speech pathology inpatients, chronic disease outpatients, and healthy enrollees in a large prepaid group health plan (Pollard, Bobbitt, Bergner, Martine, & Gilson, 1976). Test-retest reliability was high. Correlations were moderate between SIP scores and criterion variables (self-assessments of sickness and dysfunction, clinician assessments, the Katz Activities of Daily Living Index, and selected questions from the National Health Interview Survey [NHIS]). Additionally, SIP scores discriminated among the patient subsamples.
6. After further revisions a shorter version (189 items) was retested. In an assessment of alternative administration methods, self-administration without interviewer instructions showed lower correlations with criterion variables than did interviewer delivery with self-administration or mailing with self-administration (Bergner et al., 1981).
7. Results of reassessments of test-retest reliability and mode of administration using the shorter version were consistent with those obtained in earlier tests (Bergner et al., 1981).
8. Convergent and discriminant validity were assessed for the 1976 sample through comparisons of SIP scores with self-assessments, the NHIS Index of Activity Limitation, Work Loss and Bed Days, and clinician assessments (Bergner et al., 1976b; Bergner et al., 1981). Relationships between the SIP and criterion measures were moderate to high and in the direction hypothesized.
9. Further modifications were made in the instrument, including eliminating or combining items and combining categories to reduce redundancy, resulting in the final 136-item instrument. Reanalysis of data from the previous surveys demonstrated that the final version performed as well or better than the longer ones on reliability, criterion validity, and discriminant validity (Bergner et al., 1981).

Properties of Final Version

The properties of the final SIP are generally as good as or better than earlier versions. Internal

consistency overall is 0.96 and in the categories ranges from 0.63 for eating to 0.90 for body care and movement. Correlations with other measures are 0.73 with patient self-assessments of dysfunction, 0.68 with the NHIS index, and 0.49 with clinician assessments of dysfunction. Regression models indicate that the SIP explains 59 % of the variance in both patient self-assessments and the NHIS index and 31 % of the variance in clinician assessments. Since the completion of its development in the late 1970s, the SIP has proved to be a reliable and valid measure of health status in a variety of populations and for a variety of applications in clinical and health services research.

Administration Methods

While scores from interviewer-administered or interviewer-assisted methods have been demonstrated to have higher correlations with criterion measures, self-administration is acceptable. Administration by telephone or electronically has not been formally tested. The time required to complete it is usually 20–30 min depending on the severity of the respondent's illness. Because the items of the SIP reflect observable behaviors, a score can also be obtained from a proxy respondent such as a caregiver or clinician.

The SIP must be completed in its entirety in order for the reliability and validity of categories to be retained and for their scores to be calculated. Without this, dimension and overall scores cannot be calculated. While individual categories are reliable and valid, selective administration of categories is discouraged because the discriminative capacity of the SIP will be decreased and because categories have demonstrated differential importance in accounting for the variance in overall SIP score for different patient groups.

Limitations

Because the purpose of the SIP is to assess the effect of illness on health-related behaviors, it tends not to discriminate well among people with "very good to excellent" health, resulting in a "ceiling effect." On the other hand, severe impairments are scorable, including death. To date, no population norms for the SIP have been developed. It is recommended that users seek

applications with similar study populations in the literature.

Applications

Since the completion of its development, the SIP has proven to be a useful outcome measure in clinical trials, epidemiologic studies, and program evaluations. For example, in 1985, the SIP was used to assess differences in health status of survivors of out-of-hospital cardiac arrest compared to a control group of survivors of myocardial infarction (Bergner, Hallstrom, Bergner, Eisenberg, & Cobb, 1985). The SIP has been demonstrated to be a useful tool in examining the health disability associated with chronic lower back pain (Follick, Smith, & Ahern, 1985) and long-term functional outcomes of trauma patients (Jurkovich et al., 1995). The SIP was used as an outcome measure in the Robert Wood Johnson Foundation-funded Study to Understand Prognoses and Preferences and Outcomes for Treatment (SUPPORT) that examined the care of over 9,000 seriously ill hospitalized adults in a controlled clinical trial (SUPPORT Investigators, 1996).

Two systematic reviews in 2005 and 2011 found the SIP to be one of the most common measures of generic quality of life for people with chronic lower back pain and neurological diseases, respectively, along with the SF-36, Nottingham Health Profile, and SF-12 (Chapman et al., 2011; von Steinbuechel, Richter, Morawetz, & Riemsma, 2005). A 2002 systematic review reported that the SIP was among the most frequently evaluated generic quality of life measures, with 111 examples (Garratt, Schmidt, Mackintosh, & Fitzpatrick, 2002).

The SIP has been modified by other investigators by shortening it, adding subscales, altering the scoring, or rewording items. These changes are not authorized by the developers or the copyright holders at The Johns Hopkins University and have uncertain validity except to the extent demonstrated by the investigator.

Summary

The Sickness Impact Profile was one of the first comprehensive measures of health status and

Sickness Impact Profile (SIP), Table 2 When is the Sickness Impact Profile most useful?

For seriously ill individuals with poor health status and/or a high cumulative burden of disease
For populations with a high likelihood of death during the course of the study
For populations with incapacity, at least at times, that prevents self-assessment, requiring that information be collected from proxy respondents
For researchers who want to measure a more comprehensive set of dimensions of health
For studies in which it is desirable to have to capture health status in a single score

remains a model for the patient-centered development and rigorous testing of PROs. The SIP may be most useful for research or evaluation on specific populations and applications as shown in Table 2. Because it measures very poor levels of functioning, it can be used in people who are seriously ill or those whose health is likely to deteriorate. Furthermore, because it includes death in its scoring, it can be useful in populations with a high likelihood of dying during the study. And, because it is behaviorally based, scores may be assessed by proxy respondents or other observers, reducing the problem of missing data. In addition, scores for individuals can be readily interpreted by the limitations described by the respondents. It captures a comprehensive range of activities and is available in more than 20 languages and dialects. These characteristics should ensure the continued usefulness of the SIP for decades into the future.

Available for use from:

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Sickness Presenteeism

- [Presenteeism](#)

Signals

- [Contextual Indicators](#)

Significance Testing

- [F-Ratio](#)

Significance, Statistical

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Definition

In the quantitative branches of the life and human sciences, Student's test of statistical significance (Student, 1908; Ziliak, 2008) is a conventional and widely-used statistical technique which can help to separate real from random effects when estimating quantitative relationships.

For example, when researchers wish to estimate the difference between two means, the magnitude of a regression coefficient, or the difference between two correlation coefficients, they will normally conduct a test of statistical significance to determine the likelihood that real and not merely random fluctuations correlate with observed results.

The likelihood is treated as a probability and numerical results which clear a pre-determined threshold or critical value are said to be “statistically significant”, whereas results which do not clear the threshold are said to be “statistically insignificant”. Confusion abounds, and not for merely semantic reasons. By custom, belief, and education – stretching back to the 1920s and the biologist Ronald A. Fisher (Ziliak & McCloskey, 2008, Savage, 1976) – statistical significance is too often said to confer legitimacy to a scientific result and, by the same erroneous logic, the

lack of statistical significance – statistical insignificance – is said to indicate lack of a real, substantive relationship, equating statistical insignificance with lack of real-world importance. But as Ziliak (2008) and Ziliak and McCloskey (2008) and others have shown, statistical significance is neither necessary nor sufficient for proving economic, medical, psychological, or other important effects. Recently the Supreme Court of the United States decided unanimously to reject a standard of statistical significance in a major case of biomedical and securities law, in *Matrixx Initiatives vs. Sicrusano et al.* (Ziliak, 2011b).

Description

Technically speaking statistical significance (or the lack of it) is usually determined by examining the size of an estimated t-statistic or a p-value – both of which are calculated from the table of Student's t-distribution (Student, 1908; Press, 2003).

Student's t-statistic is a ratio showing how far a result probably departs on average from a null hypothesis or other parameter of interest in the larger population, measured in terms of its own variation (called “the standard error”). Two standard errors ($t > 1.96$) is a typical threshold in the life and human sciences separating, as the convention claims, “significant” from “insignificant” evidence.

The p-value is different but related. The p-value measures the likelihood of observing a t-statistic larger than the observed departure, assuming the null hypothesis of no effect is true. From economics to medicine, most of the life and human sciences have accepted a bright-line rule for determining whether an estimated t-statistic or p-value is called “statistically significant” or not. Subject to normal assumptions, if the p-value is greater than .05, or if the t-statistic is less than 1.96, the result is called “insignificant” and is omitted from further discussion.

The normal assumptions are a set of assumptions which scientists make about the long-run frequencies of estimated coefficients and the

error terms associated with them. Typically the test of statistical significance is performed on coefficients produced by a linear or non-linear multiple regression model, relating a dependent variable (Y) with two or more independent variables (X_1, X_2, \dots, X_N). Coefficients and random error terms are said to be normally distributed (that is, in conformance with the normal camel-back or bell curve-like shape) and also identically and independently distributed. Naturally if any one or more of these assumptions is strongly violated (for example, if the so-called independent variables are in truth highly correlated) the accuracy of the significance test is compromised and its meaning thrown into doubt (Ziliak, 2011a).

Discussion

Scientists have developed methods for dealing with violations of major assumptions (Jeffreys, 1961; Press, 2003; Raiffa & Schlaifer, 1961; Rothman, Greenland, & Lash, 2008; Ziliak, 2011a). Yet other, more fundamental errors abound at the core of the concept, challenging the basic logic of statistical significance.

First, statistical significance does not imply substantive scientific importance and lack of statistical significance does not mean lack of substantive importance. A variable that is important for quality of life might not be statistically significant and a statistically significant result might be unimportant to quality of life.

To claim a result is “significant” one needs a baseline or point of comparison and measured on a scale of quality of life that one cares about. In most statistical research, an investigator announces a “null hypothesis” of “no effect” as a point of comparison. Unfortunately the point-null hypothesis procedure is the beginning of numerous mistakes which can be made when designing, calculating, and interpreting the practical importance of a test of statistical significance, and, as Ziliak and McCloskey (2008) and others show, such mistakes are more the norm rather than the exception.

Suppose you have designed an observational study or experiment and have assembled data which you now wish to analyze in a regression

equation. Suppose you have an input, an X variable, which is believed to be importantly related to an output, a Y variable. The X variable might stand for how much caffeine your subjects consume in a day and the Y variable might stand for the average number of hours of uninterrupted sleep the caffeine drinkers get relative to a control group (which has no caffeine).

A linear regression equation is a mathematical equation that links the X-data with the Y-data. Regression coefficients show (in the slope of the line) how closely or how remotely related the variables are. The slope of the equation tells you, on the basis of the data, your best guess about the magnitude of correlation between X and Y, for example, between daily caffeine consumption and hours of sleep.

To determine whether or not the X variable is statistically significantly related to the Y variable, investigators posit a null hypothesis of “no relationship” between the Xs and the Ys. That is, they assume the null hypothesis is true, that no relationship exists at all, and that the true magnitude of correlation is zero, and then they calculate a likelihood based on the data on hand. Now suppose from a homogeneous population (such as college students) the caffeine/sleep correlation and its p-value are computed from the observational or experimental data and the correlation (the magnitude of relationship between X and Y) is -0.00004 with a p-value less than .05. A bright-line rule of statistical significance would claim that caffeine consumption is “significantly” related to loss of sleep because the negatively signed relationship has a p-value less than .05 (or a t-statistic greater than 1.96). But a little calculation shows that a 10 % increase in caffeine consumption would change average amount of sleep by an imperceptible fraction of a second (.000004 h): practically speaking, caffeine is not important.

Likewise, a big coefficient on the caffeine variable with a p-value of .06 would be ignored at our peril. Suppose the caffeine/sleep relationship is estimated at -4.00000 . A researcher who mechanically follows a bright-line rule of significance would omit further discussion of caffeine on grounds that the p-value is too high. But that is not necessarily true. A p-value of .06 means that

there is a small chance of seeing an effect bigger than the actual, assuming the null hypothesis of “no effect” is true. In the event, the odds are .94/.06 or almost 16-to-1 that a non-zero effect has occurred. A little calculation suggests that a 10 % increase in caffeine consumption translates into .4 h (24 min) of sleep lost on average: for some people, that is a very important reduction of sleep, though, again, notice that the result would be ignored by most investigators because it is not statistically significant at the .05 level. This basic procedure is causing good medicines and technologies and products to be kept out of the market, and it is allowing bad ones to enter the market and stay (Raiffa & Schlaifer, 1961; Rothman et al., 2008; Ziliak, 2010; Ziliak & McCloskey, 2008).

Second, statistical significance is not a synonym for hypothesis testing, though many authors have been tempted to conflate the two. In truth the test of statistical significance does not provide a test of hypotheses because it merely calculates the likelihood of observing an effect larger than the one actually observed, assuming the null hypothesis of no effect to be true. What they want to know is the probability of a hypothesis being true, given the available evidence; but what they actually know is something less: the probability of observing the evidence, assuming that the null hypothesis is true. Ziliak and McCloskey (2008) and Jeffreys (1961) show that researchers are commonly confused by this “fallacy of the transposed conditional”.

A third problem with significance testing is the temptation it offers for arbitrary manipulation of sample size and of variables to get the desired significant result. Other things equal, a larger sample size produces more significant effects, and dropping and adding variables based merely on the fit of t- and p-variables is a fraudulent though well-trodden path to academic publication and grant money renewal.

A fourth major problem is lack of power (neglect of which Neyman and Pearson called “Type II error”) (Neyman & Pearson, 1928). Power is desirable in statistics, as power measures the probability of observing a result when the null hypothesis is false, that is, when there is

a real deviation from the null hypothesis of no effect (Neyman & Pearson, 1928). Power, however desirable, is neglected in the vast majority of articles purporting to conduct tests of significance (Ziliak, 2010; Ziliak & McCloskey, 2008). More than 90% of published articles using tests of statistical significance do not know the power of their tests and well-more than half of the published papers that do know their power do not have enough power to make a rational gamble (Raiffa & Schlaifer, 1961; Ziliak & McCloskey, 2008). For these and other reasons the test of statistical significance is sure to play a smaller role in the future of the life and human sciences as it is already being reduced in business and the law.

Cross-References

- ▶ [Analysis of Variance](#)
- ▶ [Bivariate Analysis](#)
- ▶ [Bivariate Regression](#)
- ▶ [Data Analysis](#)
- ▶ [Factor Analysis](#)
- ▶ [Health](#)
- ▶ [Hypothesis Testing](#)
- ▶ [Multiple Regression](#)

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Significant Difference

- ▶ [Reliable Change Index](#)

Signs of Context

- ▶ [Contextual Indicators](#)

Similarity Analysis

- ▶ [Faceted Smallest Space Analysis \(Faceted SSA; FSSA\)](#)

Simple

- ▶ [Zero-Order Relationships](#)

Simple Component Analysis

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Synonyms

[Component analysis](#); [Data reduction](#); [Principal component analysis](#)

Definition

Simple component analysis is a method of reducing a large number of related variables to a smaller number of meaningful components. It is similar to principal component analysis but provides a more interpretable solution.

Description

Simple component analysis (SCA) method of reducing a large number of related variables to a smaller number of meaningful components was proposed as an alternative to principal component analysis (PCA) by Rousson and Gasser (2004) to address the difficulties in the interpretation of principal of components from PCA.

The PCA is considered an optimal method in the sense that it extracts the most variance from the original variables and hence has been widely used in the behavioral and social science since originally proposed by Hotelling (1933). It has been the common method of data reduction in search of a lower number of dimensions in the quality of life research as well, in spite of the difficulties encountered in seeking and interpreting a simple structure (Joël Coste, Bouée, Ecosse, Leplège, & Pouchot, 2005). In PCA, the first component captures the most variance. The “loadings” are large but unequal. The remaining components, essentially “difference” components, often show much smaller loadings, but taken together, these smaller loadings account for a larger proportion of the observed variance. The number of components to retain and the nonuniform weighting make interpretation of the components difficult (Jolliffe, 1986).

In contrast, the simple components in SCA have loadings that are restricted to the range integer $\{0, \pm 1\}$. Thus, each weight is interpretable like a correlation in the range of -1 to 1 , eliminating much of the subjectivity in the interpretation and comparison of loadings. However, the SCA algorithm is suboptimal in that it may not extract as much variance as PCA. This suboptimality is traded off with ease of

interpretation for practical applications. The SCA is not meant to replace PCA but to enhance interpretability of components.

The simple component analysis algorithm of Rousson and Gasser (2004) is available as a procedure in the R project for statistical computing. It allows users to choose, interactively, an interpretable system of simple components.

Cross-References

- ▶ [Data Analysis](#)
- ▶ [Factor Analysis](#)
- ▶ [Psychometric Analysis](#)

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Simplex Scales

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Synonyms

[Attitude scales](#)

Definition

A simplex scale is a set of items that are indicators of a latent concept, such that both

respondents and items receive measurement values on the scale, and the correlation pattern of the items follows the order of the items: the closer two items are to each other on the scale, the higher their correlation.

Description

Simplex scales stand in contrast to scales in which the items are regarded as replications of each other, as in classical test theory (CTT). In CTT, the best measurement is the mean of a number of measurements with equivalent items. If the mean is taken over the same number of items for all respondents, it has the same interpretation as the sum score. Reliability means that the respondent is predictable in his answers and gives the same response to all items. In a reliable test, all correlations are high, and factor analysis of these items then leads to one single factor.

In a simplex scale, the items are not equivalent. They rather indicate different degrees or intensities of the latent trait that is operationalized. The general term for such measurement models is “item response theory” (IRT). In the negative affect scale, for instance, the item “bored” is less negative than the item “lonely,” which in turn is less negative than “depressed.” And in the positive affect scale, the item “interested in something” is less positive than “pleased at accomplishment,” which in turn is less positive than “on top of the world” (Van Schuur & Kruijtbosch, 1995).

The term “simplex” was coined by Guttman (1954). In other applications of the simplex model, the items are not indicators of the same latent concept but are causally related (e.g., measurements at different times).

Two types of simplex scales should be distinguished: unipolar scales and bipolar scales. In a unipolar scale, the probability of a high response to an item increases with the scale value of the respondent, while in a bipolar scale, the probability of a high response generally reaches an optimum at some intermediate level. Items for the two types of scales can be distinguished by the interpretation of the low response

value to the item: if that has only one meaning (e.g., I am not bored means: I have less (and not more) than this amount of negative affect), then this is an item in a unipolar scale, but if the negative response has one of two possible opposite meanings (e.g., something is not challenging because it either is too easy, or because it is too difficult), then that is an item in a bipolar scale. Some simplex scales can be interpreted as bipolar scales, in which case Coombs’ (1964) unfolding theory and its successors can be used to measure respondents and items. But generally simplex scales are unipolar scales, in which the low response value to an item has only one unequivocal meaning. Most IRT models, such as the parametric Rasch model (e.g., Embretson & Reise, 2000) or the ordinal Mokken model (e.g., Van Schuur, 2011), assume unipolar scales. Since any two unipolar scales taken together appear as a single bipolar scale (e.g., the positive and negative affect scales), researchers need to be aware of possible misinterpretation.

Cross-References

- ▶ [Guttman Scale](#)
- ▶ [Item Response Theory \[IRT\]](#)
- ▶ [Measurement Equivalence](#)
- ▶ [Measurement Invariance](#)
- ▶ [Measurement Methods](#)
- ▶ [Rasch Analysis](#)
- ▶ [Rating Scale](#)

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Simultaneous Latent-Class Analysis Across Groups

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Synonyms

[Multigroup latent-class analysis](#)

Definition

Simultaneous latent-class analysis across groups (SLCAG) is an extension of the standard latent-class (LC) model (► [Latent Class Model](#)) for the examination of measurement equivalence/invariance (► [Measurement Invariance](#)). It can be used to compare the latent structure derived from a set of discrete item responses between multiple groups, for example, between males and females; between Japanese, Americans, and Dutch; between young and old; and between ill and healthy. Whereas the more commonly used multigroup confirmatory factor analysis (MCFA) (► [Factorial Invariance](#)) assumes that the underlying latent variables are continuous, SLCAG treats the latent variables (► [Latent Variables](#)) either as nominal, for example, to identify a typological classification from a given set of categorical indicators, or as ordinal, for example, to investigate the scalability of a set of categorical indicators. These two specifications are sometimes referred as LC cluster and LC factor models, respectively.

Description

LC analysis was first introduced by Lazarsfeld for dichotomous items (Lazarsfeld & Henry, 1968) and formalized and extended to nominal variables by Goodman (1974). The multigroup extension of the standard LC model was proposed by

Clogg and Goodman (1985). This multigroup LC model contains three types of categorical variables: a set of observed indicators (e.g., the item responses from a QoL questionnaire – ► [Quality of Life Questionnaire](#)), one or more unobserved (latent) variables that account for the relationships between the observed indicators, and a grouping variable G , which is a categorical observed variable that can be associated with both the latent variable(s) and the indicators. The main model assumption is that the indicators are mutually independent conditionally on the latent variable(s) and the grouping variable. This is usually referred to as the assumption of local independence (Lazarsfeld & Henry, 1968).

Three Parameterizations

SLCAG is used to study measurement equivalence, that is, to determine to which extent the item responses are similar across groups conditional on the individuals' latent-class memberships. For this purpose, one can use one of the three types of parameterizations of the multigroup LC model, that is, a parameterization in terms of conditional probabilities, log-linear parameters, or linear-logistic item parameters (Kankaraš, Moors, & Vermunt, 2010). The probabilistic parameterization can be used when both the indicators and the latent variable(s) are nominal variables. Measurement equivalence is studied by equating the class-specific item response probabilities across groups (Clogg & Goodman, 1985; Hagenaars & McCutcheon, 2002).

In the log-linear formulation (Haberman, 1979), the item response probabilities are parameterized using a log-linear model (Log-linear models) with a main effect for the item, an association between latent variable(s) and item, an association between group and item (called direct effect), and a three-variable term between item, latent variable(s), and grouping variable (called interaction effect). The latter two terms capture possible differences between groups. A direct effect quantifies group differences in item responses that cannot fully be explained by group differences in the latent variable(s) – that is, when the group variable influences the

indicator concerned independently of the latent variable(s). The presence of an interaction effect indicates that the association between the item and the latent variable is modified by the group membership. The third parameterization is the linear-logistic specification (Kankaraš et al., 2010) in which the item response probabilities are parameterized in terms of item intercepts and latent variable regression slopes. These intercepts and slopes may vary across groups, which is similar to the formulation used in multigroup factor analysis. The meaning of unequal slopes is the same as the presence of log-linear interaction effects, and the interpretation of unequal intercepts is the same as the presence of log-linear direct effects.

In an unrestricted SLCAG, in which all parameters vary freely across groups, the three parameterizations of the multigroup LC model are essentially equivalent. This does, however, not apply to restricted SLCAG because the three parameterizations allow for slightly different types of model restrictions which have important implications when testing for measurement equivalence. First, in the probabilistic parameterization, equivalence is studied by restricting probabilities to be group invariant, in the log-linear parameterization by eliminating interaction effects and direct effects, and in logistic formulation by restricting intercepts and slopes to be invariant across groups. Second, the latter two parameterizations are needed to formulate models in which indicators and/or latent variables are treated as ordinal variables.

Multigroup LC Models for Ordinal Indicators and with Ordinal Latent Variables

When using either the log-linear or the logistic parameterization of the (multigroup) LC model, it is possible to define restricted models for ordinal indicators. This is important because in many areas of social sciences, including quality of life research (► [Quality of Life Research](#)), questionnaire items are often of an ordinal nature (e.g., rating scales). The constrained LC models for ordinal items impose linear restrictions on the log-linear indicator-latent variable association parameters or on the latent variable slope

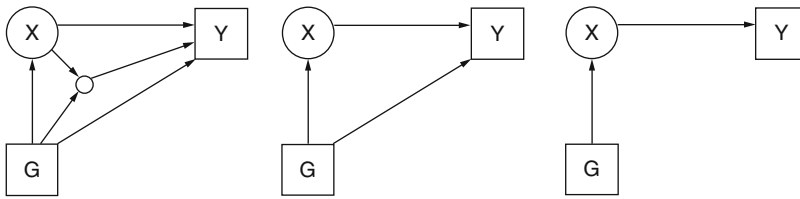
parameters (Kankaraš et al., 2010). More specifically, these parameters are restricted to be proportional to the item category scores.

Similar restrictions can be used to define models in which the latent variables have ordinal instead of nominal categories. This is achieved by assigning scores to (which is referred to as locating) the latent classes. Such LC models with discrete-ordinal latent variables are sometimes called LC factor models since they resemble linear factor analysis (► [Factor Analysis](#)) (Vermunt & Magidson, 2005). In most aspects, multigroup LC factor analysis is equivalent to standard multigroup LC analysis, with the main difference being that instead of comparing typologies, it compares latent dimensions of observed discrete variables across groups.

Although LC factor models are typically used in combination with ordinal indicators, multigroup LC factor models with nominally defined indicators can be very useful in cross-cultural research as it allows for simultaneous analysis of measurement equivalence and various types of response styles biases (Response Style Bias) that may affect survey responses (Moors, 2004).

Analysis of Measurement Equivalence

In an unrestricted SLCAG, all model parameters are allowed to differ across groups. This may yield completely different definitions of the latent classes in the investigated groups, making it difficult to perform comparisons between the groups. However, this is not the type of model a researcher is typically aiming at since he or she wants to be able to compare the latent classes across groups, that is, across medical centers, age groups, regions, and different types of patients. To determine whether this comparison is possible, the researcher has to check whether latent classes have the same meaning in all groups, that is, whether measurement equivalence can be established. In the context of LC analysis measurement, equivalence is established when the class-specific conditional response probabilities are equal across groups. This implies that it is necessary to impose across-group equality restrictions on these conditional



Simultaneous Latent-Class Analysis Across Groups, Fig. 1 Relationships between latent variable (X), indicator variables (Y), and group variable (G) in three different

multigroup LC models. (a) Heterogeneity (inequivalence), (b) partial homogeneity, (c) structural homogeneity

probabilities in order to test for measurement equivalence. As is shown below, using an SLCAG approach, various levels of homogeneity (i.e., measurement equivalence) can be tested, each of which involves restricting specific sets of model parameters to be equal across groups.

The ideal situation for an applied researcher who wishes to compare groups occurs when all measurement model parameters can be set equal across groups. From this perspective, the objective of researching measurement equivalence is to find the model with the highest level of equivalence possible that fits the data well. The model selection procedure usually starts by determining the required number of latent classes or discrete latent factors for each group. If the number of classes is the same across groups, then the heterogeneous model is fitted to the data, followed by a series of nested, increasingly restricted models which are evaluated in terms of model fit (Eid, Langeheine, & Diener, 2003; Hagenaars, 1990). Graphical representations of the three prototypical models that differ in the assumed level of measurement equivalence are provided in Fig. 1.

The heterogeneous, unrestricted multigroup LC model, graphically presented in Fig. 1a, depicts the situation of complete lack of comparability of results across groups as all measurement model parameters are group specific. Comparability is only established if we can impose across-group restrictions on the model parameters without deteriorating the fit of the model with the data. Imposing restrictions create various nested homogeneous models. If some, but not all, of the model parameters are

restricted to be equal across groups, the model is called partially homogeneous (Clogg & Goodman, 1985).

Among the various possible partially homogeneous models, the one presented in Fig. 1b with no “group–latent variable” interaction terms is especially important. This model still allows for “direct effects” or group-specific intercept parameters, which means that the values of the conditional response probabilities (i.e., their “difficulties”) are different across populations. However, as there are no group–latent variable “interaction effects” in the model (as slope parameters are assumed to be equal across groups), relationships between the latent variable and the responses are the same across groups, which make it possible to compare group differences in latent-class membership (McCutcheon & Hagenaars, 1997). This is conceptually similar with the “metric equivalence” model in MCFA in which factor loadings are equal across groups, but item intercepts may be unequal. Likewise, it resembles the situation of “uniform” differential item functioning (DIF) (► [Differential Item Functioning \(DIF\)](#)) in item response theory (IRT) (► [Item Response Theory \[IRT\]](#)) framework. It should be noted that the partially homogeneous model presented in Fig. 1b can only be specified using the log-linear and logistic parameterizations – distinguishing direct and interaction effects or intercepts and slope parameters, respectively – and, thus, not with the probabilistic parameterization. The partially homogeneous model can be tested against the unrestricted heterogeneous model. If the difference in fit between the two models is not significant, a researcher can

conclude that interaction effects are not needed in the model and can proceed with the next step in the analysis.

In comparative social research, researchers are typically interested in establishing full comparability of the measurement across groups – that is, they want to attain complete measurement equivalence. In order to do so in the context of LC analysis, it is necessary to establish structural equivalence (Hagenaars & McCutcheon, 2002). In a structurally equivalent (homogeneous) model (Fig. 1c), both direct and interaction effects are excluded from the log-linear model (set to zero), or in the alternative logistic formulation, both intercept and slope parameters are set to be equal across groups. This means that the conditional item response probabilities are restricted to be equal across groups, making the item responses independent of the group variable, when controlled for the latent-class membership. Structural equivalence is established if this model does not fit the data significantly worse than the partially homogeneous and heterogeneous models. The homogeneous model is comparable with the “scalar equivalent” model in MCFA that defines both factor loadings and item intercepts to be the same across groups. It is also similar to an IRT model with both item “difficulty” and “discrimination” parameters invariant across groups.

The SLCAG procedure explained so far concerns an analysis at the scale level; that is, it uses models in which a particular restriction is imposed or relaxed for all indicators simultaneously. However, SLCAG for testing measurement equivalence can also be conducted at the item level. This is particularly relevant when the scale level analysis indicates inequivalence in the form of either interactions or direct effects. In such a case, the analysis continues with item level comparisons in order to check which of the items in a scale are the source of inequivalence. More specifically, equivalence in the slope parameter (presence of interaction effect) for a particular item Y is assessed by comparing the unrestricted, heterogeneous model (Fig. 1a) with a model in which this parameter is equated across groups only for this item Y. In order to test for equivalence in intercept parameters (presence of

direct effects) at the item level, we need to assume equivalence in the slope parameters. Therefore, testing equivalence of the intercept parameters of item Y is based on the comparison of the partially homogeneous model with equal slope parameters for all items (Fig. 1b) with the model which in addition assumes equal intercept parameters for item Y. This procedure is very similar to the one used in MCFA where it is referred to as “partial equivalence.” It should be noted that SLCAG differs from MCFA in that it does not require the use of an invariant anchor item for identification purposes.

Analysis of measurement equivalence with LC analysis is not by definition restricted to comparing the three models drawn in Fig. 1. Various combinations of within- and across-group restrictions and different parameterizations are possible. For instance, it is possible to impose equalities constraints across items within groups or to define models with different numbers of latent classes across groups while still assuming measurement equivalence for particular classes (Kankaraš et al., 2010).

Parameter Estimation and Assessment of Model Fit

LC models are usually estimated by means of maximum likelihood (ML) under the assumption of a multinomial distribution for the indicator variables used in model. Maximization of the log-likelihood function is typically performed using an expectation–maximization (EM) algorithm, a Newton–Raphson algorithm, or a combination of these two.

Various model fit statistics are available for the evaluation in a multigroup LC model. The likelihood-ratio and the Pearson’s chi-square goodness-of-fit statistics (Chi-Squared Statistic) are used as standard measures of discrepancy between the observed frequencies and the estimated frequencies according to the model. However, these chi-square tests have a number of important limitations, the major ones being their limited use when dealing with sparse tables and their oversensitivity for misfit with large samples. In addition, the goodness-of-fit statistics do not provide enough control for the number of

parameters in a model, which can sometimes be very large even for models of modest size (Hagenaars & McCutcheon, 2002).

These limitations prompted the recent development and use of several information criteria, such as the Akaike information criterion (AIC), Bayesian information criterion (BIC), modified AIC (AIC3), and consistent AIC (CAIC), each of which is designed to penalize models with larger numbers of parameters. Since increasing the number of parameters of a model will increase the likelihood, the information criteria penalize the likelihood by a certain amount that is a function of the number of estimated parameters. Thus, a model with a lower value for the information criteria yields a better fit to a data, for a given number of parameters. Since they also control for sample size, BIC and CAIC are preferred fit statistics in situations when sample size is large. For small to medium sample sizes, the AIC statistic is most commonly used.

Software packages that can be used to obtain ML estimates and model fit statistics for multigroup LC models are LEM (Vermunt, 1997), Latent GOLD (Vermunt & Magidson, 2005), MPlus (Muthén & Muthén, 2006), and GLLAMM (Rabe-Hesketh, Skrondal, & Pickles, 2004).

Discussion

LC analysis is an obvious choice when a researcher wishes to compare typological structures across groups – that is, when investigating whether groups differ with respect to the prevalence of latent classes, while taking into account issues of measurement equivalence. With the possibility to define the latent variable(s) as discrete ordinal, it is shown that the LC approach can also be used for cross-cultural comparisons of dimensional structures, thus, presenting an alternative to the more frequently used MCFA and IRT approaches (Kankaraš et al., 2010). This is especially true in those situations when some of the model assumptions of MCFA and IRT do not hold. With its flexible set of tools, combined with recent developments in software for multigroup LC modeling, the presented approach is a very attractive option for studying measurement

equivalence in any situation in which the indicators are discrete variables.

Cross-References

- ▶ [Differential Item Functioning \(DIF\)](#)
- ▶ [Factor Analysis](#)
- ▶ [Factorial Invariance](#)
- ▶ [Item Response Theory \[IRT\]](#)
- ▶ [Latent Class Model](#)
- ▶ [Latent Variables](#)
- ▶ [Measurement Invariance](#)
- ▶ [Quality of Life Questionnaire](#)
- ▶ [Quality of Life Research](#)

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SINET

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Definition

SINET: Social Indicators Network News is a quarterly review of social reports and research on ► [social indicators](#), ► [social trends](#), and the ► [quality of life](#) that also contains news items on these topics. *SINET* serves as the Newsletter of the ► [International Society for Quality of Life Studies](#) (ISQOLS) and also includes news from Research Committee 55 on Social Indicators and Social Reporting of the International Sociological Association. It is published three times a year (February, May–August combined issue, and November).

Description

History

The United States (US) Social Science Research Council opened a Center for Coordination of Research on Social Indicators in 1972 in Washington, District of Columbia (DC). The Center began circulating its *Social Indicators Newsletter* in March 1973 and ended publication with issue number 18 in September 1983.

The objective of the *Newsletter* was to convey information on the activities of the Center for Coordination of Research on Social Indicators as well as of various activities and organizations involved in the development of social indicators, including the development of new datasets and data series, new conceptual frameworks, new indicators, and new organizations and groups involved in such activities.

When the Center closed its doors in 1984, Abbott L. Ferriss of Emory University volunteered to carry on the collation, review, and distribution of news about social indicators functions of the *Newsletter* by publishing the *SINET: Social Indicators Network News*. Ferriss edited the quarterly publication of *SINET* through the November 1995 issue (number 44). During his term, *SINET* became a key source of news about social indicators developments. Professional recognition followed at its 1992 meeting, the Working Group on Social Indicators and Quality of Life Measurement of the International Sociological Association voted to have *SINET* publish news of the Working Group commencing with the November 1992 issue. Ferriss also continued and expanded the review function of *SINET* in the form of periodic reviews of new social indicators publications and books.

Kenneth C. Land of Duke University became Editor with the Winter (February) 1996 issue number 45 and has served in that capacity through the November 2012 issue number 112 and beyond. In his initial issue as Editor (February 1996), Land (1996) published an essay entitled “Social Indicators and the Quality of Life: Where Do We Stand in the Mid-1990s?” In this article, Land reviewed the history and contemporary status of interest in social indicators, social monitoring, and social reporting and described (1) the classical heritage from the social indicators movement of the 1960s and 1970s, (2) the revitalization of interest that emerged beginning in the mid-1980s, and (3) the emergence of quality of life/well-being as a unifying concept in political, popular, and theoretical discourses of these topics in the 1990s. The lessons learned, and guidelines articulated, from the history and state of

social indicators and social reporting, as articulated by Land in this widely cited article, have held to the contemporary period (Land, Michalos, & Sirgy, 2012).

Discussion

SINET continues to publish news for what is now Research Committee 55 on Social Indicators and Social Reporting of the International Sociological Association. In addition, at the Second Conference of the International Society for Quality-of-Life Studies held December 3–6, 1998 at the Fort Magruder Inn in Williamsburg, Virginia, USA, *SINET* was made an official journal of the Society and continues to serve as the Newsletter of the Society – the November 2012 issue contains reports by Filomena Maggino, President, and Wolfgang Glatzer, Past President, of ISQOLS on the 11th Conference of the Society held in Venice, Italy, November 1–4, 2012.

SINET also continues the review function initiated by Editor Emeritus Abbott Ferriss. For instance, the February 2012 issue contains an extensive review by the Editor (Land 2012) of the Web-based Human Development Report and its ► [Human Development Index \(HDI\)](#) produced annually by the United Nations Human Development Programme. The HDI is one of the most widely known composite social indicators, and its associated annual reports are widely cited. Among the conclusions of the review is the statement that “. . . the virtues of the Human Development Reports pertain to the application of a conceptual scheme that draws attention to dimensions of well-being that go beyond a country’s Gross Domestic Product and that is simple enough in its indicator demands that the empirical calculation of the HDI can be so inclusive of countries around the world. As more data on other well-being dimensions become available for more countries, an objective of the Human Development Report Office should be to assess today’s extensive body of well-being and social indicators research for possible refinements, revisions, and extensions of the HDI.”

SINET has a homepage entry on the World Wide Web: <http://www.soc.duke.edu/resources/sinet/index.html>.

The homepage for *SINET* contains sections on Subscription Information, Editorial Information, Issue-Related Links, Contents of Current and Previous Issues, and a link to the homepage of ISQOLS, the International Society for Quality of Life Studies. The Issue-Related Links button has links to World Wide Web locations of data for the construction, study, and analysis of social and quality of life indicators that have been identified in previous issues of *SINET*. Institutions and individuals may either subscribe directly to *SINET* or by joining ISQOLS: <http://www.isqols.org/>.

Cross-References

- [History of Social Indicators and its Evolution](#)
- [Social Change](#)

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Singapore, Quality of Life

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Synonyms

[QOL](#); [SPWB](#); [SSWB](#)

Definition

Singapore

Singapore is an island city-state located at the southern tip of the Malay Peninsula, with a multiethnic, multireligious, and multilingual population of 5.08 million as at 2010. In 2011, Singapore's economy, which is primarily services-driven and export-oriented, grew at 4.9 %, and the per capita GDP was reported to be S\$63,050 (Department of Statistics Singapore, 2012). The average monthly household income in 2011 was S\$9,618, up from S\$6,792 in 2006 and S\$6,417 in 2001. Singapore prides itself as a cosmopolitan city with a good infrastructure for doing business and as a hospitable place for nonresidents and visitors.

Description

Overview

In Singapore, research and data sources on ► [subjective well-being](#) and the ► [quality of life](#) (QOL) have been fragmented although there is increasing interest in these issues. Although there is no composite index of the quality of life, three nationwide surveys on the quality of life of Singaporeans and related issues (1996, 2001 and 2011) have been done (Kau, Tan, & Wirtz, 1998; Kau, Jung, Tambyah, & Tan, 2004; Tambyah & Tan, forthcoming). Singapore has also been a part of the 2004 and 2006 AsiaBarometer Surveys (<http://www.asiabarometer.org/en/surveys/2006>), which measures quality of life at the global level (in terms of ► [happiness](#), achievement, and ► [enjoyment](#)) and the domain level (satisfaction with 15 life domains) (Inoguchi & Shin, 2009). These surveys thus provide a rich depository of data and insights into the ► [values](#), lifestyles, aspirations, happiness, and well-being of Singaporeans. We have nationally representative datasets collected in 1996, 2001, and 2011 (for the 2011 QOL Survey) for indicators such as ► [satisfaction with life](#), life domains and living in Singapore, personal values, and value orientations.

For indicators such as happiness, enjoyment, achievement, and satisfaction with rights, there are two nationally representative datasets (the 2006 AsiaBarometer Survey and the 2011 QOL Survey).

In this entry, we share the results from the most recent 2011 Quality of Life (QOL) Survey, a nationwide and nationally representative sample of 1,500 Singaporeans surveyed in June 2011. We compare some of these results with the 2001 and 1996 surveys (Kau et al., 2004), and results for Singapore from the 2006 AsiaBarometer Survey (Tambyah, Tan, & Kau, 2010), to shed light on any changes over time. In the 2011 QOL Survey, we also incorporated scales developed by Diener and Biswas-Diener (2008) on ► [emotional well-being](#), psychological flourishing, ► [economic well-being](#), and overall well-being. These scales, based on the Gallup-Healthways Well-Being Index (<http://www.gallup.com/poll/well-being.aspx>), have been used to classify citizens as “thriving,” “struggling,” or “suffering.”

Overall Quality of Life

The statistics from the 2011 QOL Survey questions on happiness, enjoyment, and achievement as well as the compilation of the Overall Life Quality Index seemed to suggest that Singaporeans were doing well, although less so compared to 5 years ago (see [Tables 1, 2 and 3](#) and [Fig. 1](#)). Singaporeans were less happy in 2011 as the Happiness Index dipped to 69 % from 72.5 % in 2006. The Enjoyment Index did not vary much, while the Accomplishment Index improved from 52.1 % in 2006 to 65.8 % in 2011. Thus, it appeared that while Singaporeans felt they had achieved more in 2011, they were not necessarily happier. Some demographic differences were noted. Married Singaporeans were happier and felt they had achieved more. Young Singaporeans (aged 25–34 years) were the least happy, enjoyed life the least, and perceived themselves as not having achieved a lot compared to other age groups. Singaporeans with high household incomes were the happiest and enjoyed life the most.

Singapore, Quality of Life, Table 1 Levels of happiness

	Very happy (a)	Quite happy (b)	Neither happy nor unhappy	Not too happy (c)	Very unhappy (d)	Happiness index (a + b)–(c + d)
Percentages for 2011 survey (%)	19.0	55.2	20.6	4.7	0.5	+69.0
Percentages for 2006 AsiaBarometer survey (%)	27.5	51.1	15.4	5.2	0.9	+72.5

Source: Tambyah and Tan (2013), p. 35

Singapore, Quality of Life, Table 2 Levels of enjoyment

	Often (a)	Sometimes (b)	Rarely (c)	Never (d)	Enjoyment index (a + b)–(c + d)
Percentages for 2011 survey (%)	31.7	56.1	11.3	0.8	+75.7
Percentages for 2006 AsiaBarometer survey (%)	34.3	54.2	10.0	1.5	+77.0

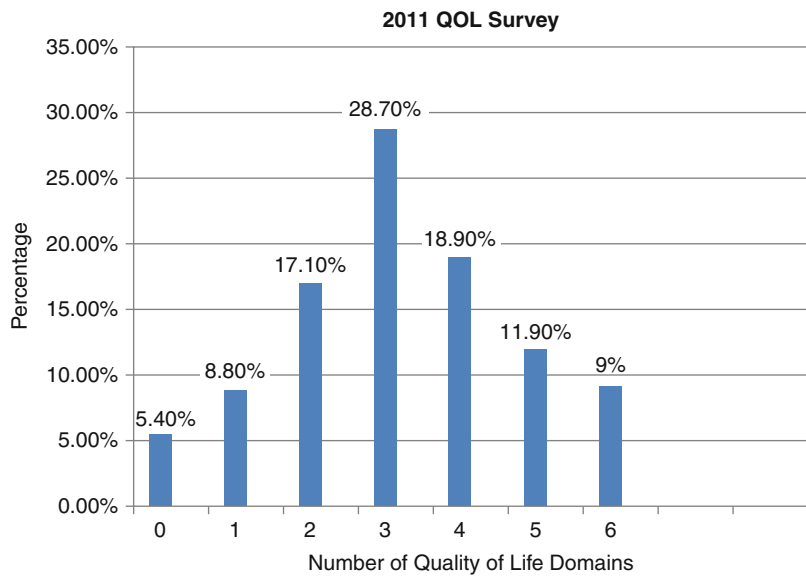
Source: Tambyah and Tan (2013), p. 35

Singapore, Quality of Life, Table 3 Levels of achievement

	A great deal (a)	Some (b)	Very little (c)	None (d)	Achievement index (a + b)–(c + d)
Percentages for 2011 survey (%)	21.2	61.7	15.3	1.8	+65.8
Percentages for 2006 AsiaBarometer survey (%)	16.9	59.1	20.7	3.2	+52.1

Source: Tambyah and Tan (2013), p. 35

Singapore, Quality of Life, Fig. 1 Index of overall life quality (2011). Source: Tambyah and Tan (2013), p. 39



Singapore, Quality of Life, Table 4 Mean ratings of satisfaction with life domains (2011 vs. 2001 vs. 1996)

Domains	2011 mean ^a	2001 mean ^a	1996 mean ^a
Relationship with your children	5.32 (1)	5.10 (1)	5.25 (1)
Relationship with your parents	5.17 (2)	5.06 (2)	5.05 (3)
Relationship with brothers/sisters	5.09 (3)	4.97 (3)	4.92(4)
Marriage/romantic relationship	4.88 (4)	4.96 (4)	5.08 (2)
Job (if you are working)	4.65 (11)	4.81 (5)	4.55 (7)
Health	4.72 (9)	4.79 (6)	4.75 (6)
Study (if studying full/part time)	4.75 (6)	4.78 (7)	4.49 (9)
Friends	4.84 (5)	4.77 (8)	4.77 (5)
Leisure activities/entertainment	4.74 (7)	4.69 (9)	4.44 (11)
Your physical appearance	Not measured	4.68 (10)	4.47 (10)
Material comfort	Not measured	4.64 (11)	4.53 (8)
Money	Not measured	4.57 (12)	4.25 (12)
Household income	4.34 (15)	Not measured	Not measured
Relationship with neighbors	4.61 (12)	Not measured	Not measured
11 Standard of living			
Standard of living	4.50 (13)	Not measured	Not measured
Education attained	4.45 (14)	Not measured	Not measured
14 Housing			
15 Spiritual life			
Housing	4.69 (10)	Not measured	Not measured
Spiritual life	4.74 (7)	Not measured	Not measured
Your overall satisfaction with life	4.83	4.81	4.77

^aMeasured on a 6-point scale: 1 = Very dissatisfied, 2 = Dissatisfied, 3 = Somewhat dissatisfied, 4 = Somewhat satisfied, 5 = Satisfied, 6 = Very satisfied. *Numbers in parentheses* indicate ranking based on highest to lowest mean ratings

Source: Tambyah and Tan (2013), p. 22

Satisfaction with Life and Specific Life Domains

Statistics from the 2011 QOL Survey questions on satisfaction with life, satisfaction with 15 specific life domains, and satisfaction with the 23 aspects of living in Singapore revealed insights into the areas that Singaporeans were satisfied or dissatisfied with. For “overall satisfaction with life,” Singaporeans were slightly more satisfied compared to 2001 and 1996 (see Table 4). For specific life domains, Singaporeans were still most satisfied with their relationships with their children, parents, siblings, and spouses/romantic partners (see Table 4). Good relationships with family members have sustained Singaporeans’ satisfaction with life over the years. This was a reflection of the importance placed on family values and ties. Singaporeans were most dissatisfied with their household incomes, education attained, standard of living,

relationship with their neighbors, and jobs (if they were working).

Satisfaction with Living in Singapore

In terms of living in Singapore, Singaporeans were most satisfied with the level of safety and security, quality of law enforcement, cleanliness, the quality of education, and the way the government runs the country (see Table 5). They were least satisfied with the affordability of cars and properties, the cost of living, the affordability of ► health care, and the availability of career opportunities in 2011. The high costs of living, housing, and car ownership have remained sources of dissatisfaction through the years. Overall, Singaporeans were less satisfied with living in Singapore as compared to 2001 and 1996, although they were slightly more satisfied with life in general as compared to 2001. There were weak linkages between the measures of

Singapore, Quality of Life, Table 5 Mean ratings of satisfaction with living in Singapore (2011 vs. 2001 vs. 1996)

Life domains	2011 mean ^a	2001 mean ^a	1996 mean ^a
1. Public services available	4.61 (6)	4.55 (4)	4.90 (3)
2. Convenience of public transport	4.55 (8)	4.53 (6)	4.78 (5)
3. Amount of freedom you have	4.57 (7)	4.40 (10)	4.53 (9)
4. Quality of education	4.76 (4)	4.50 (7)	4.69 (7)
5. Quality of law enforcement	4.90 (2)	4.57 (3)	4.81 (4)
6. Way the government runs the country	4.74 (5)	4.54 (5)	4.73 (6)
7. Cost of living	3.59 (21)	4.01 (18)	3.74 (15)
8. Number of rules and regulations	4.27 (15)	4.18 (16)	4.09 (13)
9. Cleanliness of country	4.82 (3)	4.65 (1)	4.91 (2)
10. Level of safety and security in Singapore	4.93 (1)	4.64 (2)	4.97 (1)
11. Variety of leisure and recreational facilities	4.42 (13)	4.40 (10)	4.50 (10)
12. Protection of consumers	4.23 (16)	4.34 (13)	4.40 (11)
13. Affordability of properties	3.11 (22)	3.96 (20)	3.25 ^b (16)
14. Affordability of cars	2.89 (23)	3.69 (19)	3.25 ^b (16)
15. Availability of career opportunities	3.88 (19)	4.12 (17)	4.22 (12)
16. Quality of health care	4.47 (11)	4.43 (9)	4.68 (8)
17. Availability of health care	4.53 (10)	4.44 (8)	Not measured
18. Affordability of health care	3.69 (20)	4.22 (15)	3.97 (14)
19. Range of products and services available	4.43 (12)	4.35 (12)	Not measured
20. Quality of customer services	4.07 (18)	4.31 (14)	Not measured
21. Social welfare system	4.16 (17)	Not measured	Not measured
22. Democratic system	4.37 (14)	Not measured	Not measured
23. Condition of the environment	4.54 (9)	Not measured	Not measured
24. Overall satisfaction with life in Singapore	4.41	4.50	4.67

^aMeasured on a 6-point scale: 1 = Very dissatisfied, 2 = Dissatisfied, 3 = Somewhat dissatisfied, 4 = Somewhat satisfied, 5 = Satisfied, 6 = Very satisfied

^bItems combined in 1996. *Numbers in parenthesis* show rankings based on highest to lowest mean ratings

Source: Tambyah and Tan (2013), p. 25

satisfaction and the demographic variables except for satisfaction with the various relationships. Singaporeans were more satisfied with their relationships as they got older, became more educated, had higher incomes, and became more spiritually aware.

Emotional Well-Being, Psychological Flourishing, and Economic Well-Being

Singaporeans were asked to indicate how often they have experienced pleasant feelings (e.g., pleasant, contented, loving, and joyful) and unpleasant feelings (e.g., stressed, sad, angry, and depressed) over the past 4 weeks. The ► [emotional well-being](#) score was calculated by subtracting the “unpleasant feelings” score from

the “pleasant feelings” score, resulting in an index called “hedonic balance.” For emotional well-being, on average, more than half (51.5 %) said they were “slightly happy” and one in five were “happy” or “very happy” (see [Table 6](#)).

The psychological flourishing scale measures how a person generally feels about his/her life and whether his/her life has purpose and meaning. The scale contained statements such as “I am engaged and interested in my daily activities” and “my social relationships are supportive and rewarding.” In terms of psychological wealth, 40 % of Singaporeans were in the “high flourishing” range (see [Table 7](#)). Generally, based on the scores on the emotional well-being questions and psychological flourishing scale, Singaporeans appeared to be doing well.

Singapore, Quality of Life, Table 6 Singaporeans' emotional well-being scores (2011 QOL survey)

"Hedonic balance" score	What it means	Number and percentage of Singaporeans (N = 1,500)
24 to 32	Very happy	47 (3.1 %)
16 to 23	Happy	238 (15.9 %)
5 to 15	Slightly happy	772 (51.5 %)
4 to -3	Neutral, mixed	286 (25.3 %)
-4 to -12	Somewhat unhappy	146 (3.5 %)
-13 to -23	Very unhappy	9 (0.6 %)
-24 to -32	Extremely unhappy	2 (0.1 %)

Source: Tambyah and Tan (2013), p. 41

Singapore, Quality of Life, Table 7 Singaporeans' psychological flourishing scores (2011 QOL survey)

Re-grossed score range	What it means	Number and percentage of Singaporeans (N = 1,496; 4 missing)
68-72	Extremely high flourishing	29 (1.9 %)
63-67	Very high flourishing	98 (6.5 %)
58-62	High flourishing	598 (40 %)
53-57	Flourishing	564 (37.7 %)
48-52	Slight lack of flourishing	200 (13.4 %)
32-47	Lack of flourishing	7 (0.5 %)
12-31	Extremely low flourishing	0 (0 %)

Source: Tambyah and Tan (2013), p. 43

For ► [economic well-being](#) (see [Table 8](#)), although two-thirds of Singaporeans agreed that they had enough money to buy the things they need, two-thirds disagreed that they had enough money to do what they wanted or to make a major purchase. Two-thirds of Singaporeans also felt that they did not have enough money to do what they wanted, and this perception was higher for singles (75.7 %). This sense of deprivation seemed to be more prevalent among younger people and those with lower levels of education and income.

For the Overall Life Evaluation Index (see [Table 9](#)), Singaporeans did not really perceive

themselves to be doing well as only a third of Singaporeans rated themselves as "thriving." Even among those who agreed that they were "thriving," they were still unable to spend money on their desires or to make major purchases. This "unhappiness" was felt most by the middle-income earners. The middle-income earners (those whose household income falls in the range of \$2,001–\$5,000) may feel this way because they are often considered "the sandwiched class" with many financial commitments but few subsidies from the government.

Value Orientations and Well-Being

In the nationwide surveys conducted in 1996, 2001, and 2011, we have usually identified value orientations and examined their impact on well-being. For the 2011 QOL Survey, the seven value orientations that were used to gain more insights into what was important to Singaporeans and their well-being were family values, conservatism, entrepreneurial spirit, volunteerism, eco-orientation, status consciousness, and e-orientation. Through the years, we have noted that family values continued to be highly regarded in Singaporean society. Other values that have become more prominent include societal consciousness and e-orientation, as Singaporeans have become more digitally and globally connected and more aware of societal issues and concerns. In contrast, values such as ► [materialism](#) and status consciousness have somewhat declined in importance over the past decade.

The value orientations of Singaporeans could have a significant impact on their quality of life and well-being. Subjective ► [personal well-being](#) (SPWB) comprised satisfaction with relationships with parents, children, siblings, neighbors, and friends and marriage/romantic relationship, job, and leisure activities. Another aspect of the quality of life could be subjective ► [social well-being](#) (SSWB) which referred to various aspects of satisfaction with living in Singapore. In assessing the impact of value orientations on Singaporeans' life satisfaction in the 2011 QOL Survey, we found that being E-oriented, Family-oriented, and Eco-oriented contributed positively to Singaporeans' SPWB. As noted in the results

Singapore, Quality of Life, Table 8 Singaporeans' economic well-being scores (2011 QOL survey)

Do you have enough money to buy the things you need?		Do you agree you have more than enough money to do what you want to do?		Would you be able to make a major purchase, such as a car, appliance, or furniture, or pay for a significant home repair if you needed to?	
(1) Yes, have enough (%)	(2) No, do not have enough (%)	(1) Agree (%)	(2) Disagree (%)	(1) Yes, would be able to (%)	(2) No, would not be able to (%)
66.9	33.1	32.5	67.5	36.4	63.6

Source: Tambyah and Tan (2013), p. 45

Singapore, Quality of Life, Table 9 Overall life evaluation index (2011 QOL survey)

Category	Percentage
<i>Thriving</i> (those who rate today a "7" or higher and the future an "8" or higher)	39.3
<i>Struggling</i> (those who rate today in the range of "5–6" and future in the range of "5–7")	54.9
<i>Suffering</i> (those who rate today and the future a "4" or lower)	5.8
<i>Overall Life Evaluation Index score</i> (thriving – suffering)	33.5

Source: Tambyah and Tan (2013), p. 48

of a 2001 nationwide survey reported in Tan, Tambyah, and Kau (2006), family values and societal consciousness contributed positively while materialism contributed negatively towards Singaporeans' satisfaction with aspects of living in Singapore. In the 2011 QOL Survey, Singaporeans who were more Eco-oriented, willing to volunteer, conservative in outlook, and had an entrepreneurial spirit were more likely to be satisfied with their SSWB.

Concluding Remarks

While the 2011 QOL Survey results seemed positive for the general population, there were specific groups of Singaporeans who were less contented with their quality of life in Singapore. Singaporeans in the "25–34 years" age group were the least happy, enjoyed life the least, and felt they were not achieving very much. These younger respondents might not have attained their desired social status or financial capabilities to enjoy their preferred lifestyles. However, even middle-income earners felt that they did not have enough to spend on fulfilling their desires or make major purchases. In previous surveys,

middle-income earners were still relatively satisfied. However, for the 2011 QOL Survey, high-income earners were happiest and enjoyed life the most. These results highlighted the high costs of living in Singapore and how citizens found it hard to enjoy a good quality of life. It appeared that only those with sufficient resources have the opportunities to do so. Singaporeans also expected the government to play a role in ensuring the well-being of its citizens. In the 2011 QOL Survey, we asked Singaporeans to rate on a scale of "1 = Strongly Agree" to "5 = Strongly Disagree" on 11 statements about the role of the government. The top five areas that Singaporeans wanted more government spending were the needs of an ► [aging population](#), health care, the public transport system, education, and policing and law enforcement.

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Singing

- ▶ [Arts in British Columbia, Canada](#)

Single Nucleotide Polymorphisms

- ▶ [Pain and Genetic Connections](#)

Single-Industry Communities

- ▶ [Resource-Based Communities](#)

Single-Parent Families

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Synonyms

[One-parent families \(UK\)](#)

Definition

Single-parent families are families with children under age 18 headed by a parent who is widowed or divorced and not remarried or by a parent who has never married.

Description

The term “single-parent family” relates to the family as a unit of socialization which usually consists of and is assumed by a parental couple, i.e., by two persons (mother and father). If one parent is absent, the question arises how this absence can be compensated. Therefore, happiness and life satisfaction of the members of single-parent families will depend on how they can cope with the lack of personal bonds and resources. On closer consideration, one-parent families can be seen from three different perspectives: regarding the social situation, the parent’s view, and the children’s perspective.

There are different forms of single-parent families depending on why the second parent of the triad is absent: whether the missing parent has died, the couple has divorced, or the parent in question had decided to remain single (which is often the case with women). During the nineteenth century up to the mid-twentieth century, most single-parent families developed due to the fact that one parent had died, whereas since the 1970s divorce has become the main reason for forming single-parent families. Since the beginning of the twentieth century, the number of children born out of wedlock has shown a dramatic increase (www.healthofchildren.com).

One-parent families are largely a phenomenon of modernism; they can only develop where women are capable of detaching themselves from their families of origin: women are allowed to live by themselves separate from their family groups in their own domiciles and are in a position to support themselves either by work, maintenance, or transfers from the community.

In 2003, about 16 % of children worldwide lived in a single-parent household (Rampell, 2010). The number of single-parent families

differs depending on a country's definition of the term. The discriminating variable is if another adult is living in the household or not.

In the USA, 27 % of all children live in a single-parent family. In Germany, 19 % of all families are single-parent families and in Great Britain, 25 %. Ninety percent of all single-parent families are headed by the mother (Census Bureau Reports, 2011; Office for National Statistics, 2005; Statistisches Bundesamt, 2010).

Looking at the situation in developing countries, an extremely high number of children in Latin America, Oceania, and Africa, especially in certain areas of South Africa, live in single-parent families, whereas the number of children being brought up by a single parent is low in countries located in the Middle East and Asia (Global Children's Trends, 2011).

The above-mentioned figures represent the situation of a family at a certain point in their life; in fact, being a single parent is rather a stage of the family life cycle than a family form.

Sociologists such as Parsons (1981) as well as psychoanalysts and systemic therapists maintain that the primary unit of socialization does not consist of the mother-child dyad but of the triad of father, mother, and child (Hildenbrand, 2011). Where this triad does not exist or is in disintegration, there arises the question in particular to the children how the third – absent – member of the triad can be replaced. The search for the absent parent, mostly the father, constitutes an age-old topos in the history of European civilization. However, 83 % of the single mothers who have been interviewed in Germany want a partnership (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2011).

There exists also a group of single mothers whose ideal is living alone with their children – without a male partner. They are single mothers by choice.

Usually, one-parent families are at risk of being overwhelmed by everyday demands and threatened by poverty. This is particularly true for single-mother households.

The feeling of being overwhelmed – particularly in the case of single mothers – manifests itself in a lack of self-confidence and health

problems. In contrast to married mothers, single mothers often suffer from kidney and liver diseases, chronic bronchitis, and mental diseases, especially if they belong to the lower classes (Helfferrich et al., 2003).

The economic situation of single mothers can be described as follows: about 60 % live on their own income; about a third receives transfers.

According to the EU Survey on Income and Living Conditions (EU-SILC), single-parent families are more likely to live in or near poverty than any other group of the population in Europe. In 2007, the average rate of single parents living in or near poverty in 16 high-income European nations was 31 %, ranging from 17 % in Denmark to 45 % in Luxembourg. In the USA, the at-risk-of-poverty rate is 50 % (European Union, 2010; Legal momentum, 2011).

The poverty risk of single mothers is relative to their chance of finding employment which, in turn, depends on the following factors:

- (a) Level of education. Single parents with low levels of education are more likely to be in low-paid jobs or unemployed. Furthermore, women earn, on average, 20 % less than men.
- (b) Age of the children. Mothers with young children are less likely to work and, as a result, are less likely to earn their own living. Mothers with older children are more likely to work and are thus in a position to minimize their poverty risk.
- (c) Possibility of child care. Because of their low income, lone mothers cannot afford the cost of child care. Often child care services are not available – neither in institutions nor from the families or friends.
- (d) Working full time or part time. About 20 % of single mothers work part time because there are not enough or appropriate full-time jobs (Statistisches Bundesamt, 2010).

Because of their low income, nearly half of the female-headed single-parent families find it difficult to pay for adequate housing, heating, maintenance repairs, or for going on holiday. Quite often they get into debt (Statistisches Bundesamt, 2010).

Although divorce is a reasonable solution to an unhappy marriage characterized by physical

and/or psychological violence, only 49 % of single mothers who were interviewed in Germany were satisfied with their lives – by contrast, the rate was 75 % among mothers living with their husbands (Bundesministerium für Familie, Senioren, Frauen und Jugend [BMFSFJ], 2011). Single parents expect improvement in their situation by more favorable conditions of their lives, e.g., more job opportunities, children growing older, and decreasing conflicts with the divorced husband. Life satisfaction of the 49 % of single mothers who have a positive attitude reflects an expectation that one can enjoy life, experience happiness, feel strong enough to shoulder responsibility, cope with difficult situations, and find new motivation when confronted with setbacks. They see themselves as proficient and assertive persons. Apart from their own strengths, those single mothers often have also support from their family of origin as well as from their individual network of friends and acquaintances. In Germany, 69 % of the single mothers draw on their family network (BMFSF, 2011). Lacking such a network increases the risk that children serve as replacement partners, the mother-child symbiosis cannot be dissolved, or the children assume parental functions toward their own parents.

However, quality of life in children – of divorced parents in particular – is affected throughout their lives, e.g., they undergo feelings of helplessness and uncertainty, as adults they have difficulties of finishing adequate education or training, or they are afraid of being intimate with another person. Children of divorced parents face higher risk of getting divorced as adults (Wallerstein, Lewis, & Blakeslee, 2000; Napp-Peters, 1995).

In cases where the father is absent (as is the case with most one-parent families), it is particularly difficult for boys to develop a stable gender-role identity. However, studies carried out by American and German researchers state that a quarter of children of divorced parents succeed in overcoming the consequences of divorce and developing into adults who are able to deal with life's challenges. Whether adult life is then

successful depends on how certain family structures have developed after the parent's divorce, e.g., positive contact with both parents without excluding one of the parents. If the parents succeed in mastering their divorce and its consequences, there is a chance of creating an open family made up of several parents that can integrate the divorced partners and the stepparents alike (Napp-Peters, 1995).

Being brought up in a one-parent family generally entails higher risk – particularly for boys – of developing behavioral syndromes and significant psychosocial problems. About half the minors who receive educational measures, pursuant to the Children's Act, come from one-parent families with 70 % or more of them receiving transfers, i.e., they are poor (Statistisches Bundesamt, 2010).

Discussion

Discussions about the quality of life of single-parent families focus on two dimensions: first, to avoid persons becoming single-parent families and, second, to improve the living conditions of such families. Many authors agree that divorce is a high-risk situation which may lead to problems in many areas of life. Therefore, "divorce should not be taken lightly ... Every effort should be made to sustain marriages with some strength and satisfactions" (Hetherington and Kelly, 2002, p. 280). To reach this goal, it is vital that sufficient low-threshold advisory services are available.

After the living-conditions of single-parent families vary considerably in Europe and the USA, it is important to look for individual measures to support single-parent households:

- (a) Helping parents especially the mothers to find well-paid employment and, as a result, integrate them into the labor market
- (b) Providing access to child care opinions to encourage parents to qualify for better education or a paid work
- (c) Supporting them financially by means of benefits or allowances (European Alliance for Families, 2010)

Cross-References

- ▶ [Active Coping](#)
- ▶ [Adolescent Problem Behavior](#)
- ▶ [Child and Family Well-being](#)
- ▶ [Children Living Without Their Fathers](#)
- ▶ [Employment Insecurity](#)
- ▶ [Family Quality of Life](#)
- ▶ [Family Support](#)
- ▶ [Gender and Poverty](#)
- ▶ [Household Composition](#)
- ▶ [Mother-Child Interactions](#)

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Single-Parenthood Family

- ▶ [Family Structure](#)

SIS

- ▶ [Stroke Impact Scale](#)

SIS and SS-QOL

- ▶ [Stroke Impact Scale 3.0 and the Stroke-Specific Quality of Life Scale](#)

Sisters

- ▶ [Siblings, Overview](#)

Situational Crime Prevention

- ▶ [Impact of Housing Design on Crime](#)

Skills

- ▶ [Human Capital](#)

Skills and Human Capital

- ▶ [Capabilities](#)

Skin Cancer

- ▶ [Melanoma](#)

Skipped Generational Family

- ▶ [Family Structure](#)

SLDS-C

- ▶ [Satisfaction with Life Domains Scale for Cancer \(SLDS-C\)](#)

Sleep and Well-Being

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Synonyms

[Optimal sleep](#)

Definition

▶ [Sleep](#) has long been understood to restore ▶ [health](#) and vigor after these resources are depleted over the course of a day (Adam & Oswald, 1977). The focus of most research is the association between inadequate sleep and

chronic psychopathology and physical illness. More recent research has explored the association between sleep and well-being.

Well-being has been defined in many ways. Ryff, Singer, and Love (2004) identified two general facets, hedonic well-being, defined as positive feelings, including ▶ [happiness](#) and ▶ [satisfaction](#), and ▶ [eudaimonic well-being](#), defined in terms of self-development and purposeful engagement. Ryff's eudaimonic well-being model includes six dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, ▶ [purpose in life](#), and personal growth. The vigorous energy produced by a good night's sleep may enable individuals to manage ▶ [stress](#) as well as work towards goals of eudaimonic well-being, such as seeking purpose in life and achieving a sense of ▶ [personal growth](#) (Hamilton, Nelson, Stevens, & Kitzman, 2007, pp. 149–150).

Description

Insomnia is a common problem. In population-based studies, approximately 30 % of all people report having at least one symptom of insomnia (American Psychiatric Association, 2000; Roth, 2007). Among middle-aged adults, prevalence of insomnia symptoms has been found to exceed 50 % (Hamilton, Gallagher, et al., 2007).

Despite the prevalence of and unpleasantness of sleep problems, only in the last few decades have researchers begun to examine the psychological consequences of poor-quality sleep. Adequate sleep appears to affect day-to-day functioning (Hamilton, Catley, & Karlson, 2008; Killgore et al., 2008). Hamilton and colleagues (2008) found that for chronic pain patients, optimal sleep duration and high sleep quality reduced the impact of pain on ▶ [mood](#) and stressful events on mood. Similar findings have emerged with research on healthy individuals. For example, following 2 days of continuous wakefulness, healthy individuals were found to have deficits in interpersonal functioning and stress management skills

(Killgore et al., 2008). Taken together, these results support the idea that sleep buffers the association between negative events (e.g., pain, unpleasant interpersonal interactions) and negative emotional reactions to those events.

Although it is likely that sleep promotes positive aspects of functioning, most sleep research has focused on the relationship of sleep problems, such as insomnia, to physical illness and psychopathology, particularly depression and ► **anxiety**. This research focus is not unwarranted; sleep difficulties are one of the most commonly reported symptoms in depression, with 60–90 % of people with depression reporting sleep disturbance (Hamilton, 1989). In fact, there is some evidence to suggest that sleep disturbance may be an early symptom or risk factor for depression. In a longitudinal study of individuals without depression at baseline, self-reported insomnia symptoms and sleep efficiency (as defined by polysomnographic data) at baseline predicted depression 4 years later (Szklo-Coxe, Young, Peppard, Finn, & Benca, 2010). Although it is unclear how insomnia is related to the causal trajectory of anxiety disorders, anxiety and insomnia are highly comorbid. Individuals with anxiety symptoms have been found to be nearly five times as likely to have insomnia as those who do not report anxiety symptoms (Morin, LeBlanc, Daley, Gregoire, & Mérette, 2006). Likewise, people who sleep five or fewer hours per night have been found to be twice as likely to meet criteria for an anxiety disorder as those who sleep more than 5 h per night (John, Meyer, Rumpf, & Hapke, 2005).

The combined results from studies on sleep and psychopathology would seem to indicate that simply sleeping more is the solution. However, results from large-scale epidemiological studies have shown that there is a U-shaped relationship between sleep duration and both morbidity and mortality. This relationship was first reported by Kripke and colleagues, who examined mortality risk in a very large sample of middle-aged adults (Kripke, Simmons, Garfinkel, & Hammond, 1979). The same U-shaped relationship between sleep duration

and mortality has also been documented many times, recently in Taiwanese community-dwelling residents of Chinese ethnicity (Chien et al., 2010) and British civil servants (Ferrie et al., 2007). In addition to premature death, sleep duration is also related to psychological morbidity. For example, in a study of European college students, sleeping more than 9 h or fewer than 7 h per night was associated with increased risk of depression and social isolation (Allgöwer, Wardle, & Steptoe, 2001). Although the sleep duration “sweet spot” varies slightly from study to study, the majority of the data show that the optimal range would fall between 7 and 8 h per night in order to be associated with lower morbidity and mortality risk (Gallicchio & Kalesan, 2009).

In summary, results of many studies have shown that sleep duration has a curvilinear relationship with morbidity and mortality (e.g., Allgöwer et al., 2001; Chien et al., 2010; Ferrie et al., 2007; Gallicchio & Kalesan, 2009). However, there is limited research on the relationship of sleep to positive aspects of functioning, such as psychological well-being. If the theory that sleep is a resource that restores energy and increases vigor is true, then individuals who routinely sleep in the optimal range should also report higher levels of ► **psychological well-being**, particularly the effort and energy-dependent facets of eudaimonic well-being. In the current study, originally reported in Social Indicators Research (Hamilton, Nelson, et al., 2007), we investigated the relationship between psychological well-being and self-reported sleep duration.

Methods

Participants

Participants were residents of Dallas, Texas, called for jury duty between the fall of 2003 and spring of 2004. Of the approximately 1,500 jurors present when the study was described, 682 returned completed questionnaires, producing a sample in which women, Caucasians, and well-educated, higher income individuals were overrepresented relative to the demographics of Dallas County.

Measures

The variable of *sleep duration* was measured via a question from the Personal Health Behavior Survey (Allgöwer et al., 2001): “On average, how many hours of sleep do you get in a 24-hour period?” In general, lower bound cutoffs for optimal sleep duration are between 5 and 6 h, and upper bound cutoffs for optimal sleep duration are between 8 and 10 h (Allgöwer et al.; Gale & Martyn, 1998; Kojima et al., 2000; Kripke et al., 1979; Kripke, Garfinkel, Wingard, Klauber, & Marler, 2002). For the purposes of this study, *optimal sleep* was defined as sleep duration between 6 and 8.5 h per night.

Other measures included in the study were the shortened version of the Psychological Well-Being Scale (Ryff, 1989), which measures six dimensions of eudaimonic functioning: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Symptoms of depression were measured by the ► [Beck Depression Inventory](#) (BDI; Beck, Rush, Shaw, & Emery, 1979) and dispositional anxiety was measured by the ► [State-Trait Anxiety Inventory – Trait Version](#) (STAI-T; Spielberger, Gorsuch, & Lushene, 1970).

Results

After controlling for sex, ethnicity, ► [education](#), marital status, children, employment, and income, optimal sleep duration was associated with better psychological well-being and fewer symptoms of psychopathology. In particular, optimal sleep was significantly related to fewer symptoms of depression and anxiety and greater environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Overall, optimal sleep accounted for 1.2–2.4 % of the variance within the indices of psychological well-being and symptoms of psychopathology.

In order to determine whether this result was due to the known overlap between depression symptoms and sleep problems, a second set of analyses was conducted with participants who scored lower than 10 on the BDI (a common cutoff score for probable depression in

a community sample). The results again supported this hypothesis and indicated that optimal sleep in this sample subset was significantly related to fewer depression symptoms and higher levels of positive relations with others, purpose in life, and self-acceptance.

Discussion

Although the majority of sleep research has focused on the relationship between disrupted sleep and physical and psychological pathology, this study was the first investigation into the relationship between sleep and dimensions of eudaimonic well-being. The results from this study indicate that optimal sleep is related to fewer symptoms of anxiety and depression as well as higher levels of environmental mastery, personal growth, positive relations with others, and greater purpose in life. These results were, with the exception of environmental mastery and personal growth, found to be independent of coexisting psychopathology. That is, for individuals who did not report mild to moderate symptoms of depression, optimal sleep continued to be significantly related to fewer symptoms of psychological distress and higher levels of well-being.

Since the publication of this study, the general pattern of results has been replicated in several studies (e.g., Steptoe, O’Donnell, Marmot, & Wardle, 2008) and in the National survey of Midlife Development in the United States (MIDUS) data. In this large, middle-aged, sample, sleep disturbance was inversely correlated with hedonic well-being and eudaimonic well-being (Hamilton, Gallagher, et al., 2007). This relationship was found even after controlling for a broad array of physical illnesses (e.g., cancer, allergies, and HIV) and indicators of psychological distress (depression and anxiety). In addition to self-reported sleep disturbance, PSG measures of sleep parameters, such as total sleep time and REM duration, have been associated with psychological well-being (Ryff et al., 2004). More recently, the MIDUS-2 data showed that there was a 10-year, prospective longitudinal effect of sleep disruption on both psychological well-being and distress. In

particular, individuals that reported insomnia problems at both time points also reported higher levels of psychological distress and lower levels of hedonic and psychological well-being (Karlson, Gallagher, Olson, & Hamilton, 2013).

The body of research discussed here is consistent with a theoretical model that defines sleep as both a psychological and energetic resource (Zohar et al., 2005). That is, adequate sleep may render individuals better able to accomplish goals and thus may lead to a better sense of mastery and overall well-being. It is important to note that the measure of eudaimonic well-being used in the Hamilton et al. (2007) study did not encapsulate other well-known indicators of well-being, such as ► [positive affect](#), ► [mindfulness](#), goal directedness, and hope. Accordingly, future research could expand upon this study by including a more diverse set of well-being indicators and examining their unique relationship to sleep.

Although sleep is most likely both a cause and a consequence of well-being, the results of this study cannot indicate a causal or directional relationship between sleep and well-being. It may be that individuals with fewer symptoms of psychopathology and higher levels of well-being sleep better. Additionally, a third variable, such as health status, could influence the relationship between sleep and well-being. As noted previously, chronic physical illness has been associated with poor sleep, which could also be associated with poorer overall psychological well-being. Nevertheless, establishing a correlation between sleep and eudaimonic well-being is an important first step before examining causal relationships.

In sum, previous research has primarily examined the relationship between poor sleep and physical and psychological pathology. This study sought to explore the relationship between sleep and indicators of eudaimonic well-being. Adequate sleep was related to fewer symptoms of psychopathology and higher levels of psychological well-being. Future research should continue to examine such relationships and begin to characterize adequate sleep as a component of resilience.

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Sleep, an Overview

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Definition

Sleep is fundamental to well-being and quality of life. The quality of sleep is influenced by the social context in which it occurs, including by household composition, gender, social roles, and life course position.

Description

Sleep is more than a shared biological universal. How, where, and when we sleep also depends on the type of society in which we live. At the macrolevel, societies have cultural rules and norms about sleep timing and patterns. These rules and norms should not be considered “natural” or “inevitable” but are historically and culturally contingent (Williams, 2005). At the microlevel, the ways in which individuals understand and carry out sleep reflect broader social inequalities, power dynamics, gender relations, and life course positions.

Disciplines vary in their ways of conceptualizing and researching sleep. Most sleep scientists and sleep medicine practitioners view sleep purely as a physiological process, undertaking laboratory studies of sleep that “control out” social factors. Epidemiologists primarily consider how age, gender, and work factors impact on the quantity and quality of sleep, for example, the impact of working shifts and undertaking work with high physical or psychological demands (high job strain) as risk factors for disturbed sleep. In contrast, sociologists consider how broader social and cultural factors influence the practices and social/moral understandings about sleep, which vary over time and between cultures (Arber, Meadows, & Venn,

Sleep Quality and Disturbance

► [Pittsburgh Sleep Quality Index](#)

2012; Williams, 2005; Williams, Meadows, & Arber, 2010).

Sleep varies across the life course throwing into sharp relief issues of power and control at different stages of life: childhood and youth, parents and couples, and later life. Issues related to gender roles and the household context continue to impact on sleep quality across the life course. Most sleep takes place within households, and as a shared (in) activity, it is complicated by negotiations surrounding the timing of sleep (who goes to bed when), the place of sleep (sleeping together or apart), and who is responsible for dealing with disturbances (a crying child, outside noises).

There is no doubting the importance of sleep for children and adolescents in terms of health, development, and well-being, with sleep comprising a significant part of the daily lives of children, particularly the very young. The timing and quality of children's sleep is influenced by the routines and practices of their parents and the nature of the family context. In addition, the quality of children's sleep impacts on whether their parent's sleep is disturbed at night, especially mother's sleep, given the normative assumptions that mothers are the primary nighttime caregivers (Venn, Arber, Meadows, & Hislop, 2008).

Most adults do not sleep alone. Far from sleeping with a bed partner always being comforting and reassuring, Hislop and Arber (2003) suggest that among women, the bedroom may be a "battleground" and argue that their male partners may act as "gatekeepers" to their partner's sleep. However, even with the potential for sleep disturbance caused by a bed partner in the form of snoring, restlessness, or nightmares, evidence suggests that the psychological and emotional benefits of sleeping with a partner outweigh the disadvantages. Studies of couples' sleep, therefore, have demonstrated often an (uneasy) balance between the comfort and reassurance of sharing a bed with another adult and disturbances arising from bed sharing (Arber et al., 2012).

Advice given to cope with sleep disturbance is often focused on improving sleep through

addressing sleep "hygiene" or habits, such as maintaining routines of going to bed and getting up at the same time every day and cutting out coffee. However, such advice largely ignores the impact that gender and social roles have on an individual's sleep. The multiple roles that women have, such as mother, partner, and caregiver, can create an invisible "workplace" at night. The undertaking of physical and emotional "caring" roles at night can result in caregiver's own sleep needs being subjugated to those of other family members (Arber & Venn, 2011; Hislop & Arber, 2003; Venn et al., 2008).

As we age, the amount of time spent in deep, slow-wave sleep diminishes, along with a decrease in REM (dreaming) sleep, and the time spent in lighter stage 1 and stage 2 sleep increases. The result is that older people may find that it takes longer to get to sleep, have more fragmented sleep, and wake up earlier (Bliwise, 2005). Another reason for poorer sleep quality with increasing age is because chronic ill health causes pain and discomfort at night, resulting in sleep complaints and difficulties. There is ongoing debate about whether the change in nighttime sleep experienced by older people leads to a propensity for daytime napping or has no effect on whether older people sleep during the day or not (Arber et al., 2012). There is also controversy over whether daytime napping benefits older people by increasing the overall time spent asleep during a 24-h period or is detrimental by reducing nighttime sleep quality and duration following a nap. Some older people see napping in moral terms as a sign of laziness and a signifier of aging and thus resist napping, while others regard it as necessary to enable them to carry on with their daily activities (Venn & Arber, 2011). Despite having objectively poorer quality sleep, older people are less likely to self-report their sleep as "bad/fairly bad" than younger age groups (Arber & Meadows, 2011).

Privacy, autonomy, and personal control are fundamental normative dimensions of adult sleep. However, there are circumstances under which adults may have their sleep observed by others: because they have medical conditions that require care or monitoring by caregivers at night,

or because they reside in an institutional context, such as older people living in a nursing/residential home. In these contexts, the individuals' sleep may be not only "observed" at night but also disturbed by those undertaking care, monitoring, or surveillance at night (Luff, Ellmers, Evers, Cope, & Arber, S, 2011). In institutional settings, the individuals' sleep is no longer private and under their own control but takes place in the workplace of strangers. Such individuals therefore lose power over their own sleeping context and sleeping body.

Sleep is socially patterned by socioeconomic characteristics as well as by age, gender, and household circumstances. Research has documented poorer sleep quality associated with lower educational qualifications, lower occupational class, unemployment (not being in paid work), and low income (Arber, Bote, & Meadows, 2009; Arber & Meadows, 2011).

In summary, sleep is inextricably linked to social factors. Within Western societies, cultural rules and norms suggest that we should sleep in private and alone or only with intimate others. Our quality of sleep is influenced by this normative expectation, as well as wider social inequalities and gendered expectations. Changing societal attitudes towards work, consumption, medicine, and pharmaceutical interventions are also influencing the quality of our sleep and our sleeping patterns.

Cross-References

- ▶ [Health](#)
- ▶ [Life Course Transitions](#)
- ▶ [Well-being](#)

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Sleepiness

- ▶ [Fatigue](#)

Sleeping Rough

- ▶ [Homelessness](#)

SLiCA, Survey of Living Conditions in the Arctic

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Synonyms

“Survey of Living Conditions in the Arctic: Inuit, Saami, and the indigenous peoples of Chukotka and the Kola Peninsula”; Arctic Living Conditions Survey

Definition

The Survey of Living Conditions in the Arctic, SLiCA, is a quantitative study comparing living conditions among Inuit and Saami, living in their traditional settlement regions, and the indigenous peoples of Chukotka and the Kola Peninsula.

Description

The 1994 Greenland Living Conditions Survey and Methodological Implications

In 1994, Statistics Greenland carried out the first study of living conditions in Greenland since the introduction of Home Rule. The questionnaire consisted of 147 questions and 1,121 respondents participated in the study. As research within the field of living conditions was generally at a pioneering stage in Greenland, the research design for such studies was very much a copy of the Scandinavian model, as were the living conditions indicators, which were based on indicators generally used in the Scandinavian tradition (Erikson & Uusitalo, 1987; Hansen, 1990). The questionnaire primarily focused on material well-being (e.g., income, employment, education, housing). The survey produced a substantial amount of information as well

as many questions that could not be answered without a design that also addressed causal relationships.

The fact that the people living in Greenlandic settlements in general scored low on most of the living conditions measures and still seemed to choose to stay in the settlements indicated that the underlying concept of welfare, and hence the welfare dimensions employed in the survey, was incomplete (Andersen & Poppel, 2002; Poppel, 2006). These experiences called for a revised and expanded concept of welfare adapted to the reality of the Greenlandic population. Furthermore these early survey experiences indicated a need for the development of a new research design for the study of living conditions in Arctic countries and regions, which from an economic, and especially perhaps a cultural, point of view are decidedly different from Western Europe and North America. This is the case for all the countries in the Arctic in which Inuit and Saami peoples are living (Andersen, 2004; Andersen & Poppel, 2002; Kruse et al., 2008; Poppel, 2006, 2010).

The Survey of Living Conditions in the Arctic/SLiCA

In 1997 Statistics Greenland started developing the preconditions for a living conditions survey that would address the welfare priorities of Arctic residents, focusing in particular on the Arctic's indigenous residents. The project was first meant to be conducted only in Greenland, but the project soon gathered other interested parties. At an international workshop in May 1998 in Slagelse, Denmark, representatives for Arctic residents (the indigenous peoples' regional and national organizations: Inuit Circumpolar Council, ICC; the Saami Council and the Russian Association of the Indigenous Peoples of the North, RAIPON) met with Arctic social scientists and representatives from research institutions in and outside the Arctic. They decided to create a new research design to conduct a coordinated set of living condition surveys among indigenous peoples in the Arctic (www.arcticlivingconditions.org;

Andersen, 2004; Andersen & Poppel, 2002; Kruse et al., 2008; Poppel, 2006).

Major Objectives Based on a New Set of Ground Rules for Living Conditions Research in the Arctic

On the background of the criticism leveled at the Greenland living conditions study 1994 (Andersen, 2004), and hence at the Scandinavian model and the social indicator approach, the Scandinavian model was revised, and a general list of ground rules for living conditions studies among indigenous peoples in the Arctic was produced (Andersen, 2004).

Following these ground rules, the following major objectives of the SLiCA-project were established:

- To develop a new research design for comparative investigations of the living conditions of the Inuit and Saami peoples in the Arctic. This includes developing partnerships between researchers and the respondents and their organizations.
- To map the living conditions among the Inuit and Saami and the indigenous peoples of Chukotka and the Kola Peninsula in the Arctic.
- To conduct a comparative dynamic social analysis of the causal relations between different individual resources and between individual well-being and different political, economic, cultural, and technological settings.
- To improve the basis for decision-making in relation to policy planning and implementation.
- To establish an interdisciplinary network of researchers and research institutions engaged in living conditions research in the Arctic.
- To increase the knowledge among the indigenous peoples of their own and other indigenous peoples' history and living conditions.
- To educate and involve post docs, PhD-students, candidates, and undergraduates in the SLiCA project.

The Concepts of Living Conditions and Well-Being in SLiCA

Living conditions in SLiCA are defined as "individual possession of resources in the form of money, goods, services, mental and physical energy, social relations, physical security etc. by means of which the individual person may control and consciously direct his/her living conditions in so far as the necessary arenas are available" (Andersen, 1999) and thus includes the two components: the individual's control of material as well as nonmaterial resources (Titmuss, 1958) and the arena approach (Coleman, 1971) which was used in the first Norwegian study of living conditions at the beginning of the 1970s (Ringen, 1975, 1995).

The purpose of measuring living conditions ultimately is to obtain a picture of individual well-being (Allardt, 1975). The concept of well-being is thus a broader concept than that of living conditions because it also includes the person's subjective evaluation of his/her objective resources.

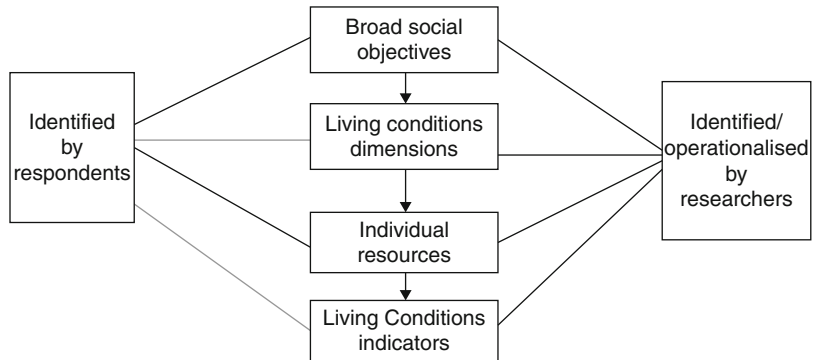
Developing the International SLiCA Questionnaire: From Social Goals to Living Conditions Dimensions and Social Indicators

The questionnaire was based on discussions by the local, regional, national, and international SLiCA workshops; focus group meetings; and team meetings. Questionnaire content emerged from early discussions on social goals and living conditions dimensions (see Fig. 1). The syntheses and recommendations from the discussions between researchers and indigenous representatives were brought to concluding discussions in the International SLiCA Management Board (the discussions are documented on the project web site: www.arcticlivingconditions.org), which itself included both researchers and indigenous representatives.

The partnership between international researchers and indigenous representatives of the respondents resulted in 2001 in agreement on a common "core questionnaire" for all regions included in the Survey of Living Conditions in the Arctic, SLiCA. This at the same time signaled the ending of SLiCA phase I.

SLiCA, Survey of Living Conditions in the Arctic,

Fig. 1 The process of defining SLiCA indicators of living conditions (Poppel, 2010)



The Process of Defining Indicators of Living Conditions

The broad social goals and concerns can be divided into two subcategories (Kruse & Hanna, 1998):

1. Social concerns and goals that are dominant in all areas/regions of SLiCA such as physical security, health, and sufficient and healthy nutrition that are types of universally accepted social goals
2. Social goals that are not universal – but dominant among Inuit and Saami peoples in all or most areas of the project

The ambition was to develop indicators reflecting the welfare priorities of Arctic indigenous peoples and at the same time increase the understanding of relationships among both new and the convention living conditions dimensions. The following living conditions dimensions included in SLiCA's research design were thus defined in the interactive process between the indigenous partners and the SLiCA research team:

Family: Family relationships and household economy

Background: Mobility, language, and education

Lifestyle: Employment, harvest, leisure, spirituality, identity, and health

Environment: Housing, income and expenses, technology, safety and justice, resource management, environmental health, political resources, and community viability

The International SLiCA Core Questionnaire

Roughly 200 questions (closed as well as open-ended questions) were included in the

SLiCA core questionnaire. The questions were grouped in eight sections:

Family relationships; background; productive activities in the market as well as the informal sector; health (physical and mental – partly by a self administered questionnaire containing a number of sensitive questions concerning, e.g., smoking and drinking habits, use of drugs and domestic violence); housing conditions and living standard; activities (leisure time, community activities, political activities, and political attitudes); Inuit/Saami values, religion, and spirituality; the local community and the environment

SLiCA's objective was not only to measure living standards of individuals and households but also to focus on all relevant resources – material as well as nonmaterial – that individuals can apply to enhance their living conditions. In addition, SLiCA's design incorporates both objective and subjective components of living conditions, the latter theoretically including satisfaction, expectations, and aspirations (Andersen & Poppel, 2002). As operationalized, SLiCA's subjective component focused on measures of satisfaction. The international core data dictionary with information also about analytic variables is accessible at <http://classic.ipy.org/development/eoi/SLiCA%20Data%20Description.pdf>.

The Interviews

Interviews were conducted face-to-face in the principal language of the respondent. Statistics Canada was responsible for fieldwork and data processing in Canada. The average interview

length was 60 min in Canada (using a shorter questionnaire) and 90 min elsewhere. Interview data for Alaska, Greenland, and Chukotka as well as for Sápmi – Norway, Sweden, and the Kola Peninsula – were separately coded and processed and stored using the Statistical Package for the Social Sciences (SPSS). Due to the involvement of Statistics Canada, Canadian data is subject to the Canadian Privacy Act. Application of the provisions of this act requires the research team to merge the Canadian data with that of the other three regions within secure analysis laboratories in Canada (Kruse et al., 2008; Poppel, 2010).

The SLiCA target population is defined in three elements: (1) indigenous individuals (in Greenland, the sample also includes immigrants, mostly individuals that migrated to Greenland from Denmark) aged 16 (in Greenland and Canada: 15+) and over, (2) residing in households, and (3) in a traditional settlement region. For the present, settlement regions are defined as follows: Alaska (North Slope, Northwest Arctic, Bering Straits census areas), Canada (Inuvialuit, Nunavik, Nunavut, Labrador Inuit land claims regions), Greenland (all regions), and Chukotka, Russia (Anadyrskij, Anadyr, Shmidtovs, Beringovskij, Chukotskij, Iujl'tinskij, Bilibinskij, Chaunskij, Providenskij, Uel'Kal' districts) (see Fig. 2) (Kruse et al., 2008; Poppel, 2010).

The SLiCA Sample Summary and Response Rates

Table 1 summarizes the main figures about the total population of the SLiCA study, the sample, and the response rate.

Results for Arctic Inuit settlement regions as a whole are subject to a maximum estimated sampling error of plus or minus one percentage point. Regional comparisons have sampling errors of one to four percentage points. Breakdowns for subpopulations and more refined geography are subject to larger sampling errors.

The SLiCA Unit(s) of Analyses: Different Levels of Aggregation and Various Categorizations

It has been a prerequisite for development of the SLiCA research design that it should be

possible to carry out causal analyses based on the interviews. The international core questionnaire makes it possible to analyze empirical relationships between the respondents' background and resources, satisfaction with different aspects of life, as well as the general satisfaction with life as whole (Andersen & Poppel, 2002; Andersen, Kruse, & Poppel, 2002; Kruse et al., 2008; www.arcticlivingconditions.org).

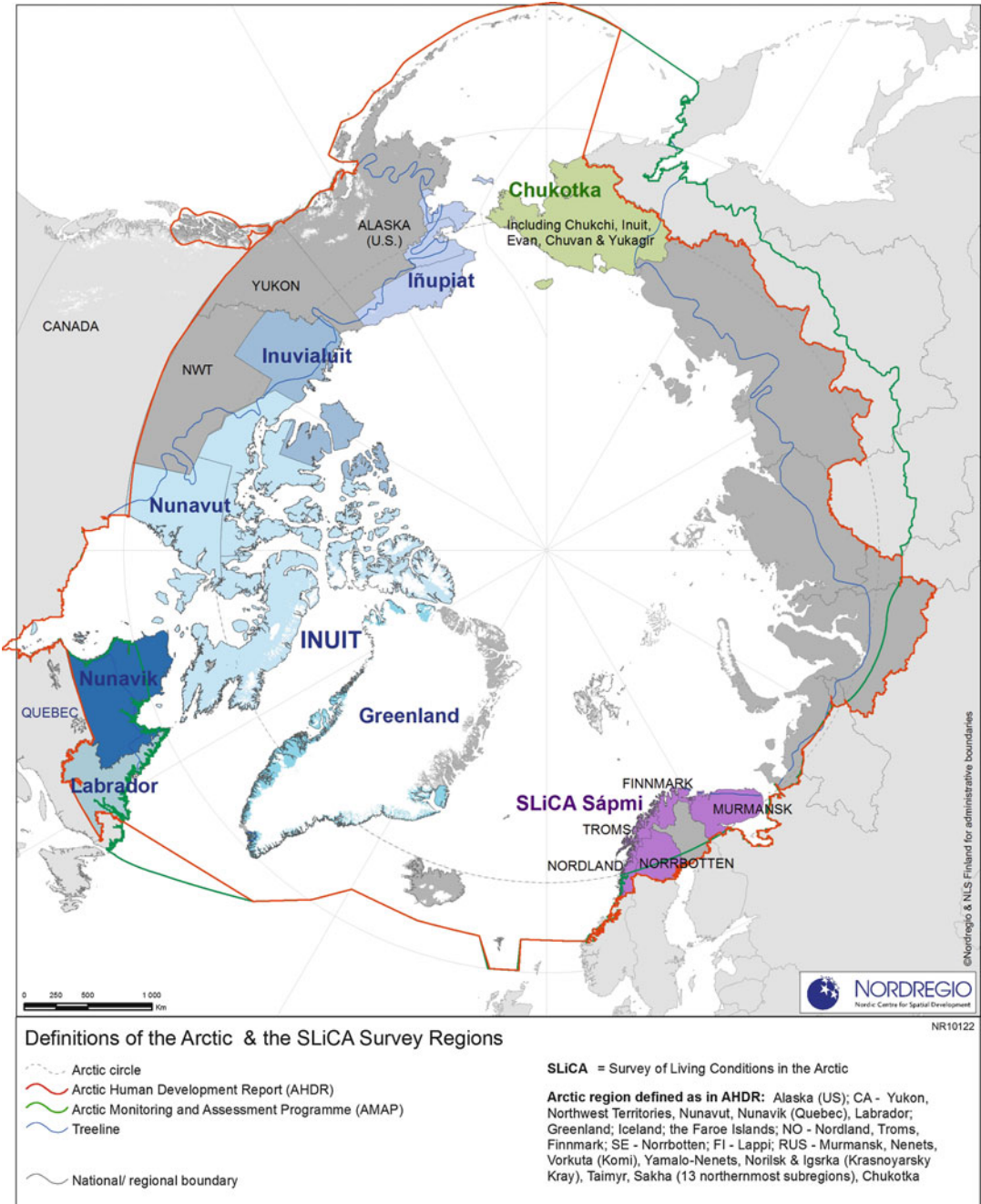
Even though the sampling unit is the individual, the respondents were asked about characteristics of the other household members: age, gender, and participation in a broad array of both formal (e.g., wage jobs) and informal (e.g., care of children) household production activities. Furthermore, the respondent is asked to report on the household's housing conditions and income.

The sampling procedures applied ensure that the SLiCA sample is representative and the subsequent weighting procedures (taking into account differences in regional and community sampling probabilities and differences in response rates by gender) make it possible to generalize responses to entire populations by: "country" (the national level), "region," "region/place size," "gender," and "age groups." Such population breakdowns are reported on the project web site, www.arcticlivingconditions.org (Kruse et al., 2008; Poppel, 2010; Poppel, Kruse, Duhaime, & Abryutina, 2007).

Apart from the more obvious ways of breaking down the data, the questions asked and the organization of data facilitate different ways of breaking down SLiCA-data and thus analyzing different distributions among individuals and households.

Protection, Handling, and Conditions for Use of SLiCA Data

All SLiCA data are based on personnel interviews, and the data are attached to either the respondent or the respondent's household, and all respondents are guaranteed anonymity and confidentiality. The data are gathered and stored according to national legislation and



SLiCA, Survey of Living Conditions in the Arctic, Fig. 2 SLiCA survey regions (Kruse et al., 2008)

regulations and in some cases regionally also to formal agreements between the national/regional SLiCA team and the organization representing the indigenous peoples in the region (Conditions

for Use of the Data – see www.arcticliving-conditions.org).

The International SLiCA team furthermore committed to conduct the research in partnership

SLiCA, Survey of Living Conditions in the Arctic, Table 1 The SLiCA sample summary and response rates (Poppel et al., 2011)

SLiCA: population ^a , sample ^a , and respondents ^a						
Indigenous settlement region	Period of interviewing	Indigenous peoples in the survey	Total number of adults in population	Sample size (N)	Response rate	Respondents (n)
Northern Alaska	2002–2003	Iñupiat, Yupiit	11.000	700	84 %	650
Chukotka	2004–2006	Inuit, Chukchi, Evan, Chuvan, Yukagir	14.000	600	85 %	500
Canada	2001	Inuit	22.000	5.650	83 %	4.700
Greenland	2004–2006	Inuit	36.000	1.450 ^b	83 %	1.050
Inuit homelands/ regions			83.000	8.500	83 %	6.900
Sweden	2006–2008	Saami	...			200
Norway	2006–2008	Saami	...	800	56 %	450
Kola Peninsula	2005–2006	Saami	1.500			300
Sápmi			50.000 ^c	950
All survey regions						7.850

^aRounded (to nearest “50”/“100”)

^bIn Greenland also the nonindigenous population was part of the survey

^cEstimate for Nordic Saami (incl. Finland – excl. Kola Peninsula) (AMAP, 1998)

with the indigenous peoples and to follow ethical standards from the very beginning of the project. The ethical standards applied are the IASSA Guiding Principles for the Conduct of Research (http://www.iassa.org/index.php?option=com_content&view=article&id=13&Itemid=23).

SLiCA: International Outreach

SLiCA was adopted as an Arctic Council project under the auspices of the Sustainable Development Working Group, SDWG, at the Ministerial meeting in Barrow, October 2000, and results were reported to the Arctic Council Ministerial in 2011 (<http://portal.sdwg.org/media.php?mid=1203>). SLiCA was developed in partnership with and is supported by the Inuit Circumpolar Council, the Saami Council, and the Russian Association of Indigenous Peoples of the North.

SLiCA was endorsed as an IPY (International Polar Year 2008–2009) project.

Researchers and indigenous expert have presented the SLiCA project (methodology, results, and experiences) in numerous conferences, workshops, and seminars and have as well published articles in scholarly journals

and in popular science magazines. Furthermore dissertations have been prepared based on SLiCA data (www.arcticlivingconditions.org).

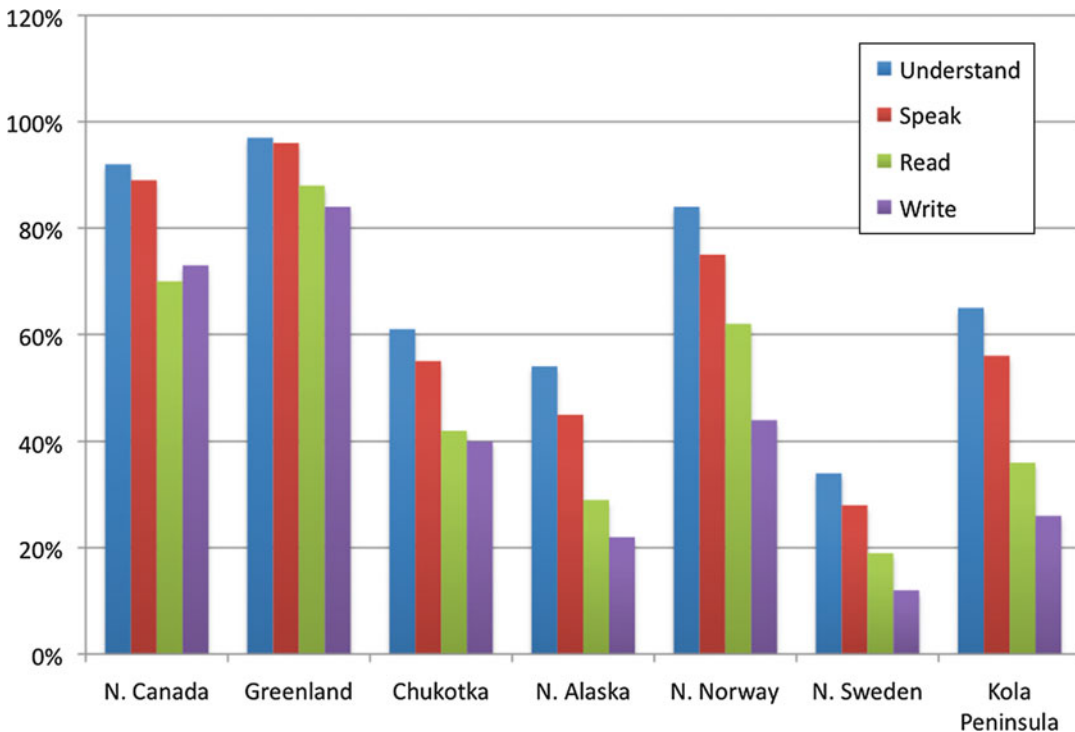
SLiCA Results: Major Findings

Results from the SLiCA survey in the Inuit homelands were first published in 2007 (Poppel et al., 2007).

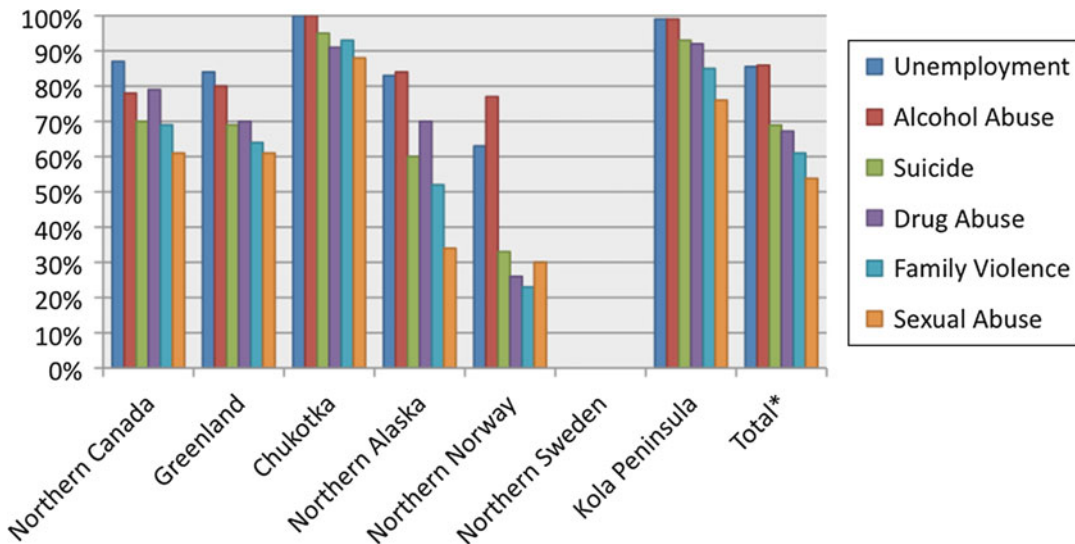
Results and major finding from all SLiCA survey regions including Sápmi were reported to the Arctic Council Ministerial in Nuuk, May 2011 (Poppel et al., 2011) (<http://portal.sdwg.org/media.php?mid=1203>). Key statements and findings are cited below:

- “Inuit, Saami and the indigenous peoples of Chukotka and the Kola Peninsula have lived and survived through millennia as hunters, fishermen and herders. Rapid social change characterizes the livelihood and living conditions of the indigenous peoples of the Arctic. Many – including large majorities in Northern Canada, Greenland, and Northern Alaska, Northern Norway, and Northern Sweden – are satisfied with the quality of life in their communities.”

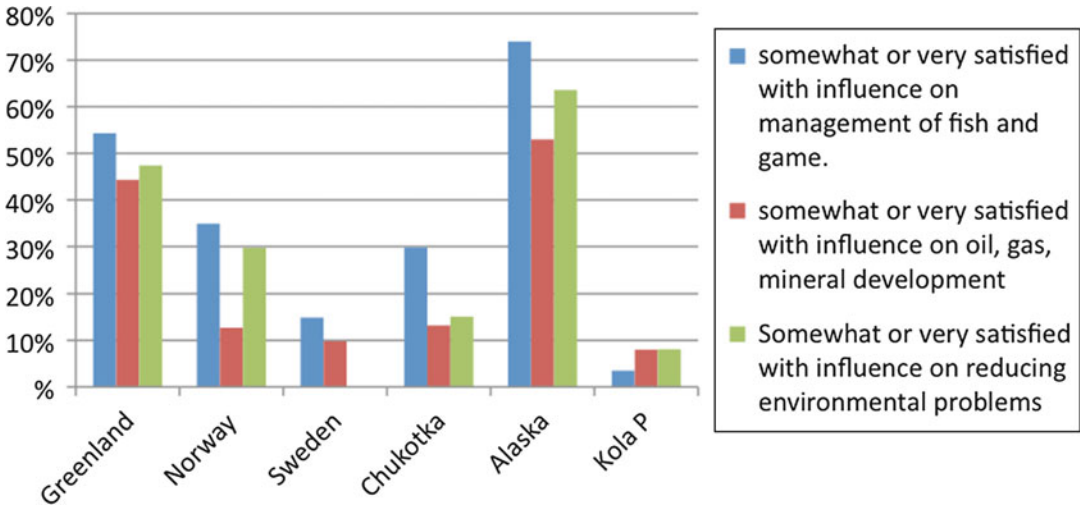
- “A combination of traditional activities and cash employment, the mixed economy of the Arctic, is the prevailing lifestyle of Arctic indigenous peoples. It takes money to pursue traditional activities; households with higher incomes can, and do, choose to spend income on these activities” (Poppel, 2008; Poppel & Kruse, 2009).
- “The most common subsistence activities throughout the survey regions are fishing and picking berries, which three quarters of respondents do. One third or more hunt birds, sea mammals or big game.”
- “Seven to nine in ten Inuit, Saami and other indigenous people of The Kola Peninsula think ‘the way they view nature’ and traditional activities and customs like eating and preserving traditional food, use of the indigenous language, fishing and hunting are important to their identity.”
- “The widespread participation in subsistence activities contributes to household economies, to healthy diets, to cultural continuity and social cohesion.”
- “When jobs are available, large majorities of people in Arctic communities work. About 75 % of respondents in Northern Alaska, Sweden and the Kola Peninsula, 80 % in Greenland and Norway, and 88 % in Canada and Chukotka worked at least some time in the year before the survey. That includes people who worked full-time and many more who worked only part-time or seasonally.”
- “Indigenous peoples throughout the survey regions cite unemployment as one of the main problems in their communities. Jobs are scarce in small Arctic communities, and many jobs are seasonal or part-time labour” (see Fig. 4).
- “Different productive activities require different skills: formal education to fit jobs in the market economy and traditional education skills to use/apply in subsistence activities. The vast majority in all regions learned five or more skills. Overall approx. four out of ten indigenous adults in the survey regions have completed vocational training or high school/university. This average covers major differences.”
- “Despite the rapid changes in the Arctic, most indigenous peoples have not only maintained their traditional subsistence activities. Many also continue to speak their indigenous languages – mostly in Greenland and Canada – in addition to other non-indigenous languages” (see Fig. 3).
- “Maintaining the indigenous language is important for the identity of the individual as well for the cultural continuity” (see Fig. 3).
- “In most regions qualifications in a non-indigenous language (English, Danish, Norwegian, Swedish or Russian) are necessary when it comes to for instance further education.”
- “When it comes to using modern communication technology a parallel development to southern regions is experienced.”
- “Health conditions vary widely in the Arctic: Most of the indigenous peoples surveyed rate their own health as good or excellent. The exception is Chukotka, where more than half rated their health as only fair or poor.”
- “Even though most are satisfied with life in their communities, indigenous people also acknowledge widespread social problems: unemployment, alcohol abuse, suicide, drug abuse, family violence and sexual abuse are considered major social problems by more than six indigenous respondents out of ten. In Chukotka and the Kola Peninsula at least eight out of ten cite most of these problems” (see Fig. 4)
- “On average three out of four indigenous people perceive climate change to be a problem in their communities and more than 50 % mention local contaminated sites, pollution of local lakes and streams and pollution from industrial development as problems in the region.”
- “Some of the overall SLiCA findings indicate an awareness of a variety of problems to the indigenous peoples – problems that most Inuit and Saami feel they lack influence on.”
- “Only between 10 % and 15 % of the Saami in Northern Norway and the Kola Peninsula and the indigenous peoples in Chukotka are satisfied with the influence the indigenous



SLiCA, Survey of Living Conditions in the Arctic, Fig. 3 Fluency in indigenous language: percentage who understands, speaks, reads, and writes the indigenous language well or relatively well (Poppel et al., 2011)

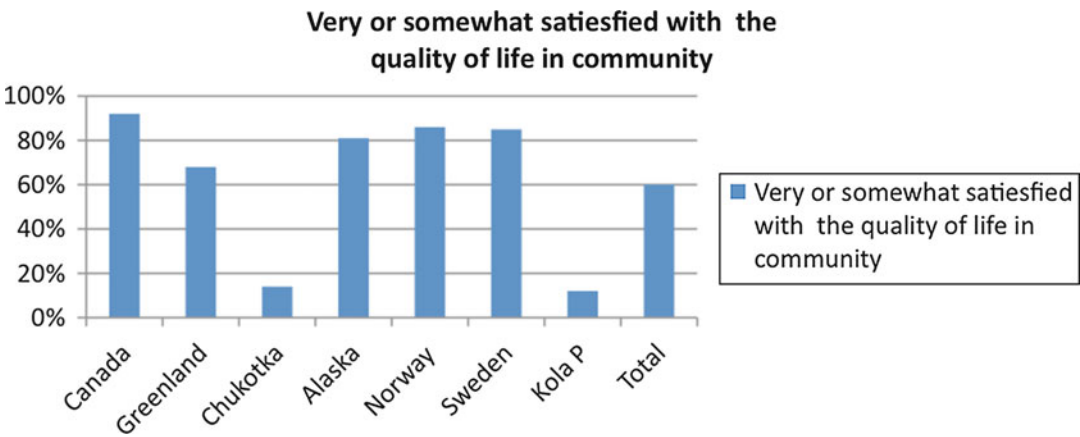


SLiCA, Survey of Living Conditions in the Arctic, Fig. 4 Social problems perceived by indigenous adults in their community (percentage) (Poppel et al., 2011)



SLiCA, Survey of Living Conditions in the Arctic, Fig. 5 Satisfaction with influence over the management of natural resources like fish, game, petroleum, and

mining and over reduction of local environmental problems (percentage) (Poppel et al., 2011)



SLiCA, Survey of Living Conditions in the Arctic, Fig. 6 Satisfaction with quality of life (Poppel et al., 2011)

peoples have on the management of natural resources like oil, gas, and minerals. The Iñupiat of Northern Alaska are much more likely than indigenous people elsewhere to be satisfied with their ability to influence management of local fish and game and other natural resources” (see Fig. 5).

Satisfaction with Quality of Life

With the exception of Chukotka and the Kola Peninsula, most of the indigenous peoples (Inuit

and Saami) are very satisfied or satisfied with the quality of life in their communities (see Fig. 6).

Analyses on data from Greenland and Alaska indicate that “opportunities” related to jobs and “availability” of fish and game had the highest score of explanation for satisfaction with quality of life in general. “Satisfaction with combination of productive activities” and “Influence over natural resources and the environment” and “job satisfaction” also contributed significantly to overall life satisfaction.

This entry is partly based on Kruse et al. (2008), Poppel (2010), and Poppel et al. (2011).

Cross-References

- ▶ [Aboriginal Peoples Survey, Canada \(APS\)](#)
- ▶ [Arctic Human Development Report \(AHDR\)](#)
- ▶ [Arctic Social Indicators \(ASI\)](#)
- ▶ [Circumpolar Indigenous Peoples](#)
- ▶ [Community Adaptation, Arctic](#)
- ▶ [Human Development, Arctic](#)
- ▶ [Informal Economy, Arctic](#)
- ▶ [Material Well-being, Arctic](#)
- ▶ [Migration, Arctic](#)
- ▶ [Subsistence in the Arctic](#)
- ▶ [Sustainable Development Working Group, Arctic Council's](#)

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Slope

- ▶ [Regression Coefficients](#)

Slough

- ▶ [Wetland\(s\)](#)

Slovakia: Rural Development Index

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Definition

The Slovak Republic (SR), one of the former socialist countries of Central and Eastern Europe, was established as an independent country in January 1993. It comprises a total area of 49 035 sq. km. (square kilometers) and is located in Central Europe. It shares common borders with five countries: in the northwest with the Czech Republic (252 km), in the northeast with Poland (547 km), in the east with Ukraine (95.8 km), in the south with Hungary (679 km), and in the west with Austria (106 km). It contains around 5.4 million inhabitants in the year 2010, i.e., a population density of 111/sq. km. 86% of inhabitants are Slovaks; Hungarians with 10% are the largest ethnic minority followed by up to 2% Roma people dispersed throughout the country.

According to its constitution, Slovakia has a one chamber cooperation: The National Council of the Slovak Republic consists of

150 members, voted for 4 years. Besides the central government, eight self-governing regions are established. The president of the SR is elected directly for a period of 5 years with possibility of one reelection. The general elections held in June 2010 led to create a middle-right-wing coalition of four political parties that replaced the former social-democratic one. Official head of the state is President Ivan Gašparovic since June 2004 (term of office till 2014). He is the first Slovak president who has been re-elected.

The euro currency was introduced in January 1, 2009, and replaced the Slovak koruna (SKK) or crown. The SKK has replaced the Czechoslovak koruna in February 1993 due to independence. After a lot of economic and political reforms, Slovakia became first a member state of NATO on the 29th of March before joining the EU on the 1st of May in 2004. Slovakia is a member of the UN and its' agencies since establishment (January 1, 1993), member OECD (2000), Council of Europe (1993), and OSCE (1993).

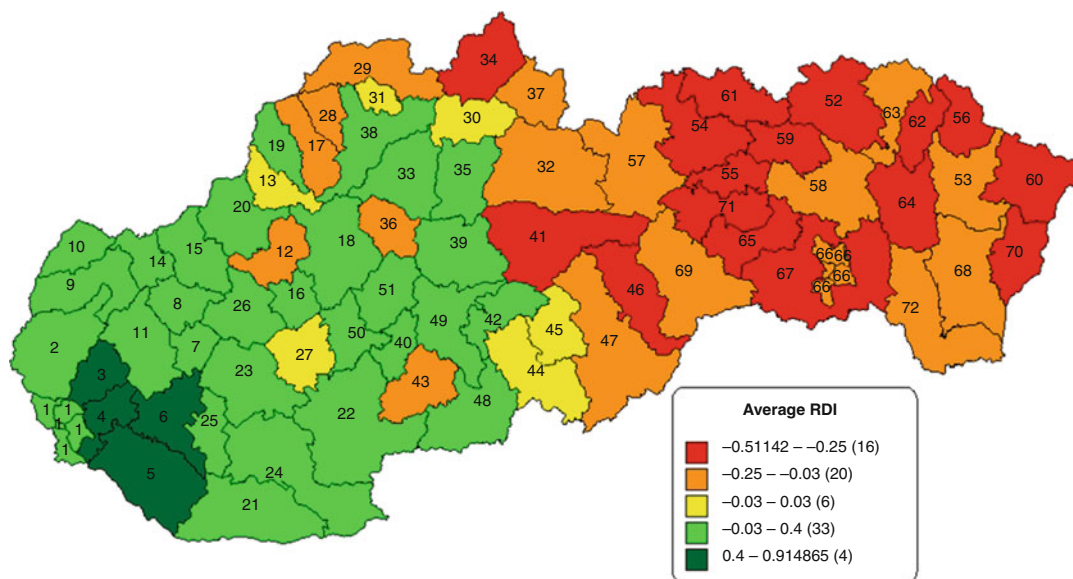
Description

Administrative Structures

Due to the OECD definition, the SR (NUTS 1) is divided into different NUTS levels and LAUs (Local Administration Units). The NUTS 2 level comprises Bratislava Region (comprises only this single okres/kraj), Western Slovakia (Trnava, Trenčín, Nitra), Central Slovakia (Žilina, Banská Bystrica), and Eastern Slovakia (Prešov, Košice). On NUTS 3 level, regions Bratislava, Trnava, Trenčín, Nitra, Žilina, Banská Bystrica, Prešov, and Košice are given. Lastly, the LAU1 level comprises 79 Slovakian districts/okres.

Land Use

In 2009, the total size of the Slovak Republic was 49,035 sq. km. (4,903,717 ha). The share of agricultural land was 49.31% of total land size, while the share of forest land was 40.97% and the share of building areas was 4.69%. Together with the changes in land utilization, areas of individual land categories varied during a longer time period. From 1990 through 2010, the area of



Slovakia: Rural Development Index, Fig. 1 Average RDI of the years 2002–2005 (number of regions) (Michalek & Zarekow, 2012)

farmland was reduced by 1.72% (−42,303 ha). On the contrary, the area of forest land increased by 1.72%, and the water area by 1.89%. The largest increase compared to 1990 was registered in case of the built-up areas and yards, these expanded by 82.15% (Enviroportal, 2012). During the 1990s, organic farming was gradually growing from 0.59% of the agricultural land fund (14,000 ha) in 1991 to 2.39% of the agricultural land fund (58,000 ha) in 2000. After 2000, the trend of an increasing area under organic farming continued. In 2008, 136,669 ha (i.e., 7.19% of the total agricultural land area) of land was in organic farming.

Demography

In 2010 the age structure of the Slovakian population was characterized as follows: 0–14 years, 15.7% (male 439,331; female 419,123); 15–64 years, 71.7% (male 1,954,798; female 1,966,611); 65 years and over, 12.6% (male 258,157; female 432,286) (2010 est). The median age in total accounted 37.3 years, whereas males were in average 35.7 years and females 38.9 years old. In comparison to the European Union, the SR has a greater share of people being 15–64 years

old and less ones who are 65 years and older (Eurostat, 2012).

Economy

Slovakia has recently been characterized by sustained high economic growth. In 2007, Slovakia achieved the second highest growth of gross domestic product (GDP) among the members of the Organisation for Economic Co-operation and Development (OECD). The annual GDP growth in 2007 is estimated at 10.5% with a record level of 14.3% reached in the fourth quarter. In 2011 the annula growth rate of the GDP is 3.2% (OECD, 2013). According to Eurostat data, Slovak PPS (purchasing power standard) GDP per capita stood at 73% of the European Union (EU) average in 2011. Unemployment, peaking at 19.2% at the end of 1999, decreased to 7.51% in October 2008. In addition to economic growth, migration of workers to other EU countries also contributed to this reduction. In 2012 the unemployment rate accounts 14% (EU, 27: 10.4%).

Rural Development

The overall level of regional development and the ► [quality of life](#) in individual rural regions at

NUTS-4 level can be described by a Rural Development Index (RDI) (Michalek & Zarnekow, 2012). This means a multidimensional (composite) index measuring the overall level of rural development and quality of life in individual rural regions of a given EU country. In the RDI, the rural development domains are represented by hundreds of partial socioeconomic, environmental, infrastructural, and administrative indicators/variables at NUTS-4 level (340 variables/indicators describing various aspects of rural development in Slovakia). The weights of economic, social, and environmental domains entering the RDI index are derived empirically from the econometrically estimated intra- and interregional migration function after selecting the “best” model from various alternative model specifications (e.g., panel estimate logistic regression nested error structure model, spatial effect models). In Michalek and Zarnekow (2012), the RDI is empirically applied to analysis of the main determinants of rural/regional development in individual rural areas in years 2002–2005 in Slovakia at NUTS-4 level.

During the years 2002–2005, the estimated value of the RDI ranged from -0.51 to $+0.91$ (regional discrepancies were therefore higher than, e.g., in Poland). The highest values of RDI were found in regions located in West Slovakia (e.g., Senec, Pezinok, Dunajska Streda, Galanta), while regions of Eastern Slovakia and Central Slovakia (e.g., Gelnica, Stropkov, Namestovo, Kezmarok, Stara Lubovna) exhibited the lowest RDI values (Michalek & Zarnekow, 2012) (Fig. 1).

Cross-References

- [Rural Development Index Applied to Poland and Slovakia](#)

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Slovenian/Serbian Inter-marriage

- [Ethnic Inter-marriage and Social Cohesion in Yugoslavia](#)

Small Congregate Care

- [Care, Residential](#)

Small-Area Analysis

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Synonyms

[Small-area estimation](#)

Definition

Small-area analysis “[...] tackles the problem of providing reliable estimates of one or several variables of interest in areas where the information available on those variables is, on its own, not sufficient to provide a valid estimate” (Gómez-Rubio & Salvati, 2007).

Description

The terms ‘small area’ and ‘local area’ are commonly used to denote a small geographical area, such as a county, a municipality or a ► [census division](#). They may also describe a ‘small domain,’ i.e., a small subpopulation such as a specific

age-sex-race group of people within a large geographical area. (Gosh & Rao, 1994; Rao, 2003)

Although information for small areas is needed for both research and policy issues, it is often scarce and difficult to obtain. As the Australian Bureau of Statistics (2006) remarks, “most surveys are designed to provide statistically reliable, design based estimates only at the national and/or state/territory geographic levels. The sheer practical difficulties and cost of implementing and conducting ► **sample** surveys that would provide reliable estimates at levels finer than state/territory are generally prohibitive, both in terms of the increased sample size required and the added burden on providers of survey data (respondents).”

An specific methodology for small-area research and estimation is needed, as “[...] the usual direct survey estimators for a small area, based on data only from the sample units in the area, are likely to yield unacceptably large ► **standard errors** due to the unduly small size of the sample in the area. Sample sizes for small areas are typically small because the over- all sample size in a survey is usually determined to provide specific accuracy at a much higher level of aggregation than that of small areas” (Gosh & Rao, 1994). Although small-area estimation has been performed for a long time, interest for accurate small-area estimations has increased since the early 1980s (Brackstone, 1987). Data sources include censuses, administrative records, and sample surveys (Smith, 2003).

Several powerful statistical methods with sound theoretical foundation have emerged for the analysis of local area data. Such methods ‘borrow strength’ from related or similar small areas through explicit or implicit models that connect the small areas via supplementary data (e.g., census and administrative records). (Gosh & Rao, 1994)

Data sources for small-area estimation include censuses, administrative records, and sample surveys (Smith, 2003).

► **Demographic Methods**: these methods are categorized under the general heading of Symptomatic Accounting Techniques (SAT),

also known as “direct” methods. Such techniques utilize current data from administrative registers in conjunction with related data from the latest census (Australian Bureau of Statistics, 2006).

The main disadvantage of direct methods is that they can only be used for variables for which administrative records are available and up to date.

Synthetic and Related Estimators: Gonzalez (1973) describes synthetic estimates as follows: “An unbiased estimate is obtained from a sample survey for a large area; when this estimate is used to derive estimates for subareas under the assumption that the small areas have the same characteristics as the large area, we identify these estimates as synthetic estimates.” Synthetic estimation uses the estimate for a larger area, applying survey weights to the sample units in each small area, under the assumption that the small area has the same characteristics as the larger area. This method has been often used by demographers. An additional refinement is the calibration of weights using auxiliary variables.

If a “direct” and a synthetic estimation are weighted, averaged, and combined into a single estimation, we obtain a **composite estimation**. Gosh and Rao (1994) and Rao (2003) consider that composite estimations balance the potential bias of a synthetic estimator against the instability of a direct estimator.

Small-Area Models: An alternative to synthetic estimation is to use ► **regression** or model-based approaches. Some authors (see Australian Bureau of Statistics, 2006; Gosh & Rao, 1994 or Rao, 2003) propose the use of random effects models as they capture the heterogeneity between different small areas. EBLUP (Empirical Best Linear Unbiased Prediction, also known as variance components approach), EB (Empirical Bayesian estimator), and HB (Hierarchical Bayesian estimator) are refinements of the random effects models.

Discussion

The availability of microdata and the increase of computer power, data storage capacity, and software applications (both proprietary and

free), together with the advances in Geographical Information Systems (GIS) and statistic and econometric advances, have boosted small-area research. On the other side, there are concerns about the loss of privacy and confidentiality, due to the comprehensive gathering of information.

There is also a political issue in small-area estimation, as higher-level governments use this estimations for the distribution of funds between local authorities. In 1980, New York State suited the US Department of Census, as New York authorities believed the estimations of the state population performed by the Department of Census to fall below the real population of the state, thus the State being allowed less funds from the Federal Government than it should have had.

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Small-Area Estimation

- ▶ [Small-Area Analysis](#)

Smart Growth

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Definition

Smart Growth is an attempt to rethink the consumption of land and natural resources through ▶ [community planning](#) and ▶ [transportation](#) policies to counteract leapfrog development (or sprawl). As an international phenomenon, Smart Growth policies are found in Europe (e.g., the UK, Germany, or the Netherlands) and in North America (Canada and the USA).

The US Environmental Protection Agency (EPA), which addresses Smart Growth as a growth policy, presents a comprehensive approach to Smart Growth. It defines Smart Growth as “development that serves the economy, the community, and the environment. It changes the terms of the development debate away from the traditional growth/no-growth question to how and where should new development be accommodated” (US EPA, 2001).

Description

Smart Growth is a policy-driven movement within the larger framework of growth management. It advocates policies and strategies intended to enhance ▶ [urban quality of life](#) while guiding urban and regional growth and reducing the drain on natural and financial resources. It originated in the United States during the late 1990s but fused with ideas such as the compact city (influencing discussions in Europe) and sustainable development (influencing discussions in countries such as Canada) to affect planning and land development policies in many countries in the years since.

To provide a brief background, growth management tries to counteract the causes and symptoms of sprawling developments by using policies linked to a healthier understanding of how to use and conserve natural resources. Growth management is not a new attempt to control sprawl, to guide growth, or to introduce developers, local governments, or homebuyers to more responsible concepts. Early attempts at guiding growth were identified in the 1970s with terms such as *no growth* or *slow growth* used mostly to describe the intent of planners (Kidd, 1992; Nelson, 1995). In 1961 the Urban Land Institute (ULI) illustrated the concept of clustered housing which was promoted as an element of growth management similar to today's Smart Growth policy (Porter, 2002).

Smart Growth aims to guide growth by balancing density and coordinating the provision of infrastructure and services to channel future growth in concentrated places. Smart Growth principles include:

- Mix land uses – combine land uses (i.e., residential, retail, or office) in one development.
 - Take advantage of compact building design – use density and better design to increase synergies.
 - Create a range of housing opportunities and choices – present a healthy mix of housing for low-, medium-, and higher-income groups.
 - Create walkable neighborhoods – reinvent walking for community quality, sense of neighborhood, and quality of life.
 - Foster distinctive, attractive communities with a strong ► [sense of place](#) – incorporate the idea of placemaking.
 - Preserve open space, farmland, natural beauty, and critical environmental areas – set values to conserve land.
 - Strengthen and direct development toward existing communities – avoid leapfrogging developments such as sprawl.
 - Provide a variety of transportation choices – realize other modes of transportation other than just the automobile.
 - Make development decisions predictable, fair, and cost-effective – initiate better communication between planning and real estate developers.
- Encourage community and stakeholder collaboration in development decisions – involve community in the process (Smart Growth Network, 2012; US EPA, 2001).

Smart Growth entails modern approaches to development and growth but reproduces the language of traditional growth management by promoting “sustainable growth on a local, regional, and global scale” (Nelson, 1995). The US EPA’s Smart Growth definition focuses on key themes such as economy, community, and environment and refers to ► [sustainable development](#) values. Smart Growth altered discussions about change from a *no-growth* attitude toward questioning how and where growth should occur. In the USA, the discussion integrated new values in terms of quality of life (livable communities or ► [healthy communities](#)) and affected how development locations were perceived (Andersson, 2001; DeGrove, 2005). Godschalk notes that the “livability vision expands the sustainability mix to include land use design aspects, ranging to the micro scale of the block, street, and building, as well as up to the macro scale of the city, metropolis, and region”(Godschalk, 2004). The vision justifies Smart Growth as a policy-driven movement within the general concept of growth management but also as a type of sustainable development. Evaluations of Smart Growth programs and their outcomes (Ingram, Carbonell, Hong, & Flint, 2009) showed that such policies were successful at the state level in Florida, Maryland, New Jersey, Oregon, Colorado, Indiana, Texas, and Virginia. By contrast, at the local scale Smart Growth policies can cause conflicts, since generic policies may ignore the specific needs of places of different scales (Edwards & Haines, 2007).

Critiques on Smart Growth?

Taking various definitions into account and contrasting them with the growth context, it is evident that development and desired conservation might produce opposing opinions in terms of economic property interests (e.g., real estate development) and sustainable development (e.g., conservation and preservation of agricultural land) within a region. Critics (Mandelker,

Payne, Salsich, & Stroud, 2011) worry about creating the possibility of a market monopoly due to imposing (artificial) “growth controls that restrict development” when applying Smart Growth policies such as growth boundaries or restricting overlay ► [zoning](#). Further, in their critical assessment of the term Smart Growth, Ye, Mandpe, and Meyer (2005) identify Smart Growth as “political cover, whether for antigrowth or antiregulation positions [or] in other cases, the principles seem to be reformulated in response to the realities in local planning.” They also identify discrepancies in definitions of the Smart Growth principles among institutions and private initiatives.

Smart Growth articulates development aims and argues that an enhanced ► [sense of community](#) can help governments better manage resources. Unfortunately, though, policies may fail to address the timeline in which aims should be achieved and in the United States may not reflect changes in housing markets after the housing market collapse in 2008. Smart Growth is not the ultimate panacea that will cure the issues which land consumption and growth in the USA has revealed in the past decades (Bullard, 2007). Smart Growth contradicts itself in theory and is weak in implementation, but it also presents valuable attempts to articulate ideas about the ► [public interest](#). At this point, we certainly can argue that practice reveals a trend from state-oriented incentives to private sector forces, which formed movements such as ► [New Urbanism](#) or focused on mixed-use developments. Smart Growth appears as both privately oriented and government initiated (DeGrove, 2005; Knaap & Wiewel, 2005). Smart Growth has transformed planning discussions in the US but has simultaneously produced legal conflicts over property which dominate the implementation process (Knaap & Talen, 2003; Salkin, 2003). Lastly, as Johnson (2007) puts it, Smart Growth is not just a property rights and policy issue but even is more complex; thus, “if Smart Growth is to flourish, it needs to be applied to the tangled issues of where people of different races and classes live, work, and go to school. In other words, all communities within a region must come to grips

with sprawl - either through reason or the force of law.”

In summary, Smart Growth is a policy tool used by many local governments in the USA (and beyond) to guide growth management and development. It faces obstacles in property rights, laws, or finances (such as increased risks with mixed-use developments) but offers a persuasive contemporary approach to building communities, with positive effects on quality of life and sense of place.

Cross-References

- [Community Planning](#)
- [New Urbanism](#)
- [Sustainability](#)

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SMiLE

- ▶ [Schedule for Meaning in Life Evaluation, Spanish Version](#)

Sociability

- ▶ [Extroversion](#)

Social (Including Psychological), Economic, and Environmental Implications of Drought and Prolonged Drying Events

- ▶ [Human Cost of Drought](#)

Social Accounting Matrix

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Synonyms

SAM

Definition

A Social Accounting Matrix (SAM) can be defined as a presentation of the system of national accounts (United Nations, 2009) in a matrix format. Not only the process of producing goods and services is presented in a matrix (usually referred to as input–output tables and supply and use tables) but also all other, nonfinancial and financial, transactions and positions. Doing so, a SAM elaborates the linkages between the production process including the generation of income by producing goods and services on the one hand, and the processes of income (re)distribution, consumption, capital formation, and financing on the other hand. SAMs are closely related to national accounts whereby their typical focus on the role of people in the economy may be reflected by, among other things, extra breakdowns of the household sector and a disaggregated representation of the labor market.

Description

General Description

The starting point for a Social Accounting Matrix (SAM), as originally developed by Nobel Prize Laureate Sir Richard Stone (Stone & Brown, 1962), is the system of national accounts. A major difference, however, is its presentation of national accounts in a matrix format. Whereas in traditional national accounts only the production process is represented in a matrix format, a SAM extends this format to the full sequence

of (institutional) sector accounts. Sector accounts are usually presented in so-called T-accounts, showing for each sector (households, corporations, government, etc.) resources/receipts at the right hand side and uses/payments on the left hand side. A full-fledged SAM contains (sub) matrices for all relevant transactions related to income (re)distribution, capital formation and transfers, financial transactions, and positions. Doing so, the rows of a (sub)matrix show the uses/payments of the various sectors, and the columns represent the resources/receipts. For an elaborate discussion of the technical details of a SAM, see, for example, United Nations et al. (1993), Timmerman and Van de Ven (1994), Keuning (1996), and Leadership Group on Social Accounting Matrices (2003).

Flexibility

The use of a matrix format allows for much more flexibility in defining classifications and breakdowns which are specifically targeted at the analytical and policy needs at hand. For each of the economic processes, a specific breakdown can be applied, for example, focusing on industries and products in the description of the production process, on types of persons employed in the description of labor input, on different household groups in describing (re)distribution, and on use of income. A SAM also typically puts much more emphasis on the interrelationships between the various sectors, showing receipts (payments) of institutional sectors by paying (receiving) counterparty sectors: the so-called from-whom-to-whom tables. The relevance of describing this interconnectedness of economic sectors became apparent in the aftermath of the economic and financial crisis, especially in relation to debtor/creditor relationships; see, for example, FSB and IMF (2009).

The matrix format also allows for expanding the system of national accounts with related nonmonetary socioeconomic indicators, such as life expectancy, infant mortality, adult literacy, nutrient intake, access to (public) health and education facilities, and housing situation by household group; see, for example, the United

Nations publication *Towards a System of Social and Demographic Statistics* (United Nations, 1975). Another extension may relate to the inclusion of environmentally related policy issues; see, for example, Keuning and Timmermans (1995). More generally, these extended matrices are sometimes referred to as a System of Economic and Social Accounting Matrices Including Extensions (SESAME).

The “Social” Aspect of SAMs

A specific feature of more commonly applied SAMs is that they put much more emphasis on the role of people in the economy, the “social” aspect of a SAM. Breakdowns of employment and households are usually much more detailed than the ones in the traditional, more macro-oriented, system of national accounts. An important social concern, such as the level and composition of (un) employment, for example, can be captured by providing additional information via a subdivision of employment and compensation of employees by type of person employed (sex, age, level of education, etc.). This subdivision would thus apply to both the use of labor by industry, as shown in the supply and use table, and the supply of labor by socioeconomic subgroup, as shown in the allocation of primary income account for households. Another social concern, such as income and wealth inequality, can be taken on board by a breakdown of the sector households into various subsectors, based on the composition of households (single person, one adult/two adults with or without children), main source of income (employee, self-employed, social benefits, property income), and/or income deciles/quintiles. As such, a SAM clearly addresses some of the recommendations made by the Commission on the Measurement of Economic Performance and Social Progress (CMEPSP), often referred to as the Stiglitz-Sen-Fitoussi Commission. In their 2009 report (Stiglitz, Sen, & Fitoussi, 2009), the first five (out of 12) recommendations deal with household issues, advising to put more emphasis on (the distribution of) income, consumption, and wealth of households.

SAMs and Modeling

The matrix format of a SAM can easily be used as a model for describing and analyzing the economy, including socially relevant dimensions. Similar to the multiplier type of analysis using input–output tables, a SAM can be applied for an extended multiplier type of analysis, taking into account not only the economic structure underlying the production process of goods and services but also socioeconomic coefficients related to income (re)distribution, consumption, investment, and financing, to estimate the direct and indirect impact of an exogenous shock to the economic system. For more details, reference is made to, for example, Pyatt (2001), Round (2003), and Thorbecke and Jung (1996). It has to be noted, however, that a basic assumption of this type of analysis is the structural relevance of the estimated coefficients, at the level of marginal changes. Nowadays, this assumption becomes more and more problematic in an environment of quickly changing and evolving production processes. This is even more true for processes of income (re)distribution and financing. A more advanced type of analysis using the basic structure of a SAM concerns applied general equilibrium modeling, which includes structural or behavioral specifications for the various groups of transactions; see, for example, Kehoe (1996) and Pyatt (1988).

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Social Activism

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Synonyms

Campaigns and activists; Civil disobedience; Protest; Strike action

Definition

Activism is intentional action by an individual to bring about social or political change. This action is in support of, or opposition to, one side of a controversial argument. Saul Alinsky stated, “The man of action views the issue of means and ends in pragmatic and strategic terms. He has no other problem; he thinks only of his actual resources and the possibilities of various choices of action” (Alinsky, 1971). It is interesting to note Alinsky’s use of “man” to mean “people.” This shows how language changes over time and place. When he was working, feminism had barely been born.

Social activism is working with other people to bring about a change in society. The word “social” applies both to “society” and to the idea that the activism fosters opportunities for participation. It reflects a personal choice to engage in society. If the participation is forced or coerced, it is not social activism. Social activism is often confrontational, against an established power, authority, or hegemony, the “status quo,” or “the way things are.” Much social activism involves advocating for social out-groups.

The concept of social activism is opposed to quietism or *laissez-faire*. It can provide one a sense of ownership on a part of society and of contribution.

Description

Social activism is dependent upon time and place. Alinsky noted, “The judgement of the ethics of means must be made in the context of the times in which the action occurred and not from any other chronological vantage point” (Alinsky, 1971). The term is often associated with progressive or liberal causes but can also be applied to conservative ones, such as antiabortion. The impetus to act, rather than think, contemplate, or meditate, comes from a dissatisfaction with the status quo in society. But even meditation or group spirituality can be associated with social activism. For example, during the Vietnam War, antiwar

activists surrounded the Pentagon, joined hands, and tried to will an end to the war. They were not successful. Social activism is rarely something one does by oneself but rather does with other people. While the changes desired are usually spelled out clearly, some social activism, such as the Occupy movement in 2011–2012, is unclear as to the specific changes it wants and how to get there. Social activists often have leaders, though some movements are leaderless.

Motivations

How do people decide to become involved in social activism? The choice is often moral. Feelings of social responsibility are often shared. When asked, some activists attribute their behavior to their personal relationships, while others believe they had a psychological predisposition to engage in social justice. “Experiences of personal marginality were also highlighted as a key contributor to social justice efforts...”. [Activists] emphasize “the importance of a fundamental, shared human connection between themselves and members of out-groups, suggesting that universalism may be importantly implicated in forging bonds across social identities. Finally, [activists] explicitly describe their social justice work according to cost-benefit analyses [which] may signal a desire for recognition or reward for their efforts in light of perceived personal costs” (Borshuk, 2004). Out-group activism is social and/or political advocacy on behalf of lower-power out-group members. Many reasons have been given for activists’ motivation, including self-concept, socialization, the search for meaning and identity, values, personality attributes, political consciousness, a quest to join community life, and a need for status (Bettencourt). Other theories include empathy, guilt, benevolence, peace, equality, and a desire to do social justice.

In recent years...moral psychologists have questioned the idea that human moral decisions are the result of careful deliberation...Social intuitionists argue that moral decisions involve...intuition—a process which is unconscious, instantaneous, and emotional...followed by a logical cognitive process, which is conscious, slow, and rational. Social intuitionists believe that

the logical component of moral judgments serves largely to provide post hoc justifications for our initial gut-level decisions as to whether an action is right or wrong. In other words, our moral thinking usually consists of rationalization more than reason. (Herzog & Golden, 2009)

Who Is Involved in Social Activism?

The middle-class, in general, devotes more of their time to all types of volunteer activity than does the working-class, as do women over men, and students over their parents (Franz & McClelland, 1994). Activism also tends to be associated with people, who have higher levels of education, and, in particular, higher levels of knowledge about social issues (Henderson-King & Stewart, 1999. (Bettencourt)

History of Social Activism

Social activism has a long history in the USA. For example, even vegetarianism has been portrayed as socially correct. “[B]y the time of the first American Vegetarian Convention, held in New York in May 1850, the justifications for avoiding meat had broadened to include moral considerations. Among the resolutions adopted at that first meeting were, “That flesh-eating is the keystone to a wide-spread arch of superfluous wants, to meet which, life is filled with stern and rugged encounters, while the adoption of a vegetarian diet is calculated to destroy the strife of antagonism, and to sustain life in serenity and strength” and “That cruelty, in any form, for the mere purpose of procuring unnecessary food, or to gratify depraved appetites, is obnoxious to the pure human soul, and repugnant to the noblest attributes of our being” (Food & Think, 2011).

A great hero of social activism is India’s Mahatma Gandhi, who led India to independence from the United Kingdom in a nonviolent way. Both Martin Luther King and Saul Alinsky were students of Gandhi.

Originators and Heroes of Social Activism

Social activism is not usually a job, but there are people who are professional activists, such as leaders and employees of social change organizations. Another example is President Obama’s work experience as community organizer in

Chicago. The handbook for social activists is often considered to be Saul Alinsky’s *Reveille for Radicals* (1946) and *Rules for Radicals* (1971). Alinsky distinguishes social activists, or radicals, from liberals: “Liberals in their meetings utter bold words; they strut, grimace belligerently, and then issue a weasel-worded statement ‘which has tremendous implications, if read between the lines.’ They sit calmly, dispassionately, studying the issue; judging both sides; they sit and still sit” (Alinsky, 1971: 4).

One of the classic statements of the need for social activism is Rev. Martin Luther King, Jr.’s Letter from Birmingham Jail (1963), in which the civil rights leader explains to his “fellow clergymen” why he is leading demonstrations. He notes the reasons for his actions: “Injustice anywhere is a threat to justice everywhere. We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly.” And what his actions consist of, “In any nonviolent campaign there are four basic steps: collection of the facts to determine whether injustices exist; negotiation; self purification; and direct action.”

Public Discourse

Public discourse constructs community activists as symbols of justice. Feisty and persistent “warriors” form committees, hold meetings, and stage demonstrations. Similarly, activists’ communities are often portrayed in the mass media and academic research as united in solidarity fighting for common causes. (Lin and Huei-Hsuan, 2001)

Social Activism and Violence

Usually, social activism is associated with nonviolence, but conceivably, radical environmentalism and modern anarchism, which sometimes use violence, could fall under the concept. For example, the University of California at Berkeley Social Activism Sound Recording Project, which sees as its role “to gather, catalog, and make accessible primary source media resources related to social activism and activist movements in California in the 1960s and 1970s,” has recordings on the Black Panther

Party. The Black Panthers were regarded by most mainstream Anglos as violent, but it regarded itself as providing social services. In 1999, demonstrators against the World Trade Organization meeting in Seattle, Washington, broke windows. Similarly, Palestinian groups regarded as terrorist by Israelis, such as Hezbollah, have strong social service wings.

The Internet and Social Media

The Internet has made it easier for people to organize for social activism by finding like-minded people and to transmit information quickly. It has also made it easier for people to take action with little commitment or consequences, such as signing online petitions. For example, on March 8, 2012, the Detroit Free Press ran an article with the headline “‘Bully’ documentary inspires social activism.” It concerned a current documentary movie about bullying of youth in schools. But what the headline called “social activism” was actually about a student in Ann Arbor, Michigan, who collected signatures on a petition through Change.org to change the film’s R rating to PG-13. The rating was indeed changed, following editing of the film and negotiations between the filmmakers and the rating authority. It is not known how much influence the petition collecting and signing had. It is also not clear how significant the rating change is.

Using social media for such activities as petition signing is sometimes called “slacktivism” or “clicktivism.” “Slacktivism,” according to the Urban Dictionary, is “the act of participating in obviously pointless activities as an expedient alternative to actually expending effort to fix a problem.” While clicktivism is criticized for not being authentic social activism, it has the potential for reaching very large numbers of people with a message. For example, in 2012, the video “Kony 2012”, about the Lord’s Resistance Army leader Joseph Kony in central Africa, reached about 100 million people in 6 days.

Nicholas Colloff, Oxfam’s Director of Strategy and Innovation, stated the following about online campaigns: “Campaigning should be more than a host of vague clicks. Mass support

is crucial but it should not come at the expense of more effective activities.” Use of social media in social activism has been defended as a tool for solving “collective action problems.” These “arise when a problem can be solved only through cooperation by many, but when there are strong disincentives for any one individual to participate, especially if victory is not guaranteed. . . A society-level collective action problem arises under an autocracy when costs of dissent are high for individuals and the means of organizing to overcome the dilemma are stifled. . . Collective action problems are hardest to crack if it’s difficult for citizens to coordinate and communicate” (Tufekci, 2011).

As is the recursive nature of life today, social activism has its own Facebook page, with 6,352 “likes” as of 4/8/2012. It refers back to the Wikipedia entry. “If you only measure donations, social media is no champion.” The national chapter of the Red Cross, for instance, has 208,500 “likes” on Facebook, more than 200,000 followers on Twitter, and a thriving blog. But according to the *Chronicle of Philanthropy*, “online donations accounted for just 3.6 % of private donations made to the organization in 2009” (Kessler, 2010).

While there has been much criticism of too-easy social activism via social media, technology has enabled activism. For example, “Smart mobs” of activists, attracted to demonstrations by text messages, have led to political change in the Philippines and the Ukraine. . . In both cases, calls to take to the streets spread virally with recipients forwarding the messages to multiple friends. In smart-mob scenarios, mobile phones function as an impromptu broadcast network. Other activist uses of cellphones take advantage of the ability of owners to create content as well as forwarding it. Other uses include keeping track of oppressors, methods of payment for poor people, exposing corruption, and anonymous protest (Zuckerman, 2007).

Celebrity, Business, and Social Activism

An interesting example of current social activism is the efforts of the musician Bono, star of the band U2. Harvard Business School professor

Nancy F. Koehn has studied Bono and written a case, “Bono and U2,” with colleagues Katherine Miller and Rachel K. Wilcox. They note that Bono used his growing celebrity status to make relationships with famous people and work on social issues in Africa, including disease, poverty, and hunger. He also used his Christianity to make allies and his “authority” as a rock star for social ends. Koehn notes, “Bono doesn’t get to meet with Bill Clinton and shake hands with the Pope John Paul II if he’s not a rock-and-roll star.” Bono began campaigning for debt relief for poor African nations and for additional funding to fight AIDS there. Bono and the rest of the band allied itself with what they felt their fans believed in, including social justice. There were fears, including from the band’s manager, that its social activism would hurt the business side of the band, but it did not. The Bono story is a case of being able to do good and do well, mixing business and activism (Girard, 2011).

Corporate Involvement and False Social Activism

Sometimes, corporations and political groups try to simulate social activism by creating “astroturf” groups that act like socially active groups. Astroturf organizations are fake grassroots movements: they purport to be spontaneous uprisings of concerned citizens but in reality are founded and funded by elite, monied, and corporate interests. Some astroturf campaigns have no grassroots component at all. Others catalyze and direct real mobilizations. The Tea Party is in the second category.

Another example of phony social activism is “greenwashing.” It is a corporation’s making exaggerated positive environmental claims to curry consumer favor, “A disingenuous claim made by an organization to promote the organization, or a product/service, as being green or environmentally sustainable, when in fact it is not”. For example, “A company spends millions of dollars positioning itself and its employees as environmentally sensitive, but sells a product that has harmful effects on the community from which its components are sourced or discarded.” (Green For All). Social

activism is not propaganda, although sometimes “guerilla theater” or “street theater” is considered part of social activism.

At least one company, MSLGroup Americas, has a program of “Social Activism Marketing.” It states, “MSLGROUP’s Social Activism Marketing (SAM) specialty is a bold new approach that uniquely blends the power of corporate social responsibility and cause marketing with the penetration of digital tools to **spawn social movements for profit and purpose**” (emphasis added) (<http://www.mslworldwide.com/sectors/social-activism-marketing/corporate-social-responsibility>).

Social Entrepreneurship

Social activism is distinguished from social entrepreneurship. Sally Osberg and Roger Martin make the case on the website Social Edge, “Instead of taking direct action, as the social entrepreneur would, the social activist attempts to create change through indirect action, by influencing others – governments, NGOs, consumers, workers, etc. – to take action. Social activists may or may not create ventures or organizations to advance the changes they seek. Successful activism can yield substantial improvements to existing systems and even result in a new equilibrium, but the strategic nature of the action is distinct in its emphasis on influence rather than on direct action” (Jonathan, 2011). I do not agree with this analysis, since as noted elsewhere, social activists may take direct action. In addition, a social entrepreneur is an innovator using entrepreneurial passion and rigor to solve societal problems. Social entrepreneurship has been defined by Dr. Alex Nichols of Saïd Business School, Oxford University, as “innovative and effective activities that focus strategically on resolving social market failures and creating new opportunities to add social value systematically by using a range of resources and organizational formats to maximize social impact and bring about change.”

Challenges for Social Activism

Social activism is subject to the same challenges of working in groups as any endeavor.

These challenges include resources, leadership, organizational culture and style, planning, diversity, equity, inclusion, operations, and lack of evaluation for effectiveness. While it might be expected that social activists are unpaid or paid very little, this can contribute to devaluing social activism. Social activism can be carried out in ways that those “helped” may find offensive, such as paternalism, exploitation, elitism, or “colonialism.” The last two are part of a far-left critique of social activism, which feels it is not sufficiently in “solidarity” with the people. In addition, some members of groups such as LGBT activists believe that a person cannot be an “ally” of their group without the group’s permission. Social activism can be confused with other activities, like tourism. For example, in “ecotourism,” people from the Global North travel to exotic places and feel they are benefiting those places.

Cross-References

- ▶ [Social Change](#)
- ▶ [Social Justice](#)
- ▶ [Social Participation](#)

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Social Actors’ Perspectives

- ▶ [Perspectives of Social Agents](#)

Social Adjustment Scale Self-Report (SAS-SR)

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Synonyms

SAS-SR; SAS-SR: Screener; SAS-SR: Short

Definition

Self-report measures of instrumental and expressive role performance at work, in social activities, and with family (including extended family, marital partners, parental roles, and family unit) include a 54-item full-length version, a 24-item short version, and a 14-item screening version.

Description

The Social Adjustment Scale Self-Report (SAS-SR; Weissman, 1999) is a paper-and-pencil self-report scale that measures instrumental and expressive role performance over the past 2 weeks in adults. The 54-item assessment covers six areas of functioning, including work (either as a paid worker, unpaid homemaker, or student), social and leisure activities, relationships with extended family, role as a marital partner (if applicable), parental role (if applicable), and role within the family unit (including perceptions of economic functioning). The items within each of the six areas cover four types of content, including performance at expected tasks, the amount of friction with people, finer aspects of interpersonal relationships, as well as feelings and satisfactions.

In addition to the full-length SAS-SR, abbreviated versions of the scale are also available: the 24-item Social Adjustment Scale Self-Report: Short and the 14-item Social Adjustment Scale Self-Report: Screener (SAS-SR: Short and SAS-SR: Screener, Weissman, 2007). These abbreviated versions were developed for use in client screening, test batteries, and other research programs where the reduction of participant burden (i.e., time to complete the assessment) is important.

Administration requires approximately 15–20 min for the full-length SAS-SR, 10 min for the SAS-SR: Short, and 5 min for the SAS-SR: Screener. Raw scores are converted to gender-based standard scores (including *T*-scores and percentiles), with higher scores indicating higher levels of impairment (i.e., lower levels of social adjustment).

The SAS-SR normative sample consists of ratings from 482 adults (205 men, 277 women), aged 25–70 years. The normative sample for the SAS-SR: Short and SAS-SR: Screener consists of ratings from 957 adults (422 male, 535 female), aged 18–87 years.

Development

The full-length SAS-SR is based on the SAS-Interview, an interview that was originally developed for use in the treatment of depressed patients. The SAS-Interview was developed based on reviews of the literature and existing social adjustment scales. The interviews were conducted over 6 months in a series of studies with different groups of psychiatric patients. The SAS-SR was derived directly from the SAS-Interview by transforming the interview questions into a self-report format on a 5-point scale. The revised wording was tested on a pilot sample of 76 depressed outpatients (Weissman & Bothwell, 1976).

The SAS-SR: Short and SAS-SR: Screener were developed through a series of reliability, content, and confirmatory factor analyses that were conducted on data from 957 nonclinical participants who were assessed with the full-length SAS-SR via a postal survey. In determining which items to retain on the shortened versions, item-level reliability analyses were conducted in a backward stepwise manner with the worst items being removed one at a time until the items were finalized. Content analyses were conducted in tandem with the reliability analyses in order to ensure that the theory underlying the full-length assessment was maintained. The content analyses involved ensuring that all six role areas and all four content areas were represented on the shortened scales (Weissman, 2007; see also Gameroff, Wickramaratne, & Weissman, 2012).

Reliability

Internal Consistency

Edwards, Yarvis, Mueller, Zingale, and Wagman (1978) found acceptable internal consistency (Cronbach's $\alpha = .74$) in sample of 92-individuals who completed the SAS-SR.

Weissman (2007) sampled 957 individuals and found very strong levels of internal consistency for the SAS-SR: Short (Cronbach's $\alpha = .88$) and the SAS-SR: Screener (Cronbach's $\alpha = .80$). These results are particularly impressive given that Cronbach's α will likely underestimate the reliability of instruments like the SAS-SR where item branching allows respondents to skip questions (Edwards et al., 1978).

Test-Retest

Edwards et al. (1978) had a sample of 92 raters complete the SAS-SR on three separate occasions spaced 2 weeks apart. Test-retest reliability was strong for the SAS-SR, with $r = .72$ for time 1 to time 2 and $r = .82$ for time 2 to time 3. Weissman (2007) found acceptable test-retest reliability levels for the SAS-SR: Short ($r = .64$) and the SAS-SR: Screener ($r = .63$) from a sample of 35 adults who completed the assessments twice over a 1- to 3-week interval.

Validity

Validity evidence for the SAS-SR has been published in nearly 200 research articles with several population types across multiple domains including affective disorders, eating disorder, substance abuse disorders, well-being in the elderly, marital satisfaction and divorce, gender issues, pharmacotherapy, physical disorders, psychotherapy, reproductive issues, parenting, suicide, trauma, as well as treatment and treatment follow-up. The following section represents a small selection of these studies.

Convergent Validity

Weissman, Olfson, Gameroff, Feder, and Fuentes (2001) assessed a sample of 211 primary care patients with the SAS-SR, the Social Adaptation Self-Evaluation Scale (Bosc & Polin, 1997), and the Medical Outcomes Study 36-item Short-Form Health Survey (Ware, Kosinski, & Keller, 1994). Correlations among the scales were statistically significant, with the SAS-SR overall adjustment score correlated at $r = .57$ ($p < .001$) with the total score from the Social Adaptation Self-Evaluation Scale and at $r = .62$

($p < .001$) with the mental component score from the Short-Form Health Survey.

Treatment Sensitivity

Kocsis, Frances, Voss, and Mason (1988) assessed the effect of imipramine treatment in 76 patients with a diagnosis of major depressive disorder. Patients were assigned to an imipramine group or to a placebo group. Patients who were assigned to the imipramine group but failed to complete the trial were placed in a non-completers group. After 6 weeks of treatment, no change in SAS-SR scores were observed for the placebo or non-completers groups, while scores dropped significantly in the imipramine group ($p < .01$).

Discriminative Validity

Weissman, Prusoff, Thompson, Harding, and Myers (1978) reported that SAS-SR scores could distinguish between participant groups. Specifically, they found that both the overall adjustment score and the role-area subscales were able to distinguish between four groups (community sample [$N = 482$], acute depressives [$N = 191$], alcoholics [$N = 54$], schizophrenics [$N = 47$]) in the expected direction (i.e., community < schizophrenic < alcoholic < depressed). These results indicate that the depressed sample had the lowest levels of social adjustment, while the community sample had the highest level of social adjustment.

Data from a community sample ($N = 92$; Edwards et al., 1978) were compared to data from a clinical sample ($N = 76$; Weissman & Bothwell, 1976). Results revealed that for the overall adjustment score, clinical means ($M = 2.48$, $SD = 0.43$) were significantly higher ($p < .001$) than the means from the community sample ($M = 1.67$, $SD = 0.29$) providing evidence for the discriminating power of the SAS-SR.

Daniels (1986) assessed four groups of African-American men ($N = 90$). Groupings were based on education and employment status: super-achievers, average, underemployed, and unemployed. Results for the work-role scale were in the expected direction

Social Adjustment Scale Self-Report (SAS-SR), Table 1 Effect of clinical status on SAS-SR: Short and SAS-SR: Screener scores (Adapted with permission from MHS Inc. (2007))

Version	Role area		Clinical group	Community group	Partial η^2
SAS-SR: Short	Overall	<i>M</i>	2.26	1.81	.25
		<i>SD</i>	0.26	0.52	
	Work role	<i>M</i>	2.03	1.29	.65
		<i>SD</i>	0.10	0.36	
	Social and leisure	<i>M</i>	2.48	1.97	.19
		<i>SD</i>	0.41	0.60	
	Extended family	<i>M</i>	2.45	1.94	.11
		<i>SD</i>	0.62	0.89	
	Primary relationships	<i>M</i>	2.38	2.03	.10
		<i>SD</i>	0.39	0.86	
	Parental	<i>M</i>	2.09	1.51	.38
		<i>SD</i>	0.17	0.41	
	Family unit	<i>M</i>	2.26	2.11	.02
		<i>SD</i>	0.33	1.04	
SAS-SR: Screener	Overall	<i>M</i>	2.22	1.74	.25
		<i>SD</i>	0.28	0.56	

(i.e., super-achievers < average < underemployed < unemployed) indicating that the unemployed men had the lowest level of adjustment in work role while the super-achievers had the highest level of adjustment in work role.

Weissman (2007) compared SAS-SR: Short and SAS-SR: Screener scores from a sample of 70 individuals (31 men, 29 women) with a clinical diagnosis (i.e., a mood, anxiety, or substance abuse disorder) to scores from a matched sample from the community. Results provided strong evidence for the discriminative validity of the SAS-SR: Short and SAS-SR: Screener (see Table 1). The clinical groups scored significantly higher on the overall adjustment score for both abbreviated measures with large effect sizes (partial $\eta^2 = .25$ for both versions). Similarly, moderate to large effect sizes (partial $\eta^2 = .10-.65$) were found for all of the role areas, with the exception of family unit, where a small effect was found (partial $\eta^2 = .02$).

Translations

The SAS-SR has been translated into the following languages: Afrikaans, Cantonese, Czech, Danish, Dutch, English, Finnish, French

(European), German, Greek, Hebrew, Hungarian, Italian, Mandarin, Norwegian, Portuguese, Russian, Spanish (European), Spanish (South American), and Swedish.

Cross-References

- ▶ [Convergent Validity](#)
- ▶ [Cronbach's Alpha](#)
- ▶ [Discriminant Validity](#)
- ▶ [Internal Consistency](#)
- ▶ [Quality of Life](#)
- ▶ [Reliability](#)
- ▶ [Test-Retest Reliability](#)
- ▶ [Translation Research](#)

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Social Avoidance and Distress Scale (SADA)

- ▶ [Need for Approval Measures](#)

Social Capabilities in Chile

- ▶ [Capability and the Middle-Income Trap in Chile](#)

Social Capital and Health Inequalities

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Definition

A central tenet of the health inequality debate focuses on the relationship between health status and relative advantage, with many studies confirming a social gradient – those with advantage, typically referred to as socioeconomic status or social class, having better health. Health status is frequently measured as self-perceptions of ▶ [health](#), mental health, and ▶ [physical function](#). Social advantage is frequently measured by indicators such as ▶ [education](#) and household income. The social capital literature is inconsistent in terms of whether social capital adds to an understanding of this relationship. Generally, social capital refers to ▶ [social participation](#) (informal and formal) and ▶ [trust](#) (▶ [sense of belonging](#), willingness to be involved).

Description

Social capital can be broadly defined as a contextual level resource that benefits individuals beyond their health, generated through positive relationships and connections with a community (Fuchs, Shapiro, & Minnite, 2001). For Putnam (2000), it integrates social participation with trust. Despite the popularity of the term, it is plagued with conceptual and definitional problems. Social capital is sometimes used synonymously with ▶ [social cohesion](#), and yet other times it is not – and sometimes each is considered a domain of the other (Carpiano, 2006). There is also much debate about whether social capital is most appropriately conceptualized at the collective (and if so at the group, ▶ [community](#), or nation) or individual level or both

(Macinko & Starfield, 2001). Is it an independent, mediating, or dependent variable (Carpiano, 2006)? Its domains (participation, ► **empowerment**, ► **norms** and ► **values**, trust, belonging, association activity, supportive networks, inclusion/exclusion, legitimacy, ► **solidarity**, etc.) are in dispute (Forrest & Kearns, 2001). Furthermore, there is often little or no ► **internal consistency** or ► **reliability** of measures (Macinko & Starfield, 2001).

Given these difficulties, it is not surprising that Macinko and Starfield (2001) suggest examining clearer concepts such as interpersonal trust and membership in groups. Chappell and Funk (2010) measured social capital both (a) as an integrated measure combining social participation with trust and (b) as separate components of social participation and trust, in order to examine the role of social capital in the relationship between social advantage and health. Interestingly, the vast majority of empirical research operationalizing social capital does so with separate rather than integrated measures.

As an independent measure, social participation has been associated with better physical health and function (Andrew, 2005), cognitive function (Murray et al., 2007), and psychological health (Ellaway & Macintyre, 2007). Group membership and ► **volunteering**, for instance, is positively associated with self-assessed health (Poortinga, 2006). In addition, trust has been associated with better function (Andrew, 2005), less long-term limiting illness (Veenstra et al., 2005), self-rated health (Mohseni & Lindstrom, 2007), mental health (Araya et al., 2006), and psychological well-being (Phongsavan, Chey, Bauman, Brooks, & Silove, 2006), as well as less risk of long-term limiting illness (Veenstra et al., 2005). However, other research reports no impact, little consistent impact, or negative impact of social participation and/or trust on health (Greiner, Li, Kawachi, Hunt, & Ahluwalia, 2004).

Little research examines gender differences in social capital despite the fact that much of bonding social capital (i.e., high in-group cohesion characteristic of more dense groups) tends to be performed by women, especially disadvantaged

women, and takes place largely at the local level. It does not necessarily translate into benefits such as employment, especially for lower class women (Bezanson, 2008). Whether there are mediating psychosocial pathways that affect the relationship between participation, trust, and health is unknown. Yet ► **social support** could play a role as could ► **self-efficacy**.

Drawing on a sample of 918 individuals age 35–64 living in a relatively disadvantaged area of Victoria, Canada, Chappell and Funk (2010) analyzed whether social capital adds any explanatory power to what we already know about the relationship between social advantage and health and whether social capital adds anything beyond its component parts (i.e., social participation and trust). Direct effects, indirect effects, and interaction effects were all examined. Health, the dependent variable, was measured as general perceived health, mental health, and physical function. The independent variable social advantage was measured as socioeconomic status: education and household income. The independent variable social participation was measured as size of the informal network, number of community activities attended, formal group membership, informal group membership, and service use. The independent variable trust was measured as a sense of belonging to the neighborhood in which the person lived and a willingness to be involved in making changes in the neighborhood. The integrated (single) measure of social capital (used in separate analyses) was measured through interaction terms: trust x formal group participation, trust x informal group participation, and trust x community activity involvement. Perceived expressive support and self-efficacy were also included. Control variables included gender, age, length of residence in the neighborhood, and average income of the enumeration area of residence. OLS multiple regression analyses were conducted.

Income is significantly and positively related to perceived health and to physical function, but none of the eight social participation and trust variables mediate the relationship between socioeconomic status and perceived health or between

socioeconomic status and physical function. The single integrated social capital variable does not mediate the relationship between socioeconomic status and the two health variables. Neither income nor education is related to mental health; none of social participation, trust, or social capital mediates the relationships that are significant. Higher self-efficacy is related to better outcomes for all three health measures; higher perceived expressive support is related to better mental health. When indirect effects are examined through the significant relationships with the two psychosocial variables, there is no indirect effect of any of the social participation variables or any of the health outcomes. However, trust shows an indirect association with health, through self-efficacy for all three health outcomes and also through expressive support for mental health. Higher trust enhances self-efficacy and perceived expressive support. Income, in addition to its direct effect on perceived health and physical function, has an indirect effect on all three health outcomes, through self-efficacy with an additional indirect effect on mental health and also through expressive support.

Among the middle-aged individuals examined, the data suggest no support for the concept of social capital as a new or different concept that adds to the health inequality discussion beyond its component parts. The findings, furthermore, suggest that greater attention should be paid to the potentially important (and indirect) role of trust in health, an importance that may become obscured when behavioral and attitudinal dimensions are combined together into indices. That is, despite the fact that much of the discussion of social capital involves an assumption of a close relationship between attitudinal and behavioral aspects, these data suggest it may be more fruitful to explore them separately and also point to the critical role of psychosocial pathways in the process.

While these data point to the unimportance of social capital in explaining or mediating the relationship between socioeconomic status or income inequality and health outcomes, they confirm the importance of social advantage to

our health. Indeed, they suggest a stronger role than previous direct effects reveal, also indicating important indirect effects through psychosocial factors – adding to their importance.

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Social Caste

► Disadvantaged Populations

Social Change

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Definition

Social change refers to the transformation of culture and social institutions over time.

Description

Social change refers to the transformation of the cultural and structural elements of society, including systems, institutions, practices, norms, or values, over time. Societies are continually changing, with changes often driven by technological innovation, environmental pressure, or the diffusion of cultural beliefs and practices. Thus, one aspect of social change research is to focus on understanding how these environmental or technological influences spur changes to other aspects of social life, such as health status, family patterns, cultural beliefs, or quality of life. Often this work takes a historical or anthropological approach, comparing a society either to itself in an earlier time or to one beyond its borders.

Social change can also be spurred through the planned or deliberate efforts of individuals or groups to bring about change. When the efforts to facilitate change are driven through social institutions such as government, it is generally viewed as a form of *social planning*. When driven by citizens, the efforts are generally considered to be a form of *collective action* or *activism*. Often-times, collective action emerges when citizens believe that the social planning process is failing to address the interests or well-being of the citizenry. In this context, social change is understood as the process of altering the initial situation of a group, organization, or community in the direction of a more liberated state (Greenwood & Levin, 1998).

Collective action can vary dramatically in scope, scale, duration, number of people involved, and level of organization. Some social change campaigns are driven by an individual *activist* whereas other initiatives mobilize multitudes through large-scale *community organizing* efforts. Some collective action, such as a protest, may be spontaneous or short-lived. In contrast, other forms of activism may last months or even years. Social change efforts that are organized, continuous, and extended beyond the immediate confines of groups or mobs are generally referred to as *social movements* (Zurcher & Snow, 1981).

Social movements have a long history of bringing about change, often using a range of activities including petitions, strikes, protests, or campaigns, to bring attention to particular causes. While early social movements focused on improving material conditions like living wages and working conditions, the post-materialist movements of the second half of the twentieth century focused more directly on expanding civil rights and acceptance and belonging of a wider range of social identity and lifestyles. The feminist movement, gay rights movement, and peace and antiglobalization movements are all examples of what has been termed *new social movements* or alternatively, *quality of life politics* (Inglehart & Rabier, 1986).

The tactics used in social movements are continually changing, in an effort to find new ways for the message to be seen and heard. In more

recent years, social movements have moved beyond oppositional forms of expression such as protests and petitions and toward more positive, celebratory, performative, or prefigurative means – what Day (2004) describes as a shift from a “politics of demand” to a “politics of the act.” New forms of political expression, such as direct action and lifestyle politics, or claiming space, have also emerged in the social movements. Social actions such as the Reclaiming the Streets, the Occupy movement, Pride parades, and the AIDS Quilt are examples of some of these new forms of political expression.

Social change efforts are inherently political because underlying them is an effort to redefine a situation from one that is routine and accepted to one that is problematic (Newman, 2008). As such, social change efforts call for a reconstruction in how we arrange ourselves materially as well as a reordering of social values and how we collectively define right and wrong. Because support for social movements is divided along ideological lines, oftentimes change-oriented social movements spur *countermovements* that become organized with the purpose of discouraging social change (Newman, 2008).

Because quality of life is tied to not only physical health but also self-esteem, sense of personal control, sense of belonging, and a feeling of purpose (Renwick & Brown, 1996), efforts to foster social change related to quality of life are diverse and abundant. For example, any effort to address injustices or inequities for individuals or groups whose quality of life is impacted by discrimination, a disabling condition, poor treatment, or lack of power can be considered a form of *quality of life activism*. Quality of life activism is thought of as an “upstream” approach to promoting quality of life because it focuses primarily on addressing the *root cause* of problems that impact quality of life, rather than through more clinical or therapeutic approaches that focus on assisting the individual. Some current examples of quality of life activism include efforts to address such social problems as elder abuse, school bullying, homophobia, or the stigmatization of mental illness.

The act of participating in activism or advocacy has also been linked to quality of life benefits to the individual. Participation is associated with a range of well-being indicators, including a sense of perceived control and empowerment (Zimmerman & Rappaport, 1988) and *psychological well-being* (Klar & Kasser, 2009). For example, for individuals living with HIV, involvement with an activist association was associated with better coping skills, greater health-related knowledge, and greater integration in a social support network (Brashers, Haas, Neidig, & Rintamaki, 2002).

Social change has also played an important role in enhancing *community quality of life*. The community supports, spaces, features, and activities that have come into being as a result of collective community action are innumerable. However, social change efforts directed toward improving community quality of life need to be closely scrutinized. One critique of community change initiatives is that the benefits are accrued mainly by the middle class. For example, improving the quality of life of a community, like ridding the area of the “blight” of homelessness, is often tied to gentrification or is racially coded (Gregory, 1993). Diverging perspectives about how to improve the quality of life for residents also create social conflict among the community residents. Further, success in community change is determined by a group’s access institutional power and ability to influence constructions of the community through discourse and ideology (Speer & Hughey, 1995), which may not be equally accessible to residents.

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Social Changes in Crime

- ▶ [Crime Trends in Spain](#)

Social Class

- ▶ [Disadvantaged Populations](#)

Social Class in Brazil

- ▶ [Brazil, Quality of Life](#)

Social Codes

- ▶ [Community Values](#)

Social Cohesion

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Definition

Social cohesion refers to the extent of connectedness and solidarity among groups in society. It identifies two main dimensions: the sense of belonging of a community and the relationships among members within the community itself. It stems from a democratic effort to establish social balance, economic dynamism, and national identity, with the goals of founding a system of equity, sustaining the impulses of uncontrolled economic growth, and avoiding social fractures.

Social cohesion is a social process which aims to consolidate plurality of citizenship by reducing inequality and socioeconomic disparities and fractures in the society. It reflects people's needs for both personal development and a sense of belonging and links together individual freedom and social justice, economic efficiency and the fair sharing of resources, and pluralism and common rules for resolving all conflicts.

Description

There are many different definition and consequently conceptual approaches to social cohesion. They vary according to period, culture, and the prevailing political ideas and differ from one another mainly in terms of the role of the players involved, the areas of life or groups concerned and, finally, the methods they employ to foster this cohesion.

According to Durkheim, a cohesive society is one that is marked by the abundance of “mutual moral support, which instead of throwing the individual on his own resources, leads him to share in the collective energy and supports his own when exhausted” (Durkheim, 1893).

A cohesive society is also one that is richly endowed with stocks of social capital.

Social cohesion refers to two broader, intertwined features of society:

1. The absence of latent social conflict – whether in the form of inequalities in income or wealth, racial and ethnic tensions, disparities in political participation, or other forms of polarization
2. The presence of strong social bonds – measured by levels of trust and norms of reciprocity (i.e., social capital), the abundance of associations that bridge social divisions (“civil society”), and the presence of institutions of conflict management (e.g., a responsive democracy, an independent judiciary).

It is possible to identify at least three types of definitions of social cohesion.

The first is based on sense of belonging which considers the ongoing process of developing a community of shared values, shared challenges, and equal opportunities based on a sense of hope, trust, and reciprocity (Stanley, 2001, 2003). It involves building shared values, reducing disparities in wealth and income, and encouraging people to have a sense of engagement in the same community (Rossel, 1995).

The second definition is merely instrumental, and it is based on the need of the members of society to work together. In this perspective, social cohesion is a “state of affairs in which a community, typically geographically delimited, demonstrates an aptitude for collaboration that produces a climate for change” (Ritzen, Easterly, & Woolcock, 2000; Easterly, Ritzen, & Woolcock, 2006). The change might be related to economic performance, and in this sense social cohesion is intended as condition in which people works together when, for example, crisis strikes or opportunity knocks. This interpretation brings to define social cohesion as the nature and extent of social and economic divisions within society. These divisions – whether by income, ethnicity, political party, caste, language, or other demographic variable – represent vectors around which politically salient societal cleavages can develop (Ritzen et al., 2000). In line with this interpretation, the Canadian Government considers that “social cohesion is

defined as the capacity of citizens living under different social or economic circumstances to live together in harmony, with a sense of mutual commitment” (Canadian Government, 1999).

The third definition is based on community bonds and considers that “social cohesion does not require communities to merge into an homogeneous entity [. . .] On the contrary cohesion can be achieved in a pluralist society through the interaction of different communities that build a bond through the recognition of difference and interdependence” (Rudiger & Spencer, 2004).

The Council of Europe echoes this understanding of cohesion as society’s ability to secure the long-term well-being of all its members, including equitable access to available resources and respect for human dignity with due regard for diversity, personal and collective autonomy, and responsible participation (Council of Europe, 2005).

These definitions are mainly based on bonds that can be considered intrinsic to the organization of the community, while in our societies, social cohesion covers a complex set of social relations and involves processes of exposure to a variety of different interests, views, and insights. In societies characterized by a plurality of interests and identities, cohesion mainly results from the ability to develop nonviolent consensual processes to resolve any conflict, with regard to either allocation of resources or to the recognition of dignity in the various lifestyle choices and traditions and in the context of equitable access to rights. It results from interpretative exercises that the institutional players and autonomous individuals carry out as they shoulder their collective responsibilities in order to resolve conflicts.

Social cohesion is the product of interrelations between individuals and institutions within a framework of laws recognized as legitimate by the community (Council of Europe, 2005). It should therefore take the form of a reference framework that institutions and active citizens adopt and renew to provide themselves in turn with shared and relevant political objectives that prevent social conflict and ensure the democratic stability of society as a whole. Therefore, more than the sharing of identical values, social

cohesion focuses on the sharing of the objective of achieving equity and equality necessary to develop as an individual in the context of existing social relationships.

Cross-References

- ▶ [Democracy](#)
- ▶ [Quality of Life](#)
- ▶ [Social Exclusion](#)
- ▶ [Social Progress](#)
- ▶ [Welfare](#)

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Social Cohesion and Social Capital Among Students

- ▶ [College Student Quality of Life and Social Capital](#)

Social Cohesion Regimes

- ▶ [Measures of Social Cohesion](#)

Social Comparison

- ▶ [Social Comparison Theory](#)

Social Comparison Group

- ▶ [Relative Income and Reference Group Behavior](#)

Social Comparison Theory

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Synonyms

[Downward comparison theory](#); [Multiple Discrepancies Theory \(MDT\)](#); [Social comparison](#); [Upward comparison](#)

Definition

Social comparison theory (SCT) is a theory that explains the reasons, as well as the processes, behind the idea that people evaluate their own opinions, values, achievements, and abilities by comparison respectively with the opinions, values, achievements, and abilities of others.

Description

Social comparison theory was first popularized by psychologist Leon Festinger in 1954 (Festinger 1954). SCT proposes that there is

a primitive drive within individuals to compare themselves with others in order to evaluate their own opinions and abilities. It was originally thought that individuals do this partly in order to limit hostility and deprecation of others, given that the act of comparing oneself with others is one of the ways to strengthen bonds and ensure uniformity within a social group. Festinger also hypothesized that the tendency to compare oneself with others decreases as the difference between the person's opinion or ability and one's own becomes divergent and that people are naturally driven to compare upward in order to achieve greater abilities and achievements.

SCT and Subjective Well-Being (SWB)

Almost 60 years after Festinger's introduction of SCT in 1954, accumulating research on the links between SCT and SWB has suggested that social comparisons are perhaps much more complex than initially thought. Dating back to the work by Richard Easterlin (Easterlin 1974), rich people are reportedly significantly happier than poorer people. Yet a growth in income for all does not necessarily lead to a significant improvement in average happiness for many countries. According to Easterlin, there is a simple underlying explanation to the so-called Easterlin paradox and that is that when it comes to how one evaluates his or her SWB, status matters. Rich people are happier than poor people partly because they make their comparisons downward, i.e., the kind of comparison that is a defensive tendency to evaluate oneself with a comparison group whose troubles are more serious than one's own, while the poor compare themselves upward, i.e., by comparing themselves to others who are more fortunate than they are. However, a growth in income for all does not lead to an increase in the amount of status available to each individual in the country – where there is a winner, there will always be a loser. The “zero-sum game” property in the pursuit of status provides a key explanation as to why the rich are often happier than the poor, and yet a growth in income for all does not necessarily lead to an increase in happiness for all.

The impact of social comparisons on SWB has also been shown to have time dimensions. For instance, at an early stage of a country's development, poor people may view the incomes of others as a “good” social indicator in that they will soon go on to achieve higher quality of life, too. Yet if the gap between oneself and others remains, after a while, the effect of others' incomes may change from positive to negative as frustration may set in (Hirschman 1973). Recent research has also shown that people compare themselves most with those who have closer relationship ties to them or who are geographically closer (Clark et al. 2009). People are also more likely to view some of their unfortunate circumstances – unemployment and victimization of crime are two prime examples – as less negative if the same unfortunate circumstance also affects a lot of their peers or their more narrowly defined comparison groups (Clark 2003) (Powdthavee 2005).

Cross-References

- ▶ [Adaptation](#)
- ▶ [Easterlin Paradox](#)
- ▶ [Relative Deprivation Theory](#)

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Social Competence

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Synonyms

[Social functioning](#)

Definition

Social competence is defined as effectiveness in social interaction, as the ability to achieve personal goals in social interaction while simultaneously maintaining positive relationships with others over time and across situations.

Description

Historically, researchers have tended to localize social competence in the person (social skillfulness) or in his or her skillful behaviors. Nowadays, there is a shift from definition as behavioral skills to the ability to achieve particular social outcomes, such as building and maintaining positive social relations. Social competence is also increasingly conceptualized as situation and context specific because the individual's observed social competence often varies across situations, and even within the same situation, different raters (e.g., parents and peers) may come to different conclusions regarding whether an individual behaves competently (Dirks, Treat, & Weersing, 2007). In addition, cultural differences in the definition of core components of social competence have to be considered as different societies place different values on behaviors such as social initiative and self-control.

Social competence is a complex, multidimensional concept. Cavell (1990) proposed a *tri-component model* of social competence. These components are said to exist in a hierarchy as separate but interrelated

constructs. The lowest level of the hierarchy consists of social skills, which are defined as specific abilities (e.g., social cognitive skills, emotional regulation) allowing for the competent performance within social tasks. The next level is social performance – or the degree to which an individual's responses to relevant social situations meet socially valid criteria. The top of the hierarchy includes the most advanced level of social competence, social adjustment. Social adjustment is defined as the extent to which an individual achieves society's developmentally appropriate goals (e.g., in the field of education, occupation, or family life). Similarly, Rose-Krasnor (1997) suggested a *prism model* of social competence. Social skills and motivations are at the lowest level. The second level consists of summary indices of social competence, such as relationships, group status, and social ► [self-efficacy](#). The top-most level is a theoretical one at which social competence is defined as effectiveness in interaction.

Many assessments of social competence focus on only one component of these models, such as social skills or being popular and well liked. Social competence has also been included as component in some quality of life measures, such as the Miami Pediatric Quality of Life Questionnaire. A larger number of other quality of life measures assess “social functioning” indicating social skills and having positive relations with others (Solans et al., 2008). Age-specific measures of social competence have to be used in childhood and adolescence because a socially competent preschool child behaves in a much different manner than a socially competent adolescent or adult.

Social competence is associated with psychological health (e.g., Semrud-Clikeman, 2007). For example, deficits in social competence increase the risk for developing psychopathology and affect the course and prognosis of mental disorders. Social competence is also essential in the successful conduct of everyday life, from conducting community activities to establishing friendships, bonding with a partner, and parenting. Good social competence is valued by employers and is associated with higher career success.

The development of social competence is affected by the interplay of biological/genetic factors (such as sociability), environmental factors (e.g., socialization, social opportunities, cultural beliefs), and the interaction of the developing individual with significant others.

Many psychosocial interventions aim to enhance social competence as part of programs for promoting positive development, preventing behavior problems, and treating psychological disorders, such as social phobia or autism. Social skills trainings are designed to teach specific social skills. They include instruction, modeling, and role playing. Social skills training packages have been successful at affecting change on the targeted skills, but their effects on broader indices of social functioning, such as peer nominations, tend to be small. In line with the situation-specific definition of social competence, some interventions also focus on change in situational and contextual factors, such as norms of the peer group.

Cross-References

- ▶ [Anxiety Disorders](#)
- ▶ [Cultural Values](#)
- ▶ [Parenting Style](#)
- ▶ [Self-Efficacy](#)
- ▶ [Social Development](#)

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Social Consequences of Insecure Jobs

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Definition

The term *social consequences of insecure jobs* refers primarily to the negative impact of the employment situation (a) on individuals in terms of family, private, and social life and ▶ [well-being](#) and ▶ [life satisfaction](#) in general and (b) on the aggregate social consequences for societies. Investigating insecurity, labor physiologists focus mainly on the self-assessed insecurity of jobs coming with the organization of work and its consequences for single individuals, while economic sociologists and labor economists focus primarily on employment contracts and their consequences for employment, individuals' social behavior, and the aggregate consequences in terms of inequality.

Description

Development

▶ [Employment insecurity](#) increased predominantly through increasing unemployment risks and the changed employment conditions of jobs. The diffusion of so-called “flexible” employment (especially in Europe), in most cases contracts of limited duration, plays a crucial role here. Some authors point out that overall the organization of work became more unstable due to a changed character of the type of work itself. “Deregulation” (both of contracts and work

organization) was expected by some to make markets more flexible and the economic systems more effective in order to respond to the new challenges coming with globalization, and to increase employment. This vision was questioned by others who suspected that forms of unstable employment would have replaced stable employment and, moreover, could have negative consequences not only for the occupational prospects but also for private, family, and social life as it often involves greater insecurity, poorer working conditions, and worse pay. In fact, empirical research showed that insecure employment is correlated with reduced well-being and increased economic strain and can come with increased inequalities between social groups.

Consequences for Career and Income

Research has largely concentrated on the description of insecure employment and its effects on the individual working careers and income (income distribution), showing that ► [temporary employment](#) is often accompanied by poorer working conditions (annual reports of European Working Conditions Observatory) and less autonomy and that there might be considerable negative effects for career development and income levels (OECD, 2003, 2004, 2006 for an overview). This lower income, it seems, cannot be compensated within the household, as insecure workers declare more frequently their household would face problems to make ends meet (Scherer, 2009), indicating a persistent economic penalty at the household level. Thus, overall, employment insecurity can come with elevated risk of exclusion from employment and long-term economic penalties for the workers and their families (DiPrete, 2005; Esping-Andersen & Regini, 2000; European Foundation for the Improvement of Living and Working Conditions, 2007, 2008; Kalleberg, Reskin, & Hudson, 2000; Nolan, Wichert, & Burchell, 2000; OECD, 2002, 2003, 2006). The national context, however, such as the welfare and family arrangements, and details of the labor market regulation play an important role for shaping these consequences (Barbieri, 2009).

At the same time, insecure employment might be a way to avoid ► [unemployment](#) or serve as an entry port to stable employment and thus – compared to unemployment – may still be the lesser evil (Kahn, 2007; OECD, 2004, 2006). The individuals' human capital and the detailed contractual situation are important for defining the detailed role unstable employment plays in peoples' lives (OECD, 2002).

Social Consequences

The "social consequences" of employment insecurity have been less researched. But as employment remains a key factor for the well-being of individuals also in contemporary societies (OECD, 2008), it is important to enlarge the perspective toward the consequences for family and private life. This is true not least because the family is still central for the quality of people's lives and is *the* stratifying institution for future generations.

The inclusion of (subjective) indicators to assess more completely the consequences of insecure employment is one way to address this issue and its possible consequences on ► [social cohesion](#) in modern societies. Other ways are to look at behavioral consequences, such as fertility behavior and their potentially strong repercussions on the society, or the emerging inequalities among social groups.

In general, workers on insecure jobs tend to be less satisfied (job satisfaction) with their job than secure ones and report significantly lower levels of ► [subjective well-being](#) and ► [happiness](#). Though working conditions are important, especially for well-being, dissatisfaction focuses particularly on job insecurity (OECD, 2002). Focusing on ► [temporary employment](#), the negative consequences for individuals' social life seem to be mainly due to the intrinsic insecurity of these jobs and, to a lesser extent, due to the less favorable working conditions (like lower autonomy and control, shift work, and atypical working hours) or the concentration in certain sectors. Research concentrating on psychological and ► [health](#)-related outcomes revealed that insecurity (together with other aspects of the employment conditions) has a considerable

impact on the psychological equilibrium and mental health (Burchell, Lapido, & Wilkinson, 2002; European Foundation, 2007). The OECD (2008) reports a higher propensity for mental health problems among temporary and other nonstandard employees, which in large parts is mediated through lower satisfaction with these jobs and poorer working conditions (it should be noted, however, that the worst situation in terms of mental health is faced by those who are not working. In this context any job seems really to be better than no job). Economic ► [stress](#) and fears of employment loss turn out to be key features of the precarious health situation of insecure workers.

The consequences of employment insecurity on the family have been approached principally with regard to fertility decisions (fertility intention, ► [fertility rate](#)), demonstrating that insecurely employed persons are less prone to opt for children (Blossfeld, Klijzing, Kurz, & Mills, 2005; Kohler, Billari, & Ortega, 2002). Scherer (2009) reports that men (and to a lesser extent women) in fixed-term employment declare themselves less disposed to becoming a parent in the near future, while women show a higher likelihood of planning for a second child. This suggests that motherhood is (still) an alternative role for women. The lower involvement often coming with job insecurity might, on the one hand – especially when combined with reduced working hours – facilitate the combination of work and family life for whoever decides (and is in the position to do so) to give priority to the family/private life. It, on the other side, decreases the satisfaction individuals gain from their working life, impacting also on life outside work. In addition, persons in insecure employment relations seem to have – net of working time – less spare time for their family and suffer higher levels of conflict with their partner. These demographic consequences of employment insecurity add to the important challenges for societies, putting additional strain on the welfare state. Barbieri and Bozzon (2011) revealed how the fertility consequences of insecure employment depend on institutional assets.

Mechanisms, Mediators, and Moderator

Although insecure employment is clearly correlated with economic and social dimensions, it is not that clear whether this correlation can be attributed causally to insecurity or is rather due to confounders. It is further necessary to distinguish between direct and indirect effect as the negative impact of ► [employment insecurity](#) can pass through different paths given that there are different mechanisms linking the employment situation with the social. For instance, insecure employment, especially in the form of certain nonpermanent contracts coming with less pay or the effective loss of a job, can impact heavily on family and social life mediated (mediators) through the worse economic situation of the worker. In this context it is important to investigate if and to what extent families can compensate for the economic strain of their individuals. Current research indicates rather an accumulation of disadvantages within the family than compensation. Insecurity also reduces satisfaction and acts as a stressor impacting on peoples' subjective ► [well-being](#) and may in this way spill over to family and social life. Worries about possible job loss and its consequences can be a considerable source of strain.

Recent publications, using ► [Random Effects Regression for Panel Data](#), established the existence of a causal relationship between the self-assessed job insecurity and well-being ruling out reversed causality or effects due to unobserved heterogeneity (Geishecker, 2010).

To further complicate the situation, the effects of employment insecurity are moderated by a series of characteristics and circumstances. On the individual level, psychological ► [moderators](#) such as certain personality traits have been shown to shape the possible negative subjective and objective effects. It is also known that ► [education](#) (understood as ► [human capital](#) and skills) can moderate (objective) effects of unstable employment. On an intermediate level, the family situation and social networks can make some persons more resilient than others. Sources of support can mitigate negative reactions, as can perceived fairness from the employers' part and

control over one's situation (Sverke & Hellgren, 2002). Finally, also the macro, economic and institutional assets shape the consequences of job insecurity. An economic downturn can effectively increase the threat of job loss for workers (for some more than for others), while the welfare state can, to some extent, compensate negative consequences of job loss as in the case of generous ► [unemployment](#). The context thus might be able to neutralize parts of unstable employment's effect on satisfaction or (psychological and economic) strain as well as the behavioral consequences.

Conclusion

Overall, it seems justified to talk about negative "social consequences" of insecure employment as insecurity in employment, over and beyond its combination with worse working conditions, comes with more problematic situations in family and private life and has corollaries on the societal level. But the consequences are shaped by individuals' characteristics, the specific work context, and the country, i.e., the institutional setting, especially labor market regulation and the welfare state. The "flexibilization" of employment, supposed to bring employment growth and ► [economic efficiency](#), was instead much more successful in fostering inequality within the labor market, between individuals and their families, and thus within the society, potentially undermining ► [social cohesion](#). This is especially the case when "flexibility" is not combined with "security," as underlined in the ► [flexicurity](#) debate.

Cross-References

- [Economic Efficiency](#)
- [Employment Insecurity](#)
- [Fertility Plans/Intentions](#)
- [Fertility Rate](#)
- [Flexicurity](#)
- [Health](#)
- [Income Distribution](#)
- [Life Satisfaction](#)
- [Random Effects Regression for Panel Data](#)

- [Social Cohesion](#)
- [Unemployment](#)
- [Welfare State\(s\)](#)

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Social Control Theory and Violence

► Family Features and Violent Behavior

Social Correlates of Well-Being

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Definition

Social correlates of well-being are factors from people’s social environment that were identified in the research literature to go together with higher reported ► [life satisfaction](#) and ► [happiness](#).

Description

According to Max Weber, any action is “social” as soon as “by virtue of the subjective meaning attached to it by the acting individual (or individuals), it takes account of the behavior of others and is thereby oriented in its course” (Weber, 1978 [1922]: 4). In this sense, social factors were examined by many researchers regarding their association with well-being (which shall be defined here as subjectively reported well-being, abbr.: SWB). In fact, a vast body of literature has

arisen which has examined the role of social capital for SWB. Social capital was defined by Putnam as “connections among individuals – social networks and the ► [norms](#) of reciprocity and trustworthiness that arise from them” (Putnam, 2000, p. 19). It is often operationalized as interpersonal ► [trust](#), ► [civic engagement](#), and informal socializing. The Commission on the Measurement of Economic Performance and Social Progress actually concluded in this regard that “for no other class of variables (including strictly economic variables) is the evidence for causal effects on subjective well-being probably as strong as it is for social connections” (Stiglitz, Sen, & Fitoussi, 2009, p. 184).

In a seminal work in this field entitled “The Social Context of Well-Being,” Helliwell and Putnam (2004) examined the role of several social capital variables at the national level, such as average trust and average membership levels, as well as individual level variables such as trust in other people or the frequency with which respondents attend religious service. Their comprehensive analysis of over 83,000 cases from the World Values Survey, plus the US Benchmark survey with over 28,000 cases, and the Canadian ESC with 7,400 cases found positive correlations with self-reported happiness, life satisfaction, and subjective health.

Other important work in this area has also shed light on the question of causality using various methods such as experiments, quasi-experiments, longitudinal data, and instrumental variables. Some studies argue that SWB causally influences social capital, for instance, in the sense that happy people “should be more likely to seek (or to be sought for) community service” (Thoits & Hewitt, 2001, p. 115). On the other hand, there is plenty of evidence that social capital causally influences SWB. Meier and Stutzer (2008) support this notion with their study of longitudinal ► [volunteering](#) data from the German Socio-Economic Panel study (GSOEP). They noted that following the exogenous shock of reunification, many East Germans lost their opportunity to volunteer. Subsequently, they “observed that their well-being decreases compared with a control group for which the volunteer status

remained unchanged.” Likewise, Van Willigen (2000) found that older adults who did not volunteer reported significantly worse health than those who did volunteer. Also, she found a positive and significant net effect of volunteering in 1986 on life satisfaction and perceived health in 1989. It can therefore be concluded with Kawachi and Berkman (2001, p. 459) who argued that “most researchers now agree that social ties have a salutary effect on mental health and psychological well-being.”

Recent work, however, has drawn the attention to more nuanced analyses of the social correlates of well-being. More precisely, the link between social capital and SWB seems to vary across subgroups. Kroll (2011) observed that “civic engagement is not at all associated with higher life satisfaction for mothers [in the UK], while the relationship is positive for men and strongest for childless women.” Thus, there is significant slope heterogeneity in the relationship between social capital and SWB across subgroups of the population. This is likely to not only be true for social capital but also for a range of economic and psychological factors associated with well-being. In conclusion, the aforementioned study suggests that in research on SWB, “a new wave of studies should take into account that different things may make different people happy, thus going beyond a unitary ‘happiness formula’” (ibid.).

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Social Desirability Bias

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Synonyms

SDB

Definition

Originally developed by Alan Edwards, social desirability was seen as a systematic source of test bias that contaminated every test response (Edwards, 1957). It represented the effort of individuals to present them in a positive light. This need to “look good” compromised the validity of test items by minimizing the endorsement of negative qualities and maximizing endorsement of positive qualities. While Edwards developed measures that controlled for social desirability and many test developers have worked to remove its influence from a test (e.g., the k correction in the MMPI-2), more recent research has found that social desirability is *not* the bias it once was believed to be (Piedmont, McCrae, Riemann, & Angleitner, 2000). Rather, social desirability has been shown to represent substantive aspects of personality; individuals high on this dimension tend to be high on agreeableness and conscientiousness (see the ► [Five Factor Model of](#)

Personality). Empirically removing social desirability from test scores has been shown to *reduce* the validity of a scale, not improve it (McCrae & Costa, 1983). Thus, efforts at demonstrating a scale as being free from social desirable responding are ill-conceived and maintain a thesis that is not supported by the data.

Cross-References

- ▶ [Marlowe–Crowne Social Desirability](#)
- ▶ [Positivity Bias](#)
- ▶ [Response Bias\(es\)](#)
- ▶ [Social Desirability Bias and Context in Sensitive Surveys](#)

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Social Desirability Bias and Context in Sensitive Surveys

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Synonyms

[SDB](#)

Definition

Sensitive questions asking survey respondents to self-report on taboo topics such as sexual habits,

illegal behavior such as illicit work, or unsocial prejudices such as ▶ [xenophobia](#) often introduce social desirability bias (SDB) into survey estimates. More specifically, respondents tend to overreport socially desirable characteristics and underreport socially undesirable ones, i.e., they adjust their answers in accordance with social ▶ [norms](#). Besides psychological aspects, cumulative empirical evidence indicates that the survey context (e.g., the use of specific data collection methods and the presence of interviewers or bystanders) influences the extent of SDB in a sensitive survey. Empirical survey researchers could generate a better ▶ [data quality](#) by carefully tailoring the survey design.

Description

Different national surveys contain item batteries asking about sensitive information, e.g., income, self-reported delinquency, and anti-Semitism in the German General Social Survey (ALLBUS); criminal victimization in the European Crime and Safety Survey (EU ICS); and smoking and drinking habits, illicit drug use, and sexual behavior in the US General Social Survey (GSS). Obtaining valid and reliable data has proven to be difficult since answers to sensitive questions are often subject to systematic ▶ [measurement error](#), more specifically SDB.

It is important to define the central theoretical concepts more precisely: According to Lee and Renzetti, a topic labeled “sensitive” is one that “potentially poses for those involved a substantial threat, the emergence of which renders problematic for the researcher and/or the researched, the collection, holding, and/or dissemination of research data” (Lee & Renzetti, 1993: 5). Furthermore, they strongly emphasize the social dimension of the concept “sensitivity”: “In other words, the sensitive character of a piece of research seemingly inheres less in the topic itself and more in the relationship between that topic and the social context within which the research is conducted” (Lee & Renzetti, 1993: 5).

Another useful definition of the term “sensitivity” is introduced by Tourangeau and

Yan (2007). They distinguish three dimensions: (1) “intrusiveness” which refers to the fact that certain questions per se may violate the norm of privacy (e.g., questions asking about the respondents’ health status or income are often perceived as too intrusive), (2) “threat of disclosure” which refers to the respondents’ worries about potential risks and negative consequences should the self-discrediting information become public beyond the survey setting (e.g., self-reports of illegal behavior such as tax evasion or illicit drug use may fall into this category), and (3) “social desirability” which refers to the respondents’ need for social approval and their tendency of making oneself look good in terms of prevailing social norms when answering to specific survey questions (Crowne & Marlowe, 1964). Respondents tend to exaggerate socially desirable characteristics (“overreporting”) and to deny socially undesirable ones (“underreporting”). For example, certain prejudices such as anti-Semitism or racism are regularly denied because they violate social norms and are judged unacceptable by the general public.

Questions asking about sensitive topics are assumed to increase the likelihood of response bias, especially SDB, thus having a negative impact on data quality. SDB arises from a gap between the true status of a respondent and his or her actual answer provided. SDB may also result from nonresponse (e.g., refusals to answer a sensitive question), especially when the missing data are systematically related to key variables of the survey.

The formal notation of SDB decomposes an answer A_{it} of respondent i on occasion t into three components (Tourangeau, Rips, & Rasinski, 2000: 266–267):

1. The respondent’s true status on the sensitive variable of interest T_i which is usually unobserved.
2. Response bias b which refers to any systematic, directional tendency across respondents to misreport.
3. A random error term e_{it} which is directionless with an expected value assumed to be zero: $E(e_{it}) = 0$. This error component varies

between respondents and between occasions within a single respondent:

$$A_{it} = T_i + b + e_{it}$$

If b does not equal zero, survey measurements of the respondent’s true status are no longer valid. Whereas random error cancels out over repeated measurements, response bias does not. Rather, the systematic difference between observed answers and unobserved true scores persists.

Theoretical and empirical research on SDB suggests that misreporting in sensitive surveys is a deliberate and motivated process (Holtgraves, 2004). Respondents edit their answers in a socially desirable direction either because of their susceptibility to self-deception or because of their inclination to impression management (Paulhus, 2003). In addition, subjective expected utility theory (SEU theory) can be used to investigate respondents’ perceptions in sensitive surveys, by modeling perceived risks and losses in the survey situation and studying their impact on the respondent’s choice whether to answer truthfully or not. In a series of experimental studies, Rasinski, Willis, Baldwin, Yeh, and Lee (1999) showed that respondents are concerned about different risks and losses (e.g., feeling of embarrassment if interviewer showed disapproval) and that these concerns varied with the survey context (e.g., data collection mode, interviewers’ characteristics, presence of bystanders).

From a practical perspective, survey designers may influence respondents’ concerns about social or legal sanctions in sensitive surveys. By carefully adjusting the survey context, they may create a more private and comfortable interview situation and reduce respondents’ feelings of jeopardy. As a consequence of an improved survey context, it is assumed that respondents develop more trust in the protection of their privacy when revealing sensitive information. As a baseline, increasing the anonymity of the question-and-answer process in a sensitive survey also increases the respondent’s willingness to cooperate and to answer more accurately. In the following section, methods and context

features influencing SDB in sensitive surveys will be discussed (Krumpal, 2013).

A vast number of methodological ▶ [experiments](#) have been conducted to study the impact of context changes on SDB. Two main types of studies can be distinguished: (1) validation studies and (2) comparative studies without validation data. The first type of studies can be considered as the gold standard of evaluation enabling the survey researcher to compare individual responses with true scores. In practice, true scores are sometimes known from external data sources, such as medical or administrative records. To evaluate which survey context is most effective in reducing SDB, the proportions of correct answers can be compared across different contexts and methodologies. The context generating the highest proportion of correct answers (in regard to the true scores) can be considered most effective in improving the validity of measurement. The second type of studies comparing two or more data collection methods or survey contexts has no possibility of validation against some “objective” standard. Therefore, when underreporting is theoretically expected, the measurement yielding the comparatively highest level of socially undesirable answers is considered as more valid (“more-is-better” assumption for socially undesirable characteristics and “less-is-better” assumption for socially desirable ones, respectively). Against this background, context and design features having an impact on the level of SDB in sensitive surveys are as follows:

1. *The data collection mode*: The main distinction among the different modes is whether the data collection is interviewer- or self-administered. Common interviewer-administered modes are computer-assisted personal interviews (CAPI) or computer-assisted telephone interviews (CATI). Common self-administered modes are paper-and-pencil self-administered questionnaires (SAQ), computer-assisted self-administered interviews (CASI), or web surveys. Detailed typologies of data collection modes and mixed-mode designs can be found in Groves et al. (2009). Cumulative empirical evidence

indicates that self-administered surveys, increasing the anonymity of the question-and-answer process, yield more valid survey estimates of sensitive characteristics compared to interviewer-administered forms of data collection.

2. *Interviewer effects*: In the presence of an interviewer during the data collection, effects of interviewers’ characteristics (e.g., gender and socioeconomic status) on SDB can be observed. Interviewer effects occur most likely in situations “when the topic of a survey is very directly related to some interviewer characteristics so that potentially a respondent might think that some of the response alternatives would be directly insulting or offensive or embarrassing to an interviewer” (Fowler & Mangione, 1990: 105).
3. *Bystander effects*: In different surveys asking sensitive questions (e.g., drug use, smoking, alcohol consumption, and ▶ [voting behavior](#)), effects of the presence of third persons in the interview situation (e.g., parents, spouse, or children) on SDB have been well documented (see Aquilino, Wright, & Supple, 2000; Tourangeau & Yan, 2007).
4. *Question wording and question context*: Survey designers often construct sensitive items using unthreatening, euphemistic, and forgiving words or phrases. In his humorous article, “Asking the embarrassing question,” Barton (1958) gives an overview of different possibilities how to ask sensitive questions in non-embarrassing ways. The major part of the general wisdom rules on how to write and contextualize sensitive questions is based on survey practice or anecdotal evidence. In contrast, experimental research indicates inconsistent results regarding the effects of forgiving wording on SDB (Näher & Krumpal, 2012).
5. *Confidentiality and data protection assurances*: Confidentiality assurances are expected to increase respondents’ ▶ [trust](#) in data protection. Singer, Vonthurn, and Miller (1995) reviewed the experimental literature evaluating the impact of data protection assurances on

SDB. Overall, more accurate self-reports (in regard to illegal or socially disapproved behavior but also income) were documented in studies involving data protection assurances, although the average \blacktriangleright [effect size](#) was small.

6. *Bogus pipeline*: The term “bogus pipeline” refers to any methodology, in which respondents believe that an objective procedure (e.g., biochemical test, lie detector) will be used to reveal false self-reports independent of whether such verification actually takes place or not: “The BPL [bogus pipeline] was predicated on the motivational assumption that a desire to avoid appearing to be a liar or to be self-unaware would supersede the typically assumed tendency to exaggerate possession of favourable traits (...).” (Roese & Jamieson 1993: 364). There is some empirical evidence that this data collection strategy reduces SDB (compared to standard direct questioning), although some studies indicate unexpected and contrary results (Aguinis, Pierce, & Quigley, 1995).

7. *“Dejeopardizing” techniques*: Different variants of statistical misclassification schemes or indirect questioning methods have been developed for eliciting sensitive information from survey respondents. Their main purpose is to anonymize the individual answers, making it impossible for the researcher to determine the true status regarding the sensitive characteristic on an individual level. The most prominent examples of such “dejeopardizing techniques” (Lee, 1993) are the randomized response technique (Warner, 1965), the item count technique (Droitcour et al., 1991), and the crosswise model (Yu, Tian, & Tang, 2008):

(a) *The randomized response technique (RRT)*: The basic idea of all RRT schemes is to obscure the meaning of an individual answer by using a randomizing device (e.g., coins or dice), whose outcome is private information of the respondent. For example, in the forced-response variant of the RRT (Boruch, 1971), the respondent might be requested to roll

a die without revealing the outcome to the interviewer. The respondent is then instructed to answer “no” if the result is 1, answer “yes” if the result is 6, or answer the sensitive question honestly with “no” or “yes” if the result is 2, 3, 4, or 5. The essential feature of the RRT is that the link between a given answer and the respondent’s true status is only probabilistic. Since only the respondent knows the outcome of the randomizing device, an observed answer does not reveal anything definite to the interviewer. However, as long as the probability distribution of the randomizing device is known, the prevalence of the sensitive characteristic can be estimated. Given the assumption that respondents understand the RRT scheme and comply with the RRT procedure, more accurate self-reports to sensitive questions are expected compared to direct questioning. Several experimental studies comparing the RRT with alternative data collection methods indicate that self-reports on sensitive issues are more accurate and more socially undesirable answers are elicited when RRT is employed (see Lensvelt-Mulders, Hox, van der Heijden, & Mass, 2005 for an overview). However, other empirical studies report serious problems in regard to the application of RRT schemes, such as a substantial share of respondents not complying with the procedure and providing self-protective “no” answers regardless of the result of the randomizing device (see Holbrook & Krosnick, 2010 for an overview).

(b) *The item count technique (ICT)*: In the ICT, a sample of survey respondents is randomly divided into two subsamples. Respondents in the first subsample are requested to answer to a “short list,” containing only a set of innocuous items. Subjects in the second subsample are instructed to respond to a “long list,” containing the same set of innocuous items plus the sensitive item of interest.

Without telling the interviewer which specific items were answered “yes,” respondents in both subsamples report solely the number of items that apply to them (i.e., the total number of “yes” answers). Since only the number of items that apply is reported, it is not possible to infer whether a respondent carries the sensitive characteristic unless he or she indicates that none or all items in a list apply. An unbiased estimate for the population prevalence of the sensitive characteristic can be obtained by calculating the mean difference of answers between the two subsamples. Compared to standard direct questioning, the ICT is expected to induce a higher sense of privacy, thus reducing SDB. An overview of the empirical research evaluating the effectiveness of the ICT can be found in Krumpal (2013).

- (c) *The crosswise model (CM)*: The CM was proposed to overcome the problem of self-protective “no” answers observed for the RRT. The idea is simple: A sensitive item and an independent nonsensitive item with a known population distribution are presented to the respondent. The respondent is requested to give a joint response to both items in combination, but not respond to both items individually. For example, consider exam cheating as the sensitive item and mother’s birthday between January 1 and April 30 as an unrelated nonsensitive item (the empirical distribution of births in a given region can be obtained from statistical offices). Respondents are then asked to choose answer option A if both items apply or none applies and choose answer option B if only one of the items applies. The CM is much more robust to noncompliance than the RRT (Coutts et al. 2011): Unlike the RRT, there is no longer an obvious self-protective answering strategy because both answer options A and B represent sensitive and nonsensitive subclasses of respondents. Choosing either answer option does not reveal anything about

whether the respondent cheated on an exam (or not), while at the same time, the population prevalence of cheaters can be estimated on the basis of probability theory (Jann, Jerke, & Krumpal, 2012).

Discussion

The degree of SDB in sensitive surveys depends on several factors such as the perceived items’ sensitivity, the degree of anonymity during the interview, and the fraction of the population who have behaved in the socially undesirable manner and on specific aspects of the survey context. Improving the validity of self-reports in sensitive surveys has proved a difficult task. SDB could be reduced by appropriately tailoring the survey design and interview context, e.g., by increasing the anonymity of the question-and-answer process (e.g., via self-administered surveys or jeopardizing techniques), by decreasing the respondent’s concerns in admitting to some taboo (e.g., via data protection assurances), by increasing the respondent’s subjective costs of lying (e.g., via the bogus pipeline procedure), by emphasizing the benefits of telling the truth (e.g., via highlighting the scientific character of the survey), or by manipulating the survey situation (such as reducing the presence of the interviewer and bystanders).

Future research on SDB could focus on the interaction between psychological variables (such as the perceived sensitivity of an item) and the survey context (such as the data collection mode) in more detail. Prospective studies are encouraged to advance the approaches of Rasinski et al. (1999) measuring the respondents’ perceived sensitivity of the overall survey context and of specific items, respectively. It would then be possible to identify specific subgroups which are characterized by varying degrees of sensitivity perceptions and to study the complex interactions between these perceptions and the survey context. Finally, a stronger foundation of the research on SDB in a general theory of human action could further illuminate the social mechanisms operating in sensitive surveys. The survey interview involves social interactions between several actors (respondents, interviewers,

bystanders, and data collection institutions). The impact of different degrees of anonymity in interactive social situations could be analyzed by means of ► [rational choice theory](#) (Levitt & List, 2007). A clearer understanding of the social interactions in the data collection process and the effects of these interactions on SDB could provide empirical researchers with a substantiated basis for designing better data collection methods for generating high data quality.

Cross-References

- [Data Collection Methods](#)
- [Data Quality](#)
- [Experimental Design](#)
- [Measurement Error](#)
- [Questionnaire Design](#)
- [Rational Choice Theory](#)
- [Response Bias\(es\)](#)
- [Social Desirability Bias](#)

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Social Development

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Definition

Numerous disciplines and theoretical perspectives have investigated the theme of social development, each one emphasizing different dimensions and adopting different methodologies and investigation instruments. [Table 1](#) provides a synthesis of the many contributions that have addressed this topic. Social development is traditionally defined as the area of study that investigates the processes of growth of the child's capacities to relate to other people (Molinari, 2007; Schaffer, 1996). These capacities unfold in an evolving progression that encompasses the entire life cycle. They are already evident in the newborn, who is biologically predisposed toward interaction, and increasingly unfold till adulthood, that requires competencies in various types of social relationships. Social development thus implies a complicated weaving among persons, situations, events, and also ► [values](#), ► [norms](#), and opportunities, within which individuals interact, adapting to the complexity of reality in their own unique way and building their personal interpretation of events and experiences. Social development can thus be defined as the progressive transformation, over the course of

a person's existence, of the *quality of social relations*, simultaneously taking into account cognitive, affective, and social functions which are indissolubly interconnected.

Description

The topic of social development is situated on the boundary between two disciplines: developmental psychology and social psychology. Although superseded by recent attempts at reconciliation, this double collocation has left its mark in a difficult “determination of paternity” (Emiliani, 1998).

From birth children establish different types of relationships with a variety of partners. Socialization is a process that takes place mainly in families where it is enacted by parents. The term socialization refers to the process by mean of which the young generations acquire given ways of thinking, feeling, and acting from previous generations (Durkheim, 1922). Through this process people acquire behavioral rules, belief systems, and attitudes that allow them to operate efficaciously as members of their society (Hewstone & Stroebe, 2001). The goal of socialization entails the existence of socializing subjects that mediate between the individual and the broader social system. Each one constitutes a specific, albeit not exclusive, socializing context.

In this entry we will examine only some major “socializing subjects” that are particularly important for the social development and well-being of the young generations: ► [family](#), peer group, and social context. It must be noted that these *agencies*, while presented separately, permeate one another inextricably.

Family

Theoreticians of social development have paid considerable attention to the ► [family](#) because of its crucial role. Developmental theories centered on families are mostly concerned with the socialization process, while social psychology has prominently focused on the parental function that can be analyzed through two important

Social Development, Table 1 A synthetic overview of the research paradigms dealing with social development (Taken from Molinari 2007)

Levels of analysis	Theoretical perspectives	The role of the “social”	Principal theoretical references	Research methods
Individual	Innatist/ maturationist	A <i>background scenario</i> that allows for the progressive manifestation of individual capacities	Chomsky	Sociometrics
			Plomin	Structured observation
			Scarr	Piagetian conversation
	Constructivist	The <i>concrete experience</i> that the child has of the environment in which he/she grows up	Piaget	
Social	Socio – constructionist	The <i>supportive scaffolding</i> of the child’s activity produced by interaction with more competent partners	Brofenbrenner	Pictorial representations
			Bowlby	Questionnaires
			Schaffer	Interviews
			Bruner	
			Vygotskij	Participant observation
	Socio – cultural	The <i>significance of the action</i> constructed inter subjectively between partners	Bruner	
			Wertsch	
			Rogoff	

aspects: parenting styles and belief systems related to development and childrearing that direct toward one or another childrearing practice. The ► **family** represents the first community for a child, and it mirrors in a variety of ways the society it is part of. This means that rules and behaviors learned within the ► **family** can be subsequently used and applied within other social groups (Schaffer, 1996).

Throughout the person’s life cycle, the ► **family** is a privileged context for learning beliefs, attitudes, models, ► **values**, and ► **norms** (Scabini, Marta, & Lanz, 2006): it is a living laboratory of transmission between generations, a context of elaboration and transformation of ► **family** and social legacies. Socialization takes place via verbal and nonverbal messages transmitted to the new generations in both conscious and unconscious ways (Cigoli & Scabini, 2006).

The ► **family** hands over to the new generations a material and moral legacy (in as much as it does not happen inevitably). It also comprises whatever the members of the new generation do or do not accept, whatever they consider as value that

deserves to be embraced and transformed, and whatever they choose to transmit in turn.

For decades research on socialization in the ► **family** was grounded into a one-way linear and additive model; according to which only parents hold knowledge and they are in charge of transmitting their symbolic legacy to their children as best they can. However, more recent advancements highlighted that intergenerational transmission, by its very nature, is bidirectional: although the hierarchical parent–child aspect should not be underestimated, family transmission is characterized by a reciprocal influence between generations (Bell, 1968; Bengtson & Troll, 1978; Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Kuczynski & Grusec 1997; Maccoby, 1992) that becomes particularly salient and evident when an offspring is in transition toward adulthood. Indeed, the legacy that is transmitted undergoes ceaseless negotiations and redefinitions. When not sufficiently reinforced, it can be considered as not “worthy of being valued” and, thus, disregarded or replaced by another legacy, even one of a different nature (Goodnow, 1997; Verlmust, De Brock, & Van Zutphen, 1989).

For a long time, theories of socialization also held that the ► **family** and in particular the mother were the only socializing agents (Lamb, 1987). According to more recent and integrated approaches, the ► **family** represents the first, but not the only, context within which the child gets in touch with the social dimension of reality. In fact, from birth children are surrounded not only by ► **family** members but also by the system of practices addressed to them and by the values and belief system developed within the community and culture the ► **family** belongs to.

Peer

Precisely due to their prominent presence in children's life, relations with peers have been widely investigated, mostly by developmental psychologists, who have highlighted different aspects of these relations. The gradual increase in families' demand for day care and early childhood education, no longer required only by families that do not have alternative childcare options during working hours, attests to the growing awareness of the importance to offer children early peer socialization opportunities that represent a fundamental resource in terms of socio-cognitive development.

Relations with peers provide a unique contribution to the child's development because the partner is on an equal level, thus allowing the child to learn abilities such as role alternation, sharing, leadership skills, and competences for facing hostility and overbearing behavior.

Developmental psychologists have investigated, in particular, the origin of cooperation among peers, which Piaget (1932) was the first to discuss in his famous essay on moral development. Piaget explained the transition from *heteronome morality* (i.e., dependent on the adult's authority) to the *autonomous morality* of childish conceptions as the result of cooperative interactions among peers. Piaget however quickly abandoned the theme of social interaction and did not emphasize enough the fact that already in the first years of life, children actively participate in complex social interactions. Indeed, there are numerous critiques of his overly individualistic conception of cognitive

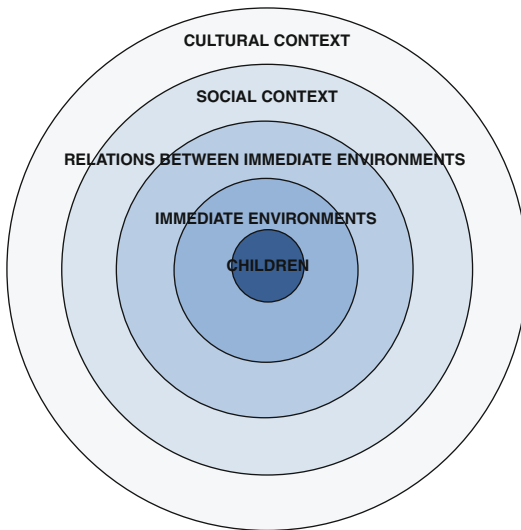
development (Molinari, 2007). Nevertheless, Piaget's intuitions regarding the role of cooperative behaviors opened a fruitful line of investigation aimed at demonstrating that cooperation among children of the same age constitutes a pattern of social regulation that is different from and independent of the social regulation pattern children adopt in their relations with adults. The two patterns do not overlap, either in terms of socio-cognitive development or of capacity to establish social relations.

Social psychology has given us one of the most significant experiments to analyze what happens within a peer group when a sense of identity and group membership develops. The experiment conducted by Sherif and colleagues (Sherif, 1961) demonstrated that group identity develops without a need for external incentives, long periods of acquaintanceship among members, or clear elements of differentiation with respect to other groups, in that the mere fact of belonging to a group unleashes discriminating behaviors toward members of other groups.

The peer group takes on different meanings and connotations with respect to gender and the developmental stages. In adolescence, for example, being with friends becomes almost synonymous with free time: indeed, the group dimension reinforces the desire for adventure, exploration, and the honing of new skills. On the other hand, the need for conformism and imitation underscores that adolescents are seeking a sense of security outside the ► **family** in the territory of their peers, with whom they must share the same musical tastes, the same look, and the same ways to have fun in order to ensure a strong sense of belonging (Scabini et al., 2006).

Social Context

Although the ► **family** and peer group represent in many ways the most immediate contexts within which the child's development takes place, other social influences can play a decisive role in development, albeit in an indirect way. For instance, it has been shown that youth who live in neighborhoods characterized by a low socio-economic level and scarcity of services or in disadvantaged communities are more likely to



Social Development, Fig. 1 Representation of the theory of social development contexts proposed by Bronfenbrenner

show conduct disorders and aggressive behavior (Aneshensel & Sucoff, 1996), as well as delinquent behaviors (Jencks & Mayer, 1990; Kalil & Eccles, 1998). The school features, in terms of structure, education contents, and climate, also play a role in orienting development. For example, the characteristics of an adolescent peer group and the level of participation in academic activities (Crosnoe & Needham, 2004) can influence youth's well-being (Santinello, Vieno, & De Vogli, 2009).

Bronfenbrenner's (1979) *Theory of Ecological Systems* attempts to provide a theoretical referential framework within which all of the above-mentioned social influences can be arranged. According to this theory, development can be only understood in relation with the environmental conditions that children experience, whether directly or indirectly, in a variety of possible scenarios. These scenarios are constituted by a set of subsystems included one inside another, which can be represented as concentric, yet interdependent circles of increasing diameter (Fig. 1).

From this perspective, it is also important to distinguish between environment and context, two terms that are often used as synonyms. In

fact, context is both *produced* by as well as *exploited* by individuals. According to Cole (1992), far from representing "that which surrounds," context is "that which weaves together," in that it entails a qualitative relation between the structure of the world in which the action takes place and the function of the individuals, who are active participants endowed with abilities and equipment that allow them to deal with the daily situations and challenges.

Cross-References

- ▶ [Family Connectedness](#)
- ▶ [Family Differentiation](#)
- ▶ [Family Support](#)
- ▶ [Identity Change](#)
- ▶ [Norms](#)
- ▶ [Parenting Style](#)
- ▶ [Peer Influence\(s\)](#)
- ▶ [Physical Quality of Life Index \(PQLI\)](#)
- ▶ [Social Interaction](#)
- ▶ [United Nations Development Programme](#)
- ▶ [Values of Adolescents and their Parents](#)

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Social Development Index

► [Social Development Index \(SDI\)](#)

Social Development Index (SDI)

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Synonyms

[Social development index](#); [SDI](#)

Definition

The Social Development Index (SDI) is an established objective and scientific system of indicators which generates information on 14 development subindexes and five population-specific subindexes. It aims at measuring social development and the quality of life in Hong Kong.

Description

The SDI was initiated by the Hong Kong Council of Social Service (hereafter referred to as “the Council”) in 1999 in response to the need for a more holistic approach to measure social development and quality of life in Hong Kong. After 1 year of research under the executive consultancy of Professor Richard Estes and the leadership of Board of Consultants chaired by Professor Edward K.Y. Chen, the first SDI, was released in 2000. Since then, it has become one of the important assessment tools in Hong Kong

to measure social development of the city (Chua, Wong, & Shek, 2010; Estes, 2005a, 2005b; Shek, 2011). As there is a paucity of research on quality of life in different Chinese contexts (Shek, 2010), the SDI nicely fills the missing gap.

Backing up the SDI is a databank consisting of about 400 indicators distributed across various domains of social development and quality of life. Based on a number of criteria (including face and construct validity, reliability, representativeness, accuracy, timeliness, and availability), 47 indicators were selected for the construction of a composite index (i.e., SDI) and 14 development subindexes, including Strength of Civil Subindex (4 indicators), Political Participation Subindex (3 indicators), Internationalization Subindex (3 indicators), Economic Subindex (3 indicators), Environmental Quality Subindex (4 indicators), Arts and Entertainment Subindex (4 indicators), Sports and Recreation Subindex (3 indicators), Science and Technology Subindex (2 indicators), Education Subindex (3 indicators), Health Subindex (6 indicators), Personal Safety Subindex (3 indicators), Housing Subindex (2 indicators), Crime and Public Safety Subindex (4 indicators), and Family Solidarity Subindex (3 indicators). The 14 subindexes and the related indicators can be seen in [Table 1](#).

In addition to the composite index of SDI and the 14 development subindexes, 5 population-specific subindexes were also constructed for the “historically vulnerable population groups,” including Women’s Status Subindex (5 indicators), Low-Income Subindex (5 indicators), Child Status Subindex (7 indicators), Youth Status Subindex (7 indicators), and Elderly Status Subindex (7 indicators). These five subindexes were not used in calculating the composite SDI score but to describe the quality of life of those population groups in Hong Kong. The different indicators can be seen in [Table 2](#).

All indicators in the SDI go with a positive (+) or negative (−) sign indicating the way each of these indicators contributes to its subindex and the entire SDI. A positive sign means that an increase in value contributes positively to

the subindex and SDI, representing a gain in social development, whereas a negative sign representing a loss. Based on the views of different panels of experts on different development domains, statistical weights of the selected indicators with respect to the corresponding subindexes as well as those of subindexes with respect to the SDI were determined for calculating the composite SDI and subindex scores. The SDI is updated and its report is published biannually. Since the first release of SDI in 2000, five updated SDI was released in 2002, 2004, 2006, 2008, and 2010, respectively. All these updates were based on similar indices and weights (Chua, Wong, & Shek, 2010).

The first SDI (SDI-2000) used the data in 1981, 1986, 1991, 1996, and 1998, and used as the bases of analyses to compute the following: (1) standardized weighted SDI scores for Hong Kong as a whole, (2) scores of the 14 subindexes in the SDI, and (3) scores of 5 subindexes for the five “historically vulnerable” population groups. The base year of SDI is 1991, with a score of 100. Changes in quality of life and social development of Hong Kong over time were reflected by the SDI data in two ways. Firstly, assessment of change can be made by the cross-sectional analyses of the city’s development with respect to the indicators in the 14 subindexes at each of the points (1981, 1986, 1991, 1996, 1998, 2000, 2002, 2004, 2006, and 2008). In addition, a set of trend scores is computed for all development and specific population subindexes for each of the points, which give an estimate of the pace at which changes in development occurred over time for each of these subindexes (The Hong Kong Council of Social Service, 2000).

Social Development Captured by the SDI

According to the SDI-2010, the overall social development in Hong Kong had a 72 % gain as compared to that of base year (Year 1991 = 100), and 1 % increase as compared to SDI-2008 in our last release (The Hong Kong Council of Social Service, 2010). This represents a slowing down of progress as compared to the 7.5 % increase from SDI-2006 to SDI-2008 (Chua et al., 2010). These figures reveal that the progress of overall

Social Development Index (SDI), Table 1 Social indicators used to form the SDI-2010 arranged by development sector (14 sectors and 47 indicators)

Sector	Indicator
Strength of Civil Society Subindex (4 indicators)	1 No. of charitable institutions and trusts qualifying for tax exemption (+)*
	1 Private charitable donation as % of GDP (+)
	1 Ratio of private charitable donations to government subvention (+)
	1 % of work force affiliated with trade unions (+)
Political Participation Subindex (3 indicators)	1 Turn out in most recent District Council elections (+)
	1 Ratio of District Council candidates to District Council offices (+)
	1 % of District Council candidates with political party affiliations (+)
Internationalization Subindex (3 indicators)	1 No. of countries to which residents of Hong Kong can travel without a visa (+)
	1 No. of registered companies incorporated outside Hong Kong (+)
	1 No. of international conferences held in Hong Kong (+)
Economic Subindex (3 indicators)	1 Per capita GDP in chained (2007) dollars (+)
	1 Gross international reserves (months of import coverage) (+)
	1 % of total household income earned by bottom 50 % of households (+)
Environmental Quality Subindex (4 indicators)	1 % of gazetted beaches ranked as poor/very poor (-)
	1 Per capita square meters of public open space (+)
	1 Per capita cubic meters of annual fresh water consumption by domestic sector (-)
	1 % of municipal solid waste recycled (+)
Arts and Entertainment Subindex (4 indicators)	1 No. of buildings and archaeological sites declared as monuments (+)
	1 No. of films produced locally (+)
	1 No. of books and magazines first published in Hong Kong (+)
	1 Attendance at museums and cultural venues per 100,000 population (+)
Sports and Recreation Subindex (3 indicators)	1 No. of public sporting facilities (+)
	1 Average utilization rate of public sporting facilities (+)
	1 Size of delegation participating in major games (+)
Science and Technology Subindex (2 indicators)	1 No. of patents granted to HK entities (+)
	1 No. scientific publications in refereed publications (+)
Education Subindex (3 indicators)	1 % of people age 20+ with upper secondary educational attainment (+)
	1 % of people aged 15+ with tertiary educational attainment (+)
	1 No. of adults registered in continuing education courses per 100,000 population aged 15+ (+)
Health Subindex (6 indicators)	1 Average life expectation at birth (+)
	1 Infant mortality rate per 1,000 live born (-)
	1 Tuberculosis cases per 100,000 population (-)
	1 No. of adults smoking per 100,000 population aged 20+ (-)
	1 No. of deaths from coronary heart diseases per 100,000 (-)
Personal Safety Subindex (3 indicators)	1 Suicides per 100,000 adults aged 20+ (-)
	1 No. of affected persons in reported food poisoning cases per 100,000 population (-)
	1 No. of occupational fatalities per 100,000 workers (-)
	1 No. of traffic fatalities per 100,000 population (-)
Housing Subindex (2 indicators)	1 % of expenditure on housing as share of total household expenditure (-)
	1 No. of waiting list applicants for Housing Authority rental flats (-)
Crime and Public Safety Subindex (4 indicators)	1 No. of reported violent crimes per 100,000 population (-)
	1 No. of reported nonviolent crimes per 100,000 population (-)
	1 % of population reporting victimized by violent crime (-)
	1 No. corruption crime convictions per 100,000 population (-)

(continued)

Social Development Index (SDI), Table 1 (continued)

Sector	Indicator
Family Solidarity Subindex (3 indicators)	1 Marriages per 100,000 people aged 15+ (+)
	1 Divorces as % of marriages (-)
	1 Reported domestic violence cases per 100,000 households (-)

Note: Plus (+) and minus (-) signs are used to indicate the directional relationship of each indicator to social development. For example, a higher number of “charitable institutions and trusts qualifying for tax exemption” are conceptualized as an indication of increased strength of the Civil Society sector which, in turn, is conceptualized as an indication of movement toward a higher level of social development

Social Development Index (SDI), Table 2 Social indicators used to form population-specific subindexes for Hong Kong’s historically vulnerable population groups (5 sectors involving 31 indicators)

Sector	Indicator
Women’s Status Subindex (5 indicators)	1 % of women in low-income households (-)
	1 Married women labor force participation rate (+)
	1 Median women’s wages as % of median men’s wages, all ages (+)
	1 % of women administrators and managers (+)
	1 % of elected District Council positions occupied by women (+)
Low-Income Subindex (5 indicators)	1 No. of people in low-income domestic households/100,000 (-)
	1 % of household expenditure on housing and food for the low-income households (-)
	1 Unemployment rate in low-income households (-)
	1 Real Wage Index of wage workers (+)
	1 Homeless people per 100,000 population (-)
Child Status Subindex (7 indicators)	1 % of children aged 0–14 in low-income households (-)
	1 % of children living in single parent households (-)
	1 Under-5 child mortality per 100,000 population aged 0–4 (-)
	1 Children aged 2–6 enrolled in kindergarten or childcare centers per 100,000 children aged 2–6 (+)
	1 Child abuse cases per 100,000 population aged 0–17 (-)
	1 % of children fully immunized against Diphtheria, Tetanus and Whooping cough (+)
	1 No. of children aged 10–15 arrested per 100,000 population aged 10–15 (-)
Elderly Status Subindex (7 indicators)	1 % of people aged 65+ in low-income households (-)
	1 Years of life expectation at age 65 (+)
	1 % of elderly with lower secondary educational attainment (+)
	1 Turnout rate of elderly voting in most recent District Council election (+)
	1 % of elderly as members of centers for the elderly (+)
	1 % of elderly aged 65+ living alone (-)
	1 Elderly suicide per 100,000 (-)
Youth Status Subindex (7 indicators)	1 % of youth aged 15–19 in low-income households (-)
	1 % of youth aged 15–19 attaining S4 or above (+)
	1 % of people aged 15–24 studying full-time courses at tertiary education (+)
	1 Youth unemployment rate, aged 15–19 (-)
	1 No. of youth aged 16–20 arrested for violent crimes per 100,000 population aged 16–20 (-)
	1 Prevalence of drug use among youth aged 15–19 per 100,000 population aged 15–19 (-)
	1 Youth suicide per 100,000 population aged 10–19 (-)

social development in Hong Kong was minimal and the society was almost standing still during the period. Moreover, there were several observations deserving our attention. First, the Family Solidarity Subindex has always been a negative figure since its first release. In SDI-2010, its value was -906 , which is around 70 % drop as compared to the previous release in 2008. Second, SDI-2010 indicates that in spite of economic growth as reflected by GDP, percentage of total household income earned by the bottom 50 % of households gradually dropped. This means that the fruit of economic growth was not equally shared by the people in Hong Kong. Third, although there was significant improvement in the Housing Subindex up to SDI-2004, latest release of SDI-2010 shows an 11 % percentage drop in this subindex. Finally, the findings based on SDI-2010 showed that there were uneven developments in different sectors in Hong Kong, with negative values recorded for Low-Income Subindex and Child Subindex.

Cross-References

- ▶ [Hong Kong, Quality of Life](#)
- ▶ [Quality of Life](#)
- ▶ [Social Development](#)
- ▶ [Social Indicators](#)

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Social Difficulties Inventory, Urdu, Punjabi, and Hindi Versions

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Synonyms

SDI-21

Definition

The Social Difficulties Inventory (SDI-21) Urdu, Punjabi, and Hindi versions are translations of the original SDI-21 for use in ▶ [health care](#) where a significant minority of patients may be non-English readers. The SDI-21 is a patient self-report questionnaire developed for use in conjunction with other ▶ [quality of life](#) questionnaires for use in routine clinical practice (Wright et al., 2005). It was designed to assess the everyday social difficulties experienced by cancer patients and cancer survivors. There are 21 items with response ratings from 0 (no difficulty) to 3 (very much difficulty). Sixteen of the items can be summed to derive a score of Social Distress (SD-16) (Smith, Wright, Selby, & Velikova, 2007). A cut point of ten or more indicates a level of distress suggesting further investigation by

health-care staff (Wright, Smith, Roberts, Selby, & Velikova, 2007). Within the SD-16 there are three subscales: Everyday Living comprising six items (independence, domestic chores, personal care, care of dependents, getting around, recreation), Money Matters comprising five items (welfare benefits, finances problems, financial services, work, planning the future), and Self and Others comprising five items (support for dependents, communication with those close to you, communication with others, body image, isolation). There are five single items: plans to have a family, sexual matters, where you live, holidays, and others (Wright, Smith, Keding, & Velikova, 2011). ► **Clinical significance** and utility have been established using anchor and distribution methods. Anchor methods employed known group differences (age) and comparison to reference values from an established questionnaire, the ► **European Organization for Research and Treatment of Cancer QLQ-C30** (Aaronson et al., 1993). Distribution methods used the ► **standard error of measurement** and effect sizes. These analyses led to a recommendation of a change score of “3” or more in SD-16 and a change of “2” or more within a subscale indicating a clinically meaningful difference (Fig. 1) (Wright, Marshall, Smith, Velikova, & Selby, 2008; Wright, Smith, Keding, & Velikova, 2011).

Description

A diagnosis and treatment for cancer may have a considerable impact on the everyday lives of patients at home, at work, economically, and recreationally. Recognition of these problems has led to the introduction of systematic, routine holistic ► **needs assessment** to identify patients who might benefit from specialist support, recommended from the time of diagnosis across the patient pathway, including assessment within the social domain (Department of Health, Macmillan Cancer Support, NHS Improvement, 2010). A brief, reliable, valid, and clinically meaningful measure such as the SDI-21 could be administered either electronically or using traditional paper format to aid the delivery of

assessment within the social domain. However, patients with limited understanding and proficiency of the primary language of the clinical service, English, may be further marginalized by not being able to participate in the introduction of this type of assessment. Therefore, in areas where minority ethnic groups make up a significant proportion of the local population, there is an argument for translation of assessment tools into languages of common usage within the locale. Although the incidence of cancer in UK residents of Asian origin is lower than their white British counterparts, the incidence is rising, possibly as a result of people becoming more integrated and adopting British lifestyles (Redman, Higginbottom, & Massey, 2008).

The Yorkshire Cancer Network in the north of England covers a population of approximately 2.6 million people. There are towns and cities within this network such as Bradford where up to 20 % of the population are of south Asian origin, mainly from ► **India**, Pakistan, and Bangladesh (Office for National Statistics Centre for Demography, Population Estimates by Ethnic Group, 2009). For many of these people, Punjabi, Hindi, or Urdu may be their primary language rather than English. Each language has its own unique script and for a dialect of Punjabi called Mirpuri, there is no written script. The Department of Health strategy for Improving Outcomes states equality issues should not be an add-on, but rather should be embedded by all aspects of cancer services (Department of Health, 2011). One step in the provision of an inclusive assessment and supportive care service for cancer patients would be to translate the SDI-21 into languages of common usage and to evaluate relevance, cultural equivalence and acceptability of the introduction of this approach into routine care for cancer patients of south Asian origin.

Translation and Validation of the SDI-21

Translation of the SDI-21 into Punjabi, Hindi, and Urdu was undertaken in three phases (Fig. 2) following guidance on translation of questionnaires from the European Organization

The Social Difficulties Inventory (SDI-21)		Subscales	Social Distress Scale (SD-16)
Standard item scoring 0= no difficulty - 3 = very much difficulty			
During the past month			
1	Have you had any difficulty maintaining your independence?	Everyday Living (score range 0-16) change in score ≥ 2 flags discussion	SD.16 (score range 0 - 44) score ≥ 10 flags discussion change in score ≥ 3 flags discussion
2	Have you had any difficulty in carrying out your domestic chores? (e.g. cleaning, gardening, cooking, shopping)		
3	Have you had any difficulty with managing your own personal care? (e.g. bathing, dressing washing)*		
4	Have you had any difficulty with looking after those who depend on you? (e.g. children, dependent adults, pets)*		
17	Have you had any difficulty with getting around (e.g. transport, car parking, your mobility)		
19	Have you had any difficulty in carrying out your recreational activities? (e.g. hobbies, pastimes, social pursuits)		
6	Have you had any difficulties with benefits? (e.g. statutory sick pay, attendance allowance, disability living allowance)	Money Matters (score range 0-13) change score ≥ 2 flags discussion	
7	Have you had any financial difficulties?		
8	Have you had any difficulties with financial services? (e.g. loans, mortgages, pensions, insurance)*		
9	Have you had any difficulty concerning your work? (or education if you are a student)*		
10	Have you had any difficulty with planning for your own or your family's future? (e.g. care of dependents, legal issues, business affairs)		
5	Have any of those close to you (e.g. partner, children, parents) had any difficulty with the support available to them?	Self and Others (score range 0-15) change in score ≥ 2 flags discussion	
11	Have you had any difficulty with communicating with those closest to you? (e.g. partner, children, parents)		
12	Have you had any difficulty with communicating with others? (e.g. friends, neighbours, colleagues, dates)		
15	Have you had any difficulty concerning your appearance or body image?		
16	Have you felt isolated?		
13	Have you had any difficulty concerning sexual matters?	Single items items rated "2" or "3" flag discussion	
14	Have you had any difficulty concerning plans to have a family?		
18	Have you had any difficulty with where you live? (e.g. space, access, damp, heating, neighbours, security)		
20	Have you had any difficulty with your plans to travel or take a holiday?		
21	Have you had any difficulty with any other area of your everyday life?		

*Scoring adjusted to (0,1,2,2) following rasch analysis

Social Difficulties Inventory, Urdu, Punjabi, and Hindi Versions, Fig. 1 The Social Difficulties Inventory (SDI-21) scoring guidance

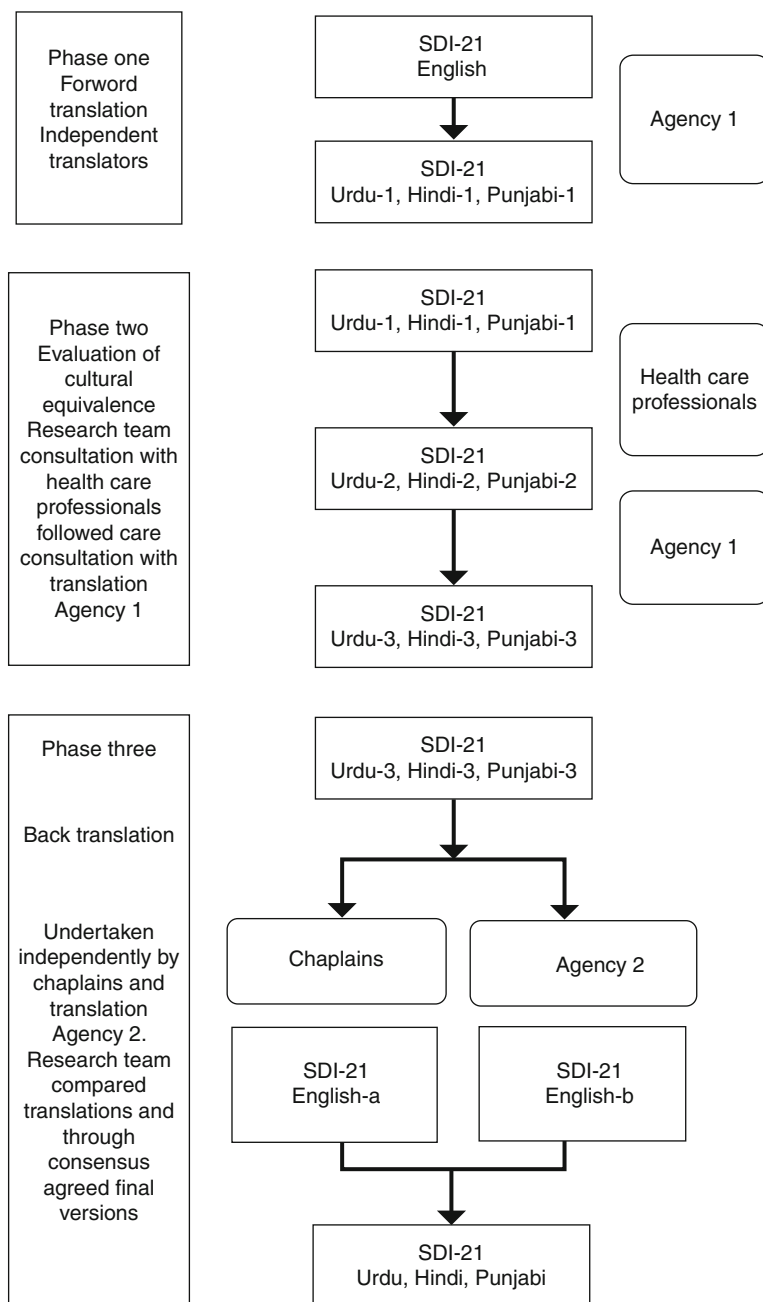
for Research and Treatment of Cancer (EORTC) (Cull et al., 2002):

1. Forward translation using an independent translation agency.

2. Evaluation of cultural equivalence of the translations by health-care professionals with appropriate language skills resulting in some amendments.

Social Difficulties Inventory, Urdu, Punjabi, and Hindi Versions,

Fig. 2 Translation process (Adapted from Hanif et al. (2011))



3. Backward translation undertaken independently by a second translation agency and by hospital chaplains. Final amendments were agreed by the research team resulting in SDI-21 (Punjabi, Hindi, and Urdu) (Hanif et al., 2011).

Translated versions of the SDI-21 were then evaluated by fifty-five cancer patients of south Asian origin attending cancer clinics within the Yorkshire Cancer Network (Table 1).

Patients completed the SDI-21 in the language of their choice, including Mirpuri speakers who

Social Difficulties Inventory, Urdu, Punjabi, and Hindi Versions, Table 1 Clinical and sociodemographic characteristics of participants (Adapted from Hanif et al. (2011))

Characteristics		N (%)
Gender	Women (mean age 49.7 years, SD 13.82)	29 (52.7)
	Men (mean age 49.6 years, SD 18.18)	26 (47.3)
Cancer site	Hematological	20 (36.4)
	Breast	11 (20)
	Genitourinary	7 (12.7)
	Other	7 (12.7)
	Gynecological	6 (10.9)
	Gastrointestinal	4 (7.3)
Primary language	English	3 (5.5)
	Urdu	17 (30.9)
	Mirpuri	5 (9.1)
	Hindi	1 (1.8)
	Punjabi	17 (30.9)
	Gujarati	5 (9.1)
	Other or two primary languages	7 (12.7)
Language of SDI-21 completion	English (mean age 40.8 years, SD 14.77)	26 (47.3)
	Urdu	18(32.7)
	Mirpuri	4(7.3)
	Hindi	3(5.5)
	Punjabi	4(7.3)
	(mean age 57.6 years, SD 12.36)	
Method of completion	Self-completion (mean age 43.8 years, SD 14.15)	35 (63.6)
	Read-aloud (mean age 59.9 years, SD 13.54)	20 (36.4)

had SDI-21(Urdu) read aloud to them. Almost half of the sample ($n = 26$) completed the questionnaire in English. SDI-21 (Urdu) was completed by eighteen with an additional four Mirpuri speakers having it read aloud to them; three completed the Hindi version and four the Punjabi version. This was followed by an interview for detailed feedback on the translated versions of the questionnaire, again following EORTC recommendations (Cull et al., 2002). Patient evaluation of the questionnaires was excellent and no amendments were suggested. Some English-speaking participants, who tended to be younger, commented that the item asking about sexual difficulties maybe inappropriate to ask of older patients, but this was not a concern of the older patients interviewed (Hanif et al., 2011).

The social difficulties reported by participants covered the full range of items at every level of endorsement (Dharni, 2011). Over half of the participants had levels of social distress above

the cut point of ten, higher than reported in other studies of mainly white British cancer patients. The Everyday Living subscale was the most heavily endorsed. More than 70 % of participants reported some level of difficulty in planning to travel or take a holiday. At interview all participants stated they would welcome assessment using the SDI-21 as it would enable health-care staff to pick up on issues which may not be routinely discussed as part of the clinical process and help people get the support they need. Older patients and non-English speakers were less knowledgeable about the kind of support available, and therefore, it was felt that assessment using translated versions of the SDI-21 may be of particular help.

Preliminary validation of the translated SDI-21(Urdu) was undertaken using Rasch and psychometric analyses. An additional 16 participants were recruited to complete the SDI-21 (Urdu) to provide a sufficient sample size for the analyses.

In order to compare the translated versions, the responses to the SDI-21 (English) and SDI-21 (Urdu), completed by patients of south Asian origin in this study, were combined with three other studies in which the SDI-21 (English) was completed by English-speaking participants, the majority of whom were white. These three studies included the original psychometric evaluation of the SDI-21 ($n = 262$) (Wright et al., 2005), a study to examine the clinical meaning and utility of the SDI-21 ($n = 186$) (Wright et al., 2007) and a study examining the meaning of SDI-21 change scores over time ($n = 188$) (Wright et al., 2008). The combined data ($n = 707$) resulted in SDI-21(English) completed by white English participants ($n = 635$), SDI-21(English) completed by participants of south Asian origin ($n = 31$), and SDI-21(Urdu) completed by participants of south Asian origin ($n = 41$). Twenty-eight participants had the SDI-21 (Urdu) read aloud to them for completion.

An analysis of ► **differential item functioning (DIF)** was employed to investigate cultural and linguistic equivalence of the SDI-21 versions and to compare equivalence across read-aloud versus self-complete versions. Only one item displayed DIF (11. “In the last month have you had any difficulty in communicating with those close to you (e.g., partner, children, parents)?”). This related only to the comparison between south Asian participants who self-completed the SDI-21(English) and south Asian participants who completed the read-aloud version of the SDI-21 (Urdu). The read-aloud group reported fewer problems with this item. The results of the DIF analysis suggested both cultural and linguistic equivalence of the SDI-21.

Examination of psychometric properties of the SDI-21 (Urdu) revealed a similar factor structure to previous work. Reliability of the SD-16 and three subscales was good with all values of alpha being $> .7$ (Hanif et al., 2011).

Discussion

The translations of the SDI-21 into Punjabi, Hindi, and Urdu were found to be culturally equivalent, acceptable, and relevant to UK cancer patients. Due to the small sample size of

Punjabi- and Hindi-speaking participants, it was not possible to undertake any reliability and validation analyses on these two translated versions of the SDI-21. Additional work will need to be undertaken prior to the SDI-21 (Punjabi and Hindi) being used with confidence in UK cancer clinics. The SDI-21 (Urdu) performed well with psychometric properties being similar to those of the English version. Only one item demonstrated DIF which concerned communication with those close to the patient. As the DIF occurred only with participants to whom the questionnaire was read aloud and as many of these participants were interviewed with a close relative accompanying them, this may have contributed towards this finding.

The SDI-21 translated versions were developed for use in the UK and, unlike many other translations of questionnaires used for international clinical trials, may not be culturally equivalent to Punjabi, Hindi, or Urdu speakers living in other countries where these languages are primary such as in India or Pakistan. Further validation work would have to be undertaken to test applicability in these countries.

The participants recorded relatively high levels of social distress across all items within the SDI-21, indicating there is considerable unmet need experienced by this group of patients. Translation of an assessment questionnaire is only the first step in ensuring equitable access for all patients. Routine assessment using questionnaires in clinical practice will only be logistically possible if computers are used to aid the process. Use of computer touch screens in cancer care, using Roman script, have been shown to be acceptable, quick, reliable, and valid (Wright et al., 2003). Work undertaken by Peters and Jackson (2005) has demonstrated the acceptability of using touch screen computers to provide written and oral health information to people in multiple languages with non-Roman scripts, including Urdu and Mirpuri Punjabi. A next stage for assessment of social difficulties would be to administer and evaluate use of the SDI-21 translations via touch screen in routine cancer care. Although responses would be available to staff in English, discussion of problems

identified would continue to be a challenge unless interpreters can be accessed. In addition, automated signposting to relevant supportive care services and providing translated self-management guidance dependent upon SDI-21 scores may help overcome some of these issues.

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Social Disparities

► Social Inequalities

Social Dominance Theory

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Definition

The social dominance theory (SDT) is a multilevel dynamic model aimed at explaining the oppression, discrimination, brutality, and tyranny characterizing human societies as a function of several individual and societal variables.

Description

The SDT has been developed in the 1990s by a group of authors led by Jim Sidanius and Felicia Pratto (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 1999). The SDT is not explicitly aimed at explaining individuals' quality of life and ► [subjective well-being](#). On the contrary, it actually accounts for societies' well-being, in that it is explicitly focused on the prediction of societal oppression, discrimination, brutality, and tyranny. The SDT is rooted in the literature on attitudes to authority, especially the authoritarian personality theory (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), Sidanius' (1976) theory on conservatism, Rokeach's (1979) two-value theory of political behavior, Blumer's (1960) group position theory, Marxist theories, and social identity theory, which considers prejudice and discrimination as the consequence of an intergroup bias aimed at granting individuals with a positive self-esteem (Tajfel, 1981).

According to the SDT's evolutionary approach, each human society, in order to minimize conflicts in intergroup relations, tends to structure itself on ► [social stratification](#), i.e., on group-based hierarchies. As a consequence, individuals' social power, prestige, and privilege will depend, at least in part, on their ascribed membership of specific social categories, mainly those defined by social and demographic characteristics such as age, gender, social class, religious identification, and regional belonging. The degree of societies' ► [social inequalities](#) will depend on a mix of (1) sociodemographic, (2) cultural, (3) institutional, (4) behavioral, and (5) psychological variables.

1. Among the first, a pivotal role is played by male gender: Given that men typically enjoy a higher social status than women, the former tend to favor ► [social stratification](#) more than the latter.
2. The main cultural variables leading to social inequalities are the hierarchy-enhancing legitimizing myths, i.e., attitudes, values, beliefs, stereotypes, and ideologies which, giving a moral and intellectual justification to

asymmetrical allocations of social resources across social groups, legitimize the hegemony of specific groups over the others. Typical examples of hierarchy-enhancing legitimizing myths are sexism, ethnic ► [prejudice](#), political-economic conservatism, protestant ethic, and beliefs in a just world.

3. At the institutional level, the authors focus on aggregated institutional discrimination, i.e., on the sum of the institutions' discriminatory rules, procedures, and actions.
4. The main behavioral variables leading to social hierarchy are aggregated individual discrimination (the sum of the simple and often small acts of individual discrimination by one individual against another) and behavioral asymmetry (mainly asymmetrical in-group bias, leading dominant groups to display higher levels of in-group favoritism than subordinate groups).
5. Among the psychological variables that promote social inequalities, the main role is played by social dominance orientation (SDO), the most crucial and developed construct in the SDT. SDO is "the degree to which individuals desire and support group-based hierarchy and the domination of 'inferior' groups by 'superior' groups, regardless of their own position in the social hierarchy" (Sidanius & Pratto, 1999, p. 61). Hence, SDO is the motivated tendency to pursue and to agree with socially advantaged groups' dominance over socially disadvantaged groups, e.g., men's dominance over women, white people's dominance over black people, and rich people's dominance over the poor. In the original version of the theory, SDO is considered as a stable personality variable, strongly correlated with beliefs fostering group-based inequalities, and thus with support of law and order policies, military expenditure, capital punishment, racial policies, and with opposition towards affirmative actions and minorities' rights. In this light, according to Altemeyer (1998), together with right-wing authoritarianism, SDO should be considered as one of the two main psychological roots of generalized ► [prejudice](#).

In the SDT, not much is said about the origins of SDO. Indeed, according to Sidanius and

Pratto (1999), SDO can be explained as the consequence of three sets of variables: (a) belonging to, and identification with, socially dominant groups; (b) variables linked to the socialization process, such as educational status, social status, and religious faith; and (c) some (not discussed) innate personality traits.

More recently, Sidanius and Pratto's conception of SDO and its origins has been radically questioned. First, strong SDO differences emerged among people belonging to the same (dis)advantaged groups (for instance, among men, very high and very low SDO scorers can be both detected). This evidence weakens the claim that people belonging to the same socially dominant group, being interested in maintaining their dominance, should share the same psychological tendency to foster social hierarchy (Huddy, 2004).

Second, research has shown that SDO changes as a function of contextual influences, mainly as a consequence of realistic threat, i.e., perceiving that one or more out-groups can jeopardize the in-groups' social status. Indeed, it has been shown that SDO depends, at least in part, on the portion of the social identity that is salient for the individuals in their "here and now." For instance, Huang and Liu (2005) showed that men actually score higher than women on SDO only if gender is experimentally made salient.

Third, Morrison and Ybarra (2009), in a US sample of Republicans and Democrats, showed that the threat to in-group values led to a significant SDO polarization: SDO increased among Republicans, a group in favor of social hierarchies, and decreased among Democrats (a group which does not tolerate them).

Fourth, Lehmler and Schmitt (2007) experimentally showed that even the association between SDO and the variables that should correlate with the construct (e.g., ► [prejudice](#), militarism, just world beliefs, support for capital punishment, and so on) is not invariant; on the contrary, it depends on the context. For example, SDO positively correlated with support for war if the war in Iraq was primed, whereas it did not if Saddam Hussein's dominance in Iraq was primed. This result drastically weakens the SDT

claim that SDO should be considered as the stable psychological basis for dominance.

Discussion

At present, the literature is mainly focused on the psychological pivot of the SDT, i.e., SDO. Unfortunately, the theorization and research on the links between the sociodemographic, cultural, institutional, behavioral, and psychological variables leading to societal discrimination, oppression, brutality, and tyranny, deserve further developments. As a whole, SDO, more than a stable personality variable, should be considered as a broad ideological orientation which depends on: (a) the portion of the social identity that comes in mind when people think about the relationships between specific groups and (b) the actual relationships between the in-groups and the out-groups. This is consistent with Duckitt's (2001) model, according to which SDO is an ideological variable which depends on a competitive-dominance-driven motivation for dominance, superiority, and power over out-groups, which in turn is negatively influenced by personality (in the first version of the model by tough-mindedness and in the second one by the agreeableness dimension of the five factors model of personality). Being based on the tendency to see the world as a social Darwinist competitive jungle governed by the rules of the "zero sum" games, SDO, more than predicting generalized ► [prejudice](#), was shown to predict ► [prejudice](#) towards groups perceived as subordinated and as threatening social hierarchy, i.e., towards derogated groups (e.g., physically unattractive people, obese and unemployed people) and dissident groups (e.g., protestors, atheists, and gay right activists) (Asbrock, Sibley, & Duckitt, 2010). Consistently, Duckitt and Sibley (2009) experimentally showed that SDO predicts ► [prejudice](#) towards a fictitious immigrant group when this group was presented as relatively disadvantaged or as competent and economically competitive, but not when it was presented as morally deviant. In conclusion, SDO efficiently predicts ► [prejudice](#) toward strategically devaluated groups, and – consistently with the claims of the SDT – such prejudice has plausibly

the function of maintaining and justifying social hierarchy, intergroup dominance, and oppression of dominant groups over subordinated groups.

Cross-References

- ▶ [Belief in a Just World \(BJW\)](#)
- ▶ [Five Factor Model of Personality](#)
- ▶ [Prejudice](#)
- ▶ [Social Inequalities](#)
- ▶ [Social Stratification](#)
- ▶ [Subjective Well-being](#)
- ▶ [System-Justifying Ideologies](#)

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Social Ecofeminism

- ▶ [Ecofeminism](#)

Social Ecological Model of Work Stress

- ▶ [Occupational Stress in a Multicultural Workplace](#)

Social Ecology

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Synonyms

Two fields that are closely related to (although not synonymous with) *social ecology* are *ecology* and *human ecology*. These terms are defined and compared in the following section.

Definition

Ecology pertains broadly to the study of the relationships between organisms and their environments (Hawley, 1950). Ecological research emerged during the nineteenth century among evolutionary biologists such as Darwin (1859/1964), Haeckel and Lankaster (1876), and Clements (1905), who conducted naturalistic field studies of *biomes* – geographically bounded areas populated by animal and plant species. Their research focused especially on processes of adaptation and natural selection by which plant and animal groups strive to achieve dynamic equilibrium with the abiotic features of their physical habitat including its climatic, hydrologic, and geologic conditions.

Naturalistic field observations of the relationships between organisms and their physical habitats, initially begun in the field of bioecology, were later applied to the study of human populations residing in large urban areas. Led by scholars such as Park, Burgess, and McKenzie (1925) at the University of Chicago, research on the relations between people and their urban ecosystems came to be known as ► *human ecology*. The Chicago School of human ecology integrated bioecology's emphasis on adaptation processes with macroeconomic theories of urban development such as Haig's (1926) theory of the *highest and best use of land* and Chirstaller's (1933) *central place theory*. The Chicago School ecologists placed primary emphasis on biological and economic processes of human adaptation to environmental resources and constraints. A particular focus of their research was the geographic distribution of health and behavioral problems across concentric spatial zones within urban regions.

An important limitation of the Chicago School's *concentric zone theory* of human ecology is that it overemphasized biological and economic dimensions of human ecosystems while neglecting sociopolitical, legal, and ethical considerations (e.g., environmental justice concerns; cf., Bullard, 2005) as well as the material and symbolic influences of environmental design on behavior and well-being (Michelson, 1970).

Firey (1945) contended that environmental features of human ecosystems convey symbolic as well as material meanings that exist independently from and sometimes in contrast to their economic and locational values. Alihan (1938) offered a broad critique of the Chicago School of human ecology and called for the establishment of a more integrative interdisciplinary approach to the study of human communities, combining the concerns of bioecology and economics with those of sociology, psychology, anthropology, law, ethics, urban planning, and other fields.

Alihan (1938), Emery, and Trist (1972), along with scholars such as Bookchin (2005), Binder (1972), and Moos (1979), referred to this broader, transdisciplinary conceptualization of human-environment relations as *social ecology*. Rooted in these cumulative scholarly efforts, the term, *social ecology*, is now widely used to denote a broad-gauged transdisciplinary approach to *the study of people-environment relations that integrates the diverse perspectives of multiple fields* (such as geography, sociology, psychology, economics, law, anthropology, architecture, urban planning, and public health), *for purposes of understanding the circumstances under which individual persons and larger groups are enabled to achieve higher levels of congruence or "fit" with their sociospatial surroundings or, alternatively, are confined to inadequate and stressful environmental circumstances over extended periods.*

Description

Core Principles of Social Ecology and Their Relevance to Quality of Life

The scientific and societal contours of social ecology are not easily delimited due to the broad transdisciplinary scope of this field (Stokols, 1992). The unique concerns of social ecology can be better understood as a set of overarching conceptual and methodological principles than as a narrowly defined body of substantive knowledge organized as a traditional academic discipline.

The conceptual themes and methodological strategies of social ecology are particularly well suited to analyses of complex ► [quality of life \(QOL\)](#) phenomena for several reasons:

First, *social ecological research approaches the study of people-environment transactions from a contextual, multi-level perspective*. Owing to the complexity of environmental and societal conditions that can jointly influence levels of QOL – for instance, neighborhood amenities or incivilities (Perkins et al., 1993), urban traffic congestion and sprawl, air and water quality, community violence, poverty, and war – human response to these circumstances must be analyzed at multiple levels, ranging from the microenvironments of individuals and the meso level of ► [neighborhoods](#) to the more macro levels of community, regional, and global phenomena (cf., Bronfenbrenner, 1979). The contextual, multi-level orientation of social ecology is conducive to gaining a composite or comprehensive understanding of the ways in which environmental and social circumstances, situated at micro, meso, and macro levels, jointly influence QOL processes and outcomes in a cumulative and synergistic fashion.

Second, social ecological analyses of human communities and their surrounding ecosystems suggest that each level of a neighborhood, community, or region is comprised of particular places, behavior settings, and life domains (Barker, 1968; Magnusson, 1981; Wicker, 1979) – for instance, homes, neighborhood parks, urban public places, transportation settings, and more ubiquitous environmental resources and conditions encompassing regional and global levels such climatic shifts and diverse ecosystem services (Costanza et al., 1997). Social ecological studies view human environments as complex systems in which local settings and organizations are embedded or nested within larger and more remote regions. Within individual settings, interdependencies between physical and sociocultural facets of the environment are explicitly addressed. Within broader regions, the interrelations among multiple life domains (e.g., a person's residence, workplace, daily commute, and other neighborhood and community settings)

are examined. And at more remote and, ultimately, global levels of analysis, the reciprocal influences between immediate local environments and more distant settings and conditions are considered (cf., Stokols et al., 2009).

Accordingly, dimensions of QOL need to be articulated for each level of analysis and type of environmental setting being considered. Examples of these QOL dimensions and criteria include the physical and mental health of individuals; the social cohesion or social capital of a neighborhood, community, or region; and the healthfulness and ► [sustainability](#) of global environmental resources for current and future generations (cf., Marans & Stimson, 2011; Putnam, 2000).

A third principle or theme of social ecological research is the use of multiple methodologies (e.g., including quantitative and qualitative methods, as well as objective and subjective measures) to gain an understanding of complex people-environment transactions and their influence on behavior, health, and QOL. The term, QOL, for example, encompasses both positive and negative conditions of human existence. QOL phenomena are multifaceted and subsume several different dimensions. For instance, positive and negative circumstances of daily living can be represented *subjectively*, through the self-reported perceptions and experiences of individuals, or more *objectively* in terms impartially measurable features of social and physical environments. *Subjective criteria of QOL* are exemplified by measures of perceived well-being, life satisfaction, and personal happiness. *Objective criteria of QOL* include the medical status of individuals or aggregate indices of population health, as well as urban livability criteria and related assessments of material conditions found at neighborhood, community, and societal levels. As illustrated by these examples, subjective and objective criteria of QOL can describe the living conditions of specific *individuals* and *groups* as well as those encountered by entire *populations*. Moreover, QOL measures can be associated with *diverse environmental settings* situated at *micro* and *meso* as well as *macro-system levels* – ranging, for example, from the dwellings and workplaces occupied by individuals and

families to the geographic regions and ambient environmental conditions experienced by urban populations.

Fourth, social ecology incorporates a variety of concepts and assumptions derived from systems theory (such as *interdependence*, *homeostasis*, *negative feedback*, *deviation amplification*, and longitudinal analysis of coping and adaptation processes) to understand the dynamic transactions between people and their surroundings (Emery & Trist, 1972; Katz & Kahn, 1966; Maruyama, 1963; Von Bertalanffy, 1950). People-environment relations are characterized by cycles of mutual influence in which the physical and social features of settings directly impinge on occupants' behavior and well-being, and concurrently, participants in these settings modify the form and quality of their environment through individual and ► **collective action**. Thus, the levels of QOL experienced by individuals and groups situated within particular places and regions can be best understood as *emergent* (rather than episodic) phenomena that, ideally, should be assessed at multiple intervals and over extended periods using diverse criteria of environmental quality, personal, and collective well-being.

Fifth, social ecological analyses of human-environment transactions emphasize a *transdisciplinary (TD) action research* orientation in which diverse knowledge cultures or epistemologies (e.g., academic-disciplinary, professional-practitioner, lay citizen perspectives) are brought together for purposes of better understanding and ultimately improving the well-being of individuals, groups, and populations (cf., Brown, 2010; Stokols, 2006). The TD action research orientation of social ecology encompasses a wide range of community interventions and public policies for improving the quality and healthfulness of human environments. These ameliorative strategies include environmental and lifestyle enhancements as well as legislative and ► **urban planning** initiatives implemented at local, regional, and national levels. Social ecological analyses of QOL assume that the potentially beneficial impacts of environmental and social interventions on various facets of QOL

can be broadened and enhanced through multi-level intervention packages that combine these diverse strategies.

Conclusions

The multifaceted nature of QOL phenomena poses certain conceptual and methodological complexities. First, for QOL assessments to be meaningful, they must be *contextualized* in relation to the *experiences of particular individuals, groups, or populations as they occur within explicit spatial and temporal boundaries* (e.g., a person's reported level of residential satisfaction relative to a particular dwelling occupied over a period of days, months, or years). Second, QOL criteria are *composite* measures in the sense that they yield an overall summary assessment of the multiple subjective and/or objective qualities of people's transactions with their everyday environments. These transactions typically engender a mixture of both positive and negative events, situations, and experiences. QOL measures, thus, provide a composite representation of the multivalent conditions of everyday life as they are encountered by individuals, groups, and populations within specified geographic, temporal, and demographic contexts.

Because QOL assessments span multiple environmental settings situated at micro, meso, and macro-system levels, they ideally should be rooted in and guided by a social ecological perspective on human-environment transactions that accounts for the ways in which people's immediate and more remote surroundings influence the overall quality of their day-to-day existence.

Cross-References

- [Collective Action](#)
- [Community Planning](#)
- [Composite Indicator\(s\)](#)
- [Demographics](#)
- [Ecosystem](#)
- [Environment and Health](#)
- [Environmental Amenities and Disamenities](#)
- [Health-Related Quality of Life Measures](#)

- ▶ [Neighborhood Unit](#)
- ▶ [Objective Quality of Life](#)
- ▶ [Policy Analysis](#)
- ▶ [Regional Analysis](#)
- ▶ [Regional Quality of Life](#)
- ▶ [Social-Ecological System\(s\)](#)
- ▶ [Subjective Well-Being \(SWB\)](#)

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Social Exclusion

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Synonyms

[Cumulative disadvantages](#); [Deprivation](#); [Disengagement](#); [Marginalization](#)

Definition

Social exclusion is a multidimensional, relational process of progressive social disengagement, one having interrelated negative consequences for quality of life and well-being of the individual as well as for the quality of society in terms of social cohesion. The meaning of “social exclusion” varies by social context, giving rise to numerous, often overlapping and ambiguous definitions. The dominant cultural, legal, and other rules for membership or eligibility provide a point of reference to assess who is “in” or “out,” calling attention to the sources of exclusion as well as its victims. Insofar as the dominant mode of integration in modern post-industrialized West European countries, where the discourse is highly prominent (Silver & Miller, 2003), is related to the labor market, employment and access to social security benefits are understood as the best agents to avoid social exclusion.

Description

The idea of social exclusion originated in France where it shares affinities with French Republican concepts of solidarity and the social bond. As the Commissariat Général du Plan officially put it (1992), exclusion is a “rupture of the social bond, a break in the social fabric and a deficiency of solidarity.” The French origins of the concept are readily seen in Durkheimian thought (Levitas, 1996), although it was also adumbrated in other early sociological works in and beyond France. Postwar French public discourse used “social exclusion” to refer to the most disadvantaged members of society, the “Fourth World” (Wresinski, 1987) or the disabled and “social misfits” ineligible for public assistance (Lenoir, 1974).

During the 1980s, the term moved from political discourse and sociological theory to policy parlance. From France, the European Union adopted the term in contradistinction to poverty. Until then the European debate had been mainly influenced by the Anglo-Saxon research

tradition, which focuses on issues of relative deprivation and concentrates on access to resources that enable full participation in the society one belongs to (Townsend, 1979). Thereafter, an understanding of disadvantages which tackled not only lack of resources but also inadequate social participation was developed (Burchardt, Le Grand, & Piachaud, 2002). Compared to poverty the understanding of social exclusion is comprehensive, multidimensional, and dynamic.

The shift from poverty to social exclusion is not merely a shift in terminology. It reflects the need for a multidimensional approach to the study of disadvantages. When analyzing social inequality, this implies a shift from concentrating on the just distribution of material resources to equal opportunities for social participation, integration, and the realization of social rights (Abrahamson, 1997; Barnes et al., 2002; Room, 1995; Silver, 1994). Thus, social exclusion refers to a social relationship (Silver, 1994, p. 544; Silver & Miller, 2003) and draws attention to the process of becoming detached from the moral, social, and political order of a community (Room, 2006, p. 5). It is an inability to interact freely with others which is constitutive of capability in its own right, and exclusion is instrumental in reducing the capability to achieve other essential functionings (Sen, 2000). Exclusion makes it difficult to retain a sense of social worth (Gallie & Paugam, 2000), and as “chronic relative deprivation of functionings,” impedes identification with others in society (Bossert, D’Ambrosio, & Preagin, 2007).

As a result of changing labor market organization and significant challenges to social protection systems, European societies confront widespread long-term unemployment, poverty, and the fear of the rise of an urban underclass. “Exclusion is not about graduations of inequality, but about mechanisms that act to detach groups of people from the social mainstream” (Giddens, 1998, p. 104). Rising social polarization leads to a potentially unbridgeable gap between insiders and outsiders. Therefore, access to employment and the fight against poverty are essential to achieving equal distribution of life chances. Employment and job security promise a stable

income to satisfy basic needs, and provide social integration and social identity at the same time. The hypothesis underlying the social exclusion approach is that the interdependence of social disadvantages and weak labor market attachment produces a vicious cycle responsible for social exclusion.

The concept of social exclusion is prevalent in large part because the comprehensive and general nature of the term encapsulates the social outcome of recent economic and social changes: the emergence of an excluded section of the population which is severely limited in its ability to participate fully in society. At the same time, the ambiguous meaning of the term incorporates the widespread fear that ongoing change represents a threat to middle class integration and mainstream values. Despite its analytical and theoretical weakness, the concept of social exclusion has helped foster a particular vision of the importance of basic social rights, including access to education, training, employment, housing, and other essential goods and services to ensure equal opportunities.

Indeed, policy debates make frequent reference to the term “social exclusion” even though there is little consensus on how to define the concept or how to operationalize it for empirical measurement. The European Union instituted an Open Method of Coordination to combat social exclusion. Each EU-member-state was required to report on a set of common indicators, first agreed upon at the Laeken Summit, to monitor progress towards the goal to combat social exclusion (Atkinson, Cantillon, Marlier, & Nolan, 2002). In 2000, the Lisbon Process tied the fight against exclusion to the EU Strategy for “sustainable economic growth with more and better jobs and greater social cohesion.” Five years later, with little progress achieved, the EU streamlined the “social dimension,” combining exclusion with efforts to modernize social insurance, producing Joint Reports on Social Protection and Social Inclusion. In this way, “inclusion” became the mechanism to combat “exclusion.” With still disappointing results in 2010, the European Year for Combating Poverty and Social Exclusion, the EU launched its Agenda 2020 with five

objectives on employment, innovation, education, climate/energy, and social inclusion. Among the headline targets for the next decade is for at least 20 million fewer people to be in or at risk of poverty and social exclusion. Meeting these targets should greatly enhance the quality of life.

As these goals suggest, Europe’s common indicators of social exclusion concentrate on the economy, labor market, and relative poverty measures, with the recent addition of a few health and education indicators. This emphasis reflects the prior existence of data on these subjects, although attempts are underway to measure homelessness and housing distress, child well-being, and disadvantages concentrated among such groups as the disabled and the Roma. Most recently, measurement efforts stress “active inclusion,” i.e., making work pay for the working poor and access to the labor market for the most vulnerable and long-term unemployed.

More research and data are needed to study exclusion as a multidimensional dynamic process. The concept implies that there are causal and mutually reinforcing relations among dimensions of disadvantage over time, but empirical studies have revealed some unexpectedly weak intercorrelations. For example, the association between persistent poverty, measured as those below 60 % of median income over 3 years, and other dimensions of deprivation (basic lifestyle, secondary lifestyle, housing, and environment) across some European countries was weak (Whelan, Layte, & Maitre, 2002). Muffels and Fouarge (2001) found only 6 % of the EU population was living in both persistent income poverty *and* persistent multidimensional resources deprivation relative to national standards over 3 years. The moderate association between persistent poverty and persistent deprivation was higher in southern European welfare regimes and lower in social democratic Scandinavian ones. Those excluded longer from the labor market were more likely to be deprived in liberal than corporatist regimes and least of all in social democratic ones.

Research findings about the correlations between material and social deprivations are not

clear-cut. The numbers of informal social contacts and memberships in formal organizations increase with social class, upward mobility, and religious affiliations (Li, Savage, & Warde, 2008; Putnam, 2002). Social embeddedness, breadth of social networks, and social support vary by socioeconomic status. However, the thesis of cumulative disadvantage is only partially confirmed. In Britain, income and unemployment are weakly associated with sociability and community participation (Pantazis, Gordon, & Levitas, 2006). Only a minority of the materially disadvantaged have no social support (Tsakoglou & Papadopoulos, 2002; Russell & Whelan, 2004). The link between material and social disadvantage is weaker in the Mediterranean than in the northern European countries (Gallie & Paugam, 2000; Paugam & Russell, 2000). Whether it exists at all also depends on the chosen indicator. While poor people and the unemployed more often live alone, contact with neighbors or organized activities, for example, are not restricted by lack of resources or employment (Gallie, Paugam, & Jacobs, 2003).

There are few attempts to measure and understand social exclusion not only in terms of objective living conditions but also self-perceptions. Individually experienced social disadvantages like unemployment, poverty, and especially long-term difficulties provide convincing explanations for feeling marginalized (Böhnke, 2010). However, it matters a lot in which country people experience economic strain and joblessness. The less relative income poverty is present in a society, and the smaller the group of people whose standard of living is only inadequately guaranteed at the basic level, the more difficult it is for these people to maintain social relations and avail themselves of supportive social contacts. Stigmatization, shame, and self-blame are the psychological mechanisms which plausibly explain this effect. But other contextual factors also influence the interplay between poverty and social disintegration. Social policy and interrelated general attitudes to religion, the family, and how to combat poverty all shape the support culture and influence the willingness of the population of a country to feel solidarity with the

poor (Böhnke, 2008). Religiosity – Catholicism, in particular – increases the social integration among the poor. Religion is related to life satisfaction, happiness, and subjective well-being more because of the supportive social networks in religious organizations than theological beliefs (Lim & Putnam, 2010).

The link between quality of life and social exclusion is direct. Policy thinking which aims at promoting social integration, access to employment, the reduction of poverty, and the creation of a strong sense of solidarity and belonging automatically implies an improvement in quality of life. Integration more than the distribution of resources is at the heart of exclusion research and policy, marking a turning point in the study of social disadvantages and vulnerable groups. For Dahrendorf and Sen, for example, whose thinking about “life chances” and “capability deprivation” comes very close to the quality of life perspective, improving the quality of life requires the creation of an institutional and political setting which enables people to take advantage of opportunities and fulfill their potential. Such a perspective focuses on substantive liberties in democracies and is closely connected with the idea of social rights and equal opportunities for everyone (Dahrendorf, 1988; Sen, 1999). Moreover, the overall well-being of people living in a society not only reflects living conditions and their control over resources but also the way in which people feel about their lives. Although sufficient resources and social relations are key elements of the exclusion perspective, so too are subjective assessments of solidarity, a sense of belonging, and the ability to participate. In addition to the further exploration of the dynamics of cumulative disadvantages, these two dimensions – institutional settings and perceptions of being excluded – describe future research needs in the area of social exclusion.

Cross-References

- ▶ [Basic Needs](#)
- ▶ [Capabilities](#)

- ▶ Deprivation
- ▶ Europe, Quality of Life
- ▶ Poverty
- ▶ Poverty Measurement
- ▶ Social Inclusion
- ▶ Social Integration
- ▶ Social Participation
- ▶ Social Support
- ▶ Subjective Well-being
- ▶ Unemployment

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Social Functioning

► Social Competence

Social Health

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Synonyms

Healthy environment; Wellness

Definition

The term ► [health](#) implies a state of complete physical, mental, and functional ► [well-being](#) of an individual within his or her own natural and social environment. In this sense, therefore, health can be considered as a multidimensional concept.

Description

The concept of social health is both less obvious and less familiar to most people than the concept of either physical or mental health, despite being one of the three main components (physical, mental, and social) of the vast majority of definitions of health itself. The reason for this may lie in the fact that social health can refer not only to individual characteristics but also to those of

society in general. It is the logical interaction between these different dimensions which gives rise to what is commonly referred to as health.

An individual's overall level of health is not, however, merely dependent on the sum total of these dimensions but rather on the balance between them. The three dimensions which make up health need to overlap without any one dimension taking precedence over any of the others. We can therefore refer to health as being multidimensional although it is vital that a unitary approach always be taken.

A healthy society is one in which all its citizens enjoy equal opportunities and have equal access to all of its essential goods and services. The health indicators of any given society should always include the existence of a state subject to the rule of law, equality in the distribution of ► [wellness](#), accessibility for its citizens to decision-making processes, and the level of social capital.

Social health refers to the dimension which looks beyond the well-being of the individual and takes into account other people and social institutions (Belleri, 1995).

Social factors permeate a person's daily life and influence the state of his or her mental and physical health, shaping his or her expectations and relationships (Gale Encyclopedia of Public Health, 2002).

The WHO has focused attention on the concept of social health which views patients as social beings who live in a complex context within which they interact with one another. It has been demonstrated that people who are well integrated into their communities tend to live longer and recover from illness more rapidly (Tognetti 2007). Conversely, social isolation has been shown to be one of the ► [risk factors](#) for illness. For this purpose, social health may be seen as social adaptation or the capacity to perform normal roles within society.

Social solidarity is commonly seen as an aspect of social health; indeed, it has been demonstrated how the presence of social support attenuates the effects of stress and reduces the incidence of illness (Russell, 1973). The concept of support underlines the extent to which social

health is a feature of modern societies and is linked to the concept of social capital which refers to the sense of reciprocal trust and reciprocity in a ► [community](#).

Following on from this, there is also a recognition of the significance of both the physical and the social environment, leading to a widening of the perspective beyond that of the individual to looking at his or her relationship with the environmental context in which they live. A picture is therefore built up of the range of human needs which include physical fitness, mental sanity, and social integration.

The social model of health places the individual at the center of a wide-ranging system which is influenced by multiple variables. In order to understand and cure disease, a doctor needs to shift his attention from purely organic problems to all the social, relational, interactive, psychological, and family-based problems in existence, all of which can influence the development of the disease by a process of interaction (Becchi & Carulli, 2009).

Another aim of social health is to encourage integration between social, ► [healthcare](#), and mental health services in order to achieve a model of health which takes into account all the different dimensions of health, according to the WHO's definition of health.

The aim behind the concept of social health is to redefine our previous understanding of health as meaning only the absence of disease or infirmity and underline its dimension as a process in itself.

Fifty years on, WHO's definition, which was universally accepted at the time by both the scientific and nonscientific communities since it had overcome the old paradigm, is now beginning to be challenged. The biggest criticism it faces is that it is unrealistic and utopistic. What is more, setting such an ambitious target has led to a gradual overlap between medical and healthcare needs and between common social expectations and resulting frustrations, due to the gap between desires and results.

Despite the WHO's efforts to spread the new concept of wellness, the major research projects continue to focus primarily on the

features and consequences of pathologies (Levin & Browner, 2005).

Cross-References

- [Quality of Life \(QOL\)](#)
- [Well-Being of Nations](#)
- [Wellness](#)

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Social Health in French Regions

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Definition

The index of social health is a composite indicator aiming at taking account of the multidimensional social issues of a territory. The specificity of this regional ISH is linked to the fact that it has been constructed on a concerted basis with multiple shareholders.

Description

The index is the combination of eight dimensions: income, work and employment, education, health, housing, physical safety, and interpersonal and social ties. All are quantified by one or two data. The regional ISH shows no correlation either with gross domestic product (GDP) or with the gross income.

A Project: Interregional Comparisons of Social Health

In assessing the state of a nation, how are we to take account not only of its economic progress but also – and perhaps more importantly – of its social progress? And who is qualified to define what constitutes progress? These are not new questions: they have been widely debated for a decade at least in the English-speaking countries, as part of a largely uncoordinated trend driven by civil society and its networks, by research studies, and increasingly, following the example of the Council of Europe, by international organizations.

Since the pioneering studies by W. Nordhaus and J. Tobin (1973), the inadequacies of GDP as a measure of a nation's well-being have become widely familiar. These doubts resurfaced recently in the work of the Stiglitz, Sen, and Fitoussi Commission (2009). Environmental emergencies and the recent financial crisis lend a little further credence to this diagnosis with the passing of each day. The gradual regionalization of public action, particularly in Europe, has made it necessary to produce analyses based on the tools used in regional governance. It is frequently acknowledged at these levels as well that GDP per capita is scarcely adequate as a measure of the multidimensional nature of a region's wealth. Similarly, measuring regional disparities on the basis of GDP per capita is but a pale reflection of the interregional distribution of economic wealth (Gadrey & Jany-Catrice, 2006).

Out of habit, by convention or because of the sparseness of the social data available at the regional and subregional level, statistical observatories and institutes usually adopt the income poverty rate as a variable to summarize these

major regional social problems. It is sometimes supplemented by the child poverty rate (Auzet et al., 2007). However, this measure is far from being satisfactory and, for various reasons, has given rise to important debates as to its relevance. Some theoretical and empirical advances in the measurement of poverty have been made, particularly when they take account of households' living conditions with the aim of constructing a multidimensional overview of the hardships endured by a population (Lollivier & Verger, 1997). However, since they are based on national surveys, the results are frequently not applicable to the regions.

More generally, today's major social issues, summarized under headings as various as "social health" (Miringoff & Miringoff, 1999), "societal progress," or "well-being for all" (European Council, 2011), are all in essence multidimensional. Although they are concerned with the economic conditions of living, they take account of the difficulties people experience in areas such as education, housing, consumption, health, work, and employment. Acknowledgement of this multidimensionality is hard to reconcile with a single variable and requires the use of a larger dashboard of variables.

How is it possible, however, to make use of a wider range of social data without it appearing to be a pure intellectual construction, imposed from on high and under the control of a handful of experts, who are responsible for both its contents and the interpretation thereof? In an attempt to avoid this risk, in part at least, an innovative experiment was conducted in France with the aim of developing an indicator. The purpose of this experiment was to consider the meaning to be attributed to indicators of social health in a region.

An Innovative Experiment in Democracy in the French Regions

A craze for developing measures of poverty and inequalities has been evident for some years. At international level, the "community indicators" movement, which started to develop rapidly in the mid-1990s, has sometime been regarded as a revival of the movement that led to the first

major attempts to construct social indicators in the English-speaking countries, particularly in the 1920s and then at the end of the 1960s and the beginning of the 1970s, when the Russell Sage Foundation provided much of the funding (Cobb & Rixford, 1998). Their aim was similar to that of the experiment conducted in the Nord-Pas de Calais region of France, namely, to develop a more multidimensional vision of “social progress” and to initiate a public debate on what is desirable in terms of sustainable human development (Jacksonville Community Council, 2007).

Evaluations of the American projects set up with the aim of developing regional indicators show that these initiatives facilitate networking among various actors in the region (e.g., local institutions producing statistics) and lead to the emergence of new “alliances.” Thus, according to *Redefining Progress*, more than 200 towns and cities, such as Missoula in Montana and Jacksonville in Florida, have developed indicators of sustainable development or quality of life. Some American states and Canadian provinces, including Alberta, Nova Scotia, and the San Francisco Bay Area, have also taken advantage of the expertise of the Genuine Progress Indicator to develop alternative measures of wealth (Talberth, Cobb, & Slattery, 2007).

In the French regions, there has been little interest in attempting to put in place tools of the composite indicator type that not only serve to provide warnings and raise awareness but also act as indicators of context or need for politicians dealing with questions of social health. One of the exceptions is the Nord-Pas de Calais region.

As early as 2003, the Regional Council of Nord-Pas de Calais was seeking to equip itself with new tools developed on the basis of debates organized to discuss a number of ideas. What did people think about the indicators of inequality and poverty in the region? How were the results to be interpreted? These working groups, consisting of more than 60 people, put forward some important suggestions. The decisions that were taken could not be described as resulting from a genuine democratic process (e.g., there was no vote). All the debates at each meeting were transcribed with great accuracy and in

great detail, and the researchers involved then worked on the speeches, debates, and arguments. These demonstrated the collective value of investigating social health by adopting a constructive approach to the region’s future rather than focusing on its social handicaps and engaging in social pleading with a view to making amends for the region’s disadvantages.

A Multidimensional Composite Indicator

The ISH is the fruit of these debates. It has six dimensions and, in its final form, uses 16 variables. It provides a basis for making comparisons between the French regions.

The reasons for choosing each of the variables are outlined below, and the results for the French regions are compared.

The Income Dimension

The income dimension of the ISH is made up of four subdimensions, as was the earlier barometer of inequalities and poverty (the “BIP40”, which was constructed by a network of campaigners on inequalities). They are consumption, inequalities, poverty, and wages.

With regard to consumption, the indicator adopted, namely, the insolvency rate, serves as a proxy for budgetary constraints or even restrictions on consumption. A high insolvency rate is one of the signs of greater economic precarity. The data show that insolvency rates by household are three times greater in the most over-indebted region (Nord-Pas de Calais, followed by Upper Normandy) than in the least over-indebted region (Corsica).

The share of households liable to pay the wealth tax, on the other hand, is a measure of the very large fortunes in a region. However, the highest shares of liable households do not necessarily equate to the highest sums paid by taxpayers, particularly because of the existence of threshold effects. Consequently, it was decided to use the share of liable households combined with the average amount paid per taxable household (see [Table 1](#) below).

These economic inequalities calculated on the basis of the share of households liable to pay the wealth tax are supplemented by the interdecile

Social Health in French Regions, Table 1 The indicator of social health: its dimensions, subdimensions, and variables

Dimension	Subdimension	Variables adopted	
Income	Consumption	Insolvency rate	
	Inequality and poverty	Share of households liable to pay the wealth tax	Average liability per taxable household
	Poverty	Income poverty rate among under 17-year-olds	
	Wages	Ratio of 9th to 1st decile	
Work and employment	Unemployment	Unemployment rate	Difference between male and female unemployment rates
	Working conditions	Incidence of workplace accidents with working days lost	Incidence of occupational disease
	Precariousness/insecurity	Share of precarious/insecure employment	Part-time rate
	Industrial relations	Industrial dispute rate	
Education		Share of economically active population without formal qualifications	Baccalaureate access rate
Health		Life expectancy at birth	
Housing		Eviction rate	
Physical safety		Number of crimes against people and property per 100,000 inhabitants	
Social ties		Rate of membership of at least one association	
Interpersonal ties		Share of individuals who see friends and neighbors at least once a week	

Source: Jany-Catrice & Zotti, 2009

ratio of living standards, i.e., households' disposable income adjusted by the number of consumption units. Here, a household's disposable income comprises earnings from employment retirement pensions and unemployment benefit, income from personal assets, transfers from other households, and social security benefits.

This ratio shows that in 2004, inequalities in living standards were greatest in the Île-de-France ($D9/D1 = 3.8$) and lowest in Western France (Brittany and Pays de la Loire) ($D9/D1 = 2.7$).

The poverty rate among children under 17 years of age was adopted as an indicator of poverty. The data indicate that the child poverty rate in France is 16.4 %, with wide variations between regions, from 11.3 % in Brittany to 25 % in Nord-Pas de Calais.

Work and Employment

In order to take account of the variety of working and employment conditions, the unemployment

rate is adjusted for differences in the rate between men and women. This "adjusted" indicator of unemployment, which averages 12.1 % for France as a whole, varies from 9 % in Limousin to 17.5 % in Languedoc-Roussillon.

Working conditions are summarized by the incidence of workplace accidents with working days lost, supplemented by the incidence of occupational disease. This composite indicator varies considerably from region to region, from just 23.9 % in the Île-de-France to 40 % in Brittany.

Job insecurity is expressed by an indicator of "precarity" that combines the rate of temporary agency work with the share of fixed-term employment contracts. According to these figures, job insecurity is lowest in Corsica and the Île-de-France (24.2 and 25, respectively) and highest in Languedoc-Roussillon (35). This indicator is supplemented by the part-time rate, as a measure of the precariousness of women's employment.

Industrial relations, finally, are evaluated by taking as a yardstick the rate of industrial disputes. Interpretation of the variation observed is based on the work of O. Hirschmann: labor disputes are an indication that workers have the possibility both of safeguarding part of their economic security and of forming work groups.

Education, Health, Housing, and Justice

In education, two variables were combined: the share of the population without formal qualifications and the rate of access to the *baccalauréat*. Educational levels in France vary considerably from region to region. Ten percentage points separate Brittany, which is in the best position because it combines a low share of individuals without qualifications with a high rate of access to the *baccalauréat*, from Picardy which, in contrast, had one of the highest shares of unqualified individuals (37 %) and the lowest rate of access to the *baccalauréat* in 2004 (57 %).

Life expectancy is the indicator adopted for health. Almost 4 years separates the highest life expectancy at birth (Île-de-France) from the lowest (Nord-Pas de Calais).

The indicator adopted for housing is the eviction rate, since it also reflects the very greatest poverty. By far the highest eviction rate is that for the Île-de-France (12.9 per 10,000 inhabitants). The regions with the lowest rates include Limousin and Nord-Pas de Calais (0.58 and 0.64 per 10,000 inhabitants, respectively).

Finally, the number of recorded crimes and misdemeanors was adopted as an indicator of physical safety. The figure varies by a factor of 3 depending on the region. PACA, the Île-de-France, and Languedoc-Roussillon are the worst affected regions, while Limousin, Auvergne, and Bretagne are the best performers in this regard with crime rates of the order of 3.6–4 %, compared with 9 % in PACA.

Social Relations: A Dual Dimension for the Regional Indicator of Social Health

In order to take account of each region's social ties, which constitute one of the forms of social wealth in a territory, the share of individuals belonging to at least one association was chosen

as a proxy. The results indicate that it is regions such as the Auvergne, Rhône-Alpes, Pays de la Loire, and Alsace that have the highest membership rates. On the other hand, Corsica brings up the rear with regard to this variable (23 %), preceded by Picardy (31 %). This social tie is supplemented by a tie summarized here by the share of individuals who see their friends and neighbors at least once a week. By this criterion, Corsica is the leading region (85 %). Three regions bring up the rear on 63 %: Upper Normandy, Alsace, and the Île-de-France.

Empirical Standardization

Since the variables are in disparate units, a comparative standardization procedure of the kind used in the construction of the indicator of human development (UNDP, 2007) was carried out. The least arbitrary standardization scale is one in which the minimum and maximum values observed in all the regions are used as the minima and maxima. In order then to aggregate all the variables, it was decided to apply a simple average. The composite synthetic indicator thus obtained ranges between 0 and 100: the higher it is, the better a region's social health is.

There are very few correlations in the spatial distribution of social health when it is compared with that of GDI or GDP per capita: the economically wealthy regions tend to be located in the center, East and Southeast, while the socially healthy regions tend to be in the *Grand Ouest* of France (Brittany and the Pays du Loire). Moreover, Nord-Pas de Calais, Languedoc-Roussillon, Picardy, and Provence-Alpes-Côte d'Azur, which are often very densely populated, have the lowest levels of social health. The regions with by far the highest levels of social health are Limousin and Brittany and the Pays de la Loire in Western France.

Conclusion

In producing an indicator of social health that serves as a basis for comparing the social performance of the French regions, no correlation can be observed between either GDP per capita and

the ISH or GDI per capita and the same indicator. The value of this regional indicator of social health lies in the modes of its construction, which determined the choice of variables. That choice was based in part on a collective production process, in which many actors debated inequalities and social health. Consequently, the legitimacy this indicator has acquired is based on two aspects: on the participatory process by which it was produced, on the one hand, and, on the other, on the indicator's capacity for being used by its coproducers from very different backgrounds. The notion of social health that is summarized in this composite indicator can perhaps claim to have become a sort of convention, a collectively shared representation of what a region's social health actually means.

The ISH has already acquired a certain degree of legitimacy in the French debate. It has been taken up by various mass-circulation newspapers and has been used by experts and researchers in debates on regional development.

It is being used by regional authorities in their approach to their region's development and social health. Furthermore, the *Association des régions de France (ARF)*, in which all the French regions are involved in the institutional and public sense and which seeks to be a lobbying body for all the French regions in their relations with central government, Parliament, and all the national networks that may enter into discussions with the regions, has appropriated this indicator of social health. As a result, the ISH is one of the three composite indicators (along with the ecological footprint and the indicator of human development) that are used by the ARF to supplement GDP.

Cross-References

- ▶ Civic Engagement
- ▶ Community QOL Measures
- ▶ Democracy
- ▶ Measures of Social Cohesion
- ▶ Social Development Index
- ▶ Social Well-Being

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Social Housing

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Synonyms

Nonmarket housing; Nonprofit cooperative housing; Nonprofit housing; Public housing; Social rented housing

Definition

Social housing is a concept that incorporates various models and types of housing assisted with public funds for the purpose of creating affordable rental housing. Since its inception in western countries, social housing as a government policy instrument has shifted in keeping with political and economic trends. This has meant the expansion and evolution of new types of accommodation but also periods of little or no government investment.

Description

Western countries such as Canada, Australia, and the USA have favored market solutions, primarily home ownership, to house their citizens (Dalton, 2009). In these countries, social rented housing is a relatively small proportion of available housing, and the trend by senior levels of government in the past two decades has been toward decreased investment and the sale of units (Dalton, 2009; Milligan & Pinnegar, 2010). Western European countries, with proportionally larger social housing sectors historically, are experiencing similar pressures to decrease public expenditures. Malpass and Victory (2010) ask whether this is simply a roll back of government involvement in the social housing sector or the continuing evolution or modernization of social housing models.

Housing policy includes both supply and demand solutions. The transition in many western societies has been from government-owned and government-managed public housing built after the Second World War to alternative models – such as cooperatives and nonprofits run by community-based organizations – which expanded during the 1970s and early 1980s in countries such as Canada (Dalton, 2009). Housing policy in this context was consistent with expansion of social welfare objectives. In the last several decades, in keeping with neoliberal economic policies globally, governments have looked to increase private market involvement

in the provision of affordable rental housing. In many western countries public investment in building social housing decreased. Alternatively, demand solutions such as housing allowances have gained favor as a policy tool to assist low-income households to access the private rental market. Dodson (2007) described an uneven application of neoliberal strategies in housing policy across western European countries and in the case of Australia a return to “bricks and mortar” social housing after years of retrenchment (Milligan & Pinnegar, 2010).

Another theme debated is the role social housing plays in society: a residual or targeted approach versus a more integrative approach with redistributive objectives. Or – as in the case of Australia, New Zealand, and Canada – it may involve an opportunity to improve quality of life for indigenous people through self-government of culturally appropriate, affordable urban housing (Walker & Barcham, 2010). As Malpass and Victory (2010) and Milligan and Pinnegar (2010) note, social rented housing in England, Australia, and Canada continues to be confined to a small residual sector. Such housing is targeted to meet the housing needs of the lowest-income households and specific groups considered to have a social need. Up until the late twentieth century, the Netherlands had an alternative approach: a large social housing sector of good quality attracted a mix of incomes (Milligan, Dieleman & van Kempen, 2006). Social housing policy is linked to broader community outcomes such as ► [equity](#), ► [social inclusion](#), and ► [quality of life](#). At the microlevel, household quality of life is associated with variables such as affordability, housing of sufficient size and quality, and security of tenure.

Cross-References

- [Housing Affordability](#)
- [Poverty](#)
- [Public Housing](#)
- [Social Welfare](#)

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Social Ideas

- ▶ [Community Values](#)

Social Identity Theory

- ▶ [System-Justifying Ideologies](#)

Social Impact Analysis

- ▶ [Social Impact Assessment](#)

Social Impact Assessment

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Synonyms

[Assessment, social](#); [Community impact assessment \(CIA\)](#); [Social impact analysis](#)

Definition

Social impact assessment (SIA) is the process of identifying, evaluating, and addressing the effects of proposed actions, policies, and programs on the human environment and the social fabric of communities. SIA provides a framework for determining how policies and projects affect the social fabric of a community. The process recognizes that communities are systems, with a number of interrelated interdependent parts operating as a whole. The process is iterative and multidimensional, taking into account the effects of these actions on individuals, families, groups, and entire communities, as well as on the networks and institutions that play an essential role in a community's social cohesion.

Description

History/Background

Social impact assessment evolved from attempts by government agencies starting around the mid-1900s to evaluate and understand the social and environmental impacts of major development projects, in particular those that were subject to the National Environmental Policy Act (NEPA) of 1969 in the United States and the Canadian Environmental Assessment and Review Process (EARP), passed in 1973 (Burdge & Vanclay, 1996). In the United States, these efforts stemmed in large part from the construction of the interstate highway system beginning in the 1950s, where the social and community effects associated with large-scale public actions became apparent in both direct and indirect consequences (Townsend, Lane, & Hartell, 2006). Numerous laws were passed in the United States and Canada in the following decades to implement these policy frameworks, and over that time, SIA has become an important requirement for major development projects in numerous countries.

The field of SIA has evolved into a robust concept internationally with public and private

entities around the globe contributing to the practice. Social impact assessments have been prepared for public and private entities for policies, programs, and projects across a host of industry sectors (Dani, 2003). Some countries and regions have focused primarily on resource development, while others have emphasized major infrastructure projects and still others, broader policies and programs with implications for social equity. As SIA practice has continued to develop, impact assessment professionals have worked to document and describe the core elements of the SIA process, while recognizing that SIAs will continue to be tailored to the context in which each individual SIA is undertaken (Vanclay, 2003).

What Is SIA?

Social impact assessment is a process to determine, for proposed actions, policies, and programs, what kinds of social impacts are likely to occur to people and their communities, to assess the significance of these impacts, to inform decision-making on the recommended course of action, and to identify measures that may help to avoid or minimize potentially adverse effects (Armour & Noble, n.d.).

Defining Social Impacts

Social impacts are the consequences to human populations of public and private actions that “alter the ways in which people live, work, play, relate to one another, organize to meet their needs, and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalize their cognition of themselves and their society” (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1994). Social impacts include both positive and negative effects of actions, policies, and programs on individuals and communities. They encompass changes in the lifestyle, quality of life, cultural expressions, political systems, provision of infrastructure and services, well-being, and values of an individual, family, group, or community (Esteves & Vanclay, n.d.). Social impacts

may arise from changes in the ways in which members of a community interact with the natural environment, whether for resource acquisition, subsistence, recreation, spiritual expression, or social gathering (Centre for Good Governance, 2006).

Major actions that may result in social impacts include, but are not limited to, surface and underground mining, hazardous and sanitary waste sites, power plants, reservoirs/water impoundments, manufacturing facilities, military installations (closures and openings), schools and universities, hospitals, transportation facilities, water/wastewater infrastructure, power lines, cell towers, land use designations, housing, commercial development, and development of parks, preserves, refuges, and recreation areas (Interorganizational Committee, 1994).

The SIA Process

The purpose of an SIA is to not only classify and quantify potential social impacts but also to compare outcomes and trade-offs of alternatives, inform the decision-making process, and devise approaches to address potential negative consequences. The process involves forecasting the likely impacts of a proposed policy, program, plan, or project, analyzing the social consequences to different groups and individuals, considering these effects in decision-making, and devising a set of mechanisms for avoiding, minimizing, or compensating for any adverse effects, as well as monitoring and managing these effects over time (Vanclay, 2003; Greenland Bureau of Minerals and Petroleum, 2009; Queensland Department of Infrastructure and Planning, 2010).

While there are variations in the process and overlapping elements among disciplines, SIA involves a number of core process steps including profiling baseline social conditions; scoping to identify impact-causing activities and the kinds of changes likely to occur as a result of a proposed action; informing the development of alternatives; projecting the impacts of alternatives, including who will be affected, in what way, and for how long; determining how different stakeholders are likely to respond to and view these changes; identifying measures

to prevent or minimize adverse effects and to optimize beneficial effects; evaluating alternatives for implementing the proposed action and recommended alternative given the significance of potential social impacts along with natural resource impacts, costs, and other implementation considerations; and developing mitigation and monitoring plans to address adverse effects (Armour & Noble, n.d.; Misra, n.d.; Vanclay, 2003).

An inventory of community conditions is prepared at the onset of a proposal for action to develop an understanding of the community context in which the action will take place. This inventory will incorporate statistical research and data collection, review of past actions affecting the community, field studies, and community input. Baseline community characteristics include population and demographic characteristics, economic conditions, housing, community facilities and services, social and political resources, and community needs and values. Community plans and goals relevant to the proposed action are captured in the baseline inventory and can inform the goals for the proposal and development of alternatives.

Scoping includes identifying those components of a proposed action that may have effects (impact-causing activities), determining the type and range of potential social impacts, and ascertaining those community members likely to be affected by the action. The scoping process is informed by the context of the action including the type of action, scale of the initiative, stage of development (policy, planning, construction, operations, etc.), and the community conditions. The scoping process for a proposed action should incorporate community input along with technical and data reviews to ensure that a full range of social impacts is identified (Centre for Good Governance, 2006).

Social impacts may be organized into impacts to individuals and families, population characteristics, community and institutional structures, political and social resources, and community resources and facilities (Interorganizational Committee, 1994). Impacts may also be classified or categorized into domains or types such as

impacts to economic and fiscal conditions, public infrastructure, land use and development, socio-cultural resources, health, safety and well-being, and community cohesion. Social indicators and measures are developed for relevant social impact topics to support the evaluation of impacts.

A number of qualitative and quantitative approaches are employed to evaluate the likely effects of a proposed action and specific alternatives on baseline community conditions and impact variables selected during the scoping effort. Evaluation methods for SIA include trend analysis, scenario analysis, map overlays, geographic information systems, expert consultation, various modeling approaches, and community surveys and input (Centre for Good Governance, 2006). An interdisciplinary approach to SIA is required to address the wide range of social impact topics, variables, and evaluation methods (Vanclay, 2003).

The impacts considered as part of the SIA process are multidimensional and vary across time, space, and project and community context. Thus, the impact analysis accounts for dimensional characteristics including the duration, timing, intensity, severity, frequency, scale, extent, and permanence of each impact (Esteves, Vanclay, Morardi, Sairinen, & Sauer, 2010). The evaluation of social impacts also includes an assessment of cumulative impacts resulting from past actions and related present and future actions, as well as indirect effects resulting from the current action. The distribution of impacts with respect to indigenous, vulnerable, or sensitive populations groups is reviewed to determine social equity implications (The World Bank Poverty Reduction Group & Social Development Department, 2003).

Determining how different stakeholders and community members are likely to respond to and view the impacts of a proposed action is integral to SIA. Social impacts can include perceptions of and attitudes toward potential changes, in addition to more quantifiable measurable effects. Community feedback informs the SIA process including determination of whether effects are viewed as adverse or beneficial and

their significance to communities. A balanced approach must be taken to incorporating this input into the SIA process to avoid drawbacks including the potential for overrepresentation in the process by vocal or influential stakeholder groups and underrepresentation by other groups, particularly disadvantaged populations, as well as any inaccuracies in public perceptions of project impacts (Burdge & Vanclay, 1996).

Each step of the SIA process provides inputs to inform the decision-making process including defining the need for and objectives of the proposed action; identifying options and alternatives; evaluating, comparing, and refining alternatives; selecting a preferred alternative plan of action; maximizing beneficial effects; developing measures to avoid, minimize, or mitigate adverse effects; and establishing monitoring plans to gauge social outcomes and adjust accordingly over time (Belgian Federal Public Service Social Security, 2010).

SIA Principles and Professional Framework

There have been a number of professional activities, developments, and milestones associated with standards and guidelines for the practice of SIA. The International Association for Impact Assessment (IAIA) was formed in 1980 and held its first international conference in 1982. The Interorganizational Committee on Guidelines and Principles for Social Impact Assessment was created in 1992 to assist agencies and organizations in the United States in fulfilling the requirements of NEPA and other regulations. The committee published Guidelines and Principles for Social Impact Assessment in 1994. In 2003, the International Association for Impact Assessment endorsed "International Principles for Social Impact Assessment" which include principles and core values for SIA addressing human rights, equity, diversity, quality of life, social capital, decision-making integration, transparency and accountability, community involvement, local knowledge, minimization of negative impacts, creation of beneficial impacts, and sustainable development (Esteves & Vanclay, n.d.). The European Commission adopted Impact Assessment (IA)

Guidelines for the development of legislation and policy in 2002. The IA guidelines were revised in 2005 and 2009 and emphasize integrated assessments that address economic, social, and environmental impacts (Watson & Schulte-Braucks, 2010; Meuwese, 2010).

Private organizations and foundations have taken similar actions to advance SIA practice in support of improved assessment methodologies (The Rockefeller Foundation & The Goldman Sachs Foundation, 2003). The World Bank's International Finance Corporation introduced environmental and social performance standards that require preparation of an Environmental and Social Action Plan. These standards now form the basis of the Equator Principles a voluntary set of standards that have been adopted by most lending institutions (Franks, Fidler, Brereton, Vanclay, & Clark, 2009).

Discussion

The SIA process encompasses a diverse set of practices across a host of industry sectors and international settings. It is an intensively interdisciplinary and complex process that can vary widely based on the context of its implementation (Dani, 2003). Despite the associated challenges, bringing together the different disciplines and broad perspectives of practitioners and organizations engaging in SIA has led to increasingly comprehensive approaches that more effectively capture the holistic nature of communities as interdependent systems. Further, a multi-sector approach to SIA, such as that promoted by the European Commission's IA Guidelines, enhances decision-making by providing an enriched understanding of how impacts from multiple actions affect communities and resources (Watson & Schulte-Braucks, 2010). Continued attention needs to be paid to adequately including and addressing cumulative impacts in SIA with sufficiently broad temporal and spatial boundaries (Franks et al., 2009).

Practitioners of SIA continue to promote integration of SIA early in planning and policy development, emphasis on social impacts alongside environmental impacts, methods for addressing more qualitative impacts,

preparation of SIAs by those with expertise in the field, standards for SIA practice, involvement of stakeholders in SIA, and collaborative decision-making. As sustainable development becomes the expectation of communities and stakeholders and standard for proposed actions, a shift is taking place with SIA practitioners and many agencies in orientation from minimizing and offsetting adverse social impacts often in the short term to focusing on positive social outcomes managing them across the life cycle of proposed developments. The definition of SIA will continue to expand along with the practice.

Cross-References

- ▶ Attitudes
- ▶ Community
- ▶ Community Effects
- ▶ Development
- ▶ Equity
- ▶ Health
- ▶ Human Rights
- ▶ Impact Assessment
- ▶ Land Use
- ▶ Lifestyle(s)
- ▶ Quality of Life
- ▶ Social Indicators
- ▶ Sustainable Development
- ▶ Trend Analysis
- ▶ Values
- ▶ Well-Being

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Social Inclusion

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Definition

Social inclusion is a complex, difficult, and often contested concept that cannot be simplified or reduced to any single dimension or meaning. Its scope and use are far ranging. It has been identified and taken up as a concern by an expansive range of (local, national, international) governments, policy makers, academic disciplines and professional practice fields (e.g., sociology, economics, political science, geography, social justice, law, immigration, psychology, education, social work, rehabilitation) and by grassroots and community activist groups interested in the situations of a similarly broad range of marginalized and equality-seeking groups.

In general terms, *social inclusion is concerned with communities, groups, and individuals – with a primary focus on those that are marginalized – and with access to and level and quality of participation and integration in the rudimentary and fundamental functions and relations of society. As such, it has personal, institutional, societal, and global dimensions* (Bach, 2002; Nash, 2002; Walker & Wigfield, 2004).

Description

Social inclusion is understood both as a process (i.e., systems and structures are organized in such a way as to either enable, facilitate, and invite or prohibit or actively remove people) and as a situation or status – an outcome (i.e., people live under circumstances of being either included or excluded). To understand it, we must examine how it comes about and what it looks like (Cameron, 2006; Sayed & Soudien, 2003; Walker & Wigfield, 2004).

Processes are key to social inclusion. These processes are dynamic, comprehensive, and multifaceted: individuals, groups, or communities may be included (or excluded) across a range of different dimensions (Bach, 2002). Similarly, social inclusion cannot be fully understood with reference to any single subsystem or societal unit, for instance, personal or professional relationships, neighborhoods, organizations, nations, or supranational blocs (e.g., the European Union). It is also multilayered and fluid. One may be included in some systems or units but not others, and different levels of inclusion may coexist in the lives of any single person, family, group, or community, resulting in variation in the degree and experience of inclusion in and across different systems and societal units and over time (Belfiore, 2002; Walker & Wigfield, 2004).

Labonte (2004) argues for the necessity of understanding the distribution, use, misuse, and abuse of power in determinations and processes of social inclusion. It is necessary to examine the socioeconomic rules and political powers and processes that serve to create included

(and excluded) groups and conditions: who is doing the including (and excluding); how are these various processes of inclusion and exclusion facilitated; what are the dominant views and relations of social, economic, and political power; and who benefits (who suffers) (Labonte, 2004; Sayed & Soudien, 2003). As such, it demands attention to economic and other material indicators but cannot ignore other factors important in determinations of who is and is not included (e.g., class, race, gender, ability, age). Similarly, understandings of inclusion should not be limited to local or national contexts: globalization is serving to create conditions that, across the world, include some while excluding others (Labonte, 2004).

The determination of inclusion is similarly complex. Therefore, on what basis is one understood to have achieved social inclusion? The list of possible indicators of social inclusion is extensive (Walker & Wigfield, 2004). Tremendous variation exists in how social inclusion is conceptualized and the theoretical underpinnings that inform such. The historical and cultural contingency at work in these socially constructed conceptualizations is made plain in the variations between and within the global north and south and between and within different disciplines, organizations, communities, and groups. This is important in that it complicates attempts at precise and universally recognized definition and measurement (Sayed & Soudien, 2003).

There may be an unduly narrow focus on site- or group-specific indicators of inclusion, for example, employment, income, and other forms of material advantage. Social inclusion is often tied directly to the elimination of poverty (United Nations, 2010). In the UK, it is typically truncated to labor market participation, despite the knowledge that being pulled out of poverty does not necessarily result in meaningful social inclusion, and “work” itself, particularly if part time, not secure, poorly paid, or physically demanding, may be extremely problematic (Labonte, 2004). A narrow focus further fails to attend to the myriad, and sometimes contradictory, ways inclusion is understood and how some

groups may be permanently excluded from particular measures (e.g., elderly and severely disabled persons excluded from valued competitive employment). Many argue against this urge toward precision, proffering instead the necessity of understanding social inclusion more broadly (Bach, 2002; Labonte, 2004; Leff & Warner, 2006).

In a related vein, social inclusion is often linked, and sometimes used interchangeably, with a number of other constructs, further complicating how it is understood, used, measured, and addressed. For example, it is frequently discussed along with, or as being the same as, ► [social participation](#) or the opportunity and ability to participate in social, economic, political, and cultural life (Milner & Kelly, 2009; Walker & Wigfield, 2004). Social inclusion has been described as a necessary achievement for both individual and societal ► [well-being](#) (Bach, 2002; Walker & Wigfield, 2004). Chamberlain (2011) places it as the desired end of a continuum of constructs influencing policy development beginning with ► [social exclusion](#) and moving through ► [tolerance](#) to acceptance and, finally, social inclusion. As it is taken up elsewhere in considerations of European social policy, it is seen as one of the four interconnected components of social quality, the others being socioeconomic security, social cohesion, and empowerment (Walker & Wigfield, 2004). Labonte (2004) and the United Nations (2010) also address its similarities and differences with the constructs ► [social cohesion](#) and social capital, while Ware et al. (2007) make connections between social inclusion, citizenship, and ► [social integration](#). Social inclusion has been further linked to citizenship when the understanding of citizenship is moved beyond a narrow legalistic sense to more broadly reference possibilities for full and democratic participation in economic, political, social, and cultural systems and institutions (Bach, 2002). It has also been differentiated from citizenship, with citizenship deemed insufficient to capture the agency and activity implied in social inclusion (Walker & Wigfield, 2004). Much emphasis has been placed on the importance of economic

redistribution and civil and human rights to social inclusion (Bach, 2002; Walker & Wigfield, 2004), but there is a growing awareness that rights and redistribution, while necessary, are not sufficient conditions for social inclusion (Labonte, 2004).

Social inclusion is, however, most often spoken of in connection to ► **social exclusion**. The two are understood to be inextricably linked – to each other and to a politics of social change (Walker & Wigfield, 2004). The contemporary focus on social inclusion in Western societies is a response to concerns over social exclusion that emerged as an important policy concept in Europe in the 1980s. The movement in the transition from modernity to late modernity, from an inclusive to an exclusive society, reflected in growing social divides, economic disparities, and inadequate social welfare provisions to address the needs of increasingly diverse populations, has led to attempts to address (through legislative and other efforts) social disadvantage in the face of the major economic and social transformations that characterize post-modernity (Belfiore, 2002). Social inclusion, as a result, is often a reframing of debates about poverty and vulnerability, one highlighting the economic and social dimensions of poverty, and linking these to other sources of exclusion (e.g., racism, ableism, rejection of difference, historic oppression) (Labonte, 2004). It is also now firmly embedded in government policy in most Western nations (Chamberlain, 2011).

A focus on social inclusion as a means of combating social exclusion, however, typically entails a strong normative stance that social inclusion is by definition “good” and exclusion is “bad.” The purpose of (good) inclusion policies and practices is to overcome (bad) exclusion (Sayed & Soudien, 2003). As a value-based concept, social inclusion is thus a way of “raising the bar and understanding where we want to be and how to get there” (Freiler & Zarnke, 2002: viii). It is an ideal – a hoped for outcome in which our arrangements will no longer disadvantage particular “others” because they are deemed to be different from the dominant norm. It is, then, not so much a condition as a philosophy, an

idea or focus of thinking that drives social policy, social action, and program development (Bach, 2002).

Labonte, however, cautions not to “let the warmth of our inclusive ideal smother our anger over exclusivity’s unfairness” (2004:118). Cameron argues that this type of boundary setting, by reflecting normative moral, political, and economic agendas, marks the “included” group more favorably than the “excluded” group (2006), with negative impacts on those who are excluded. Further, it may be simplistic as it fails to recognize that any inclusive policies may inadvertently result in new forms of exclusion and that even supposedly “universal” systems (such as education) exclude inasmuch as they include (Sayed & Soudien, 2003).

Also inherent in this dichotomous thinking is the assumption that the task of policy and social action is to target and then pull those who are excluded into the larger, “included” group. Such thinking leads to the risk of homogenization in that it ignores the complexity of social relations in society, the differences between and within individuals, groups, communities, and nations, and fails to specify the relationships between other forms of difference and inequity in society (Sayed & Soudien, 2003). Further, if the goal is assimilation, then inclusion is not likely to disrupt the status quo (Luxton, 2005). For example, it is not just about providing more paid work opportunities that are designed for a particular group with the expectation that everyone must “fit.” Social inclusion is about adapting institutions and accommodating the diversity of population so that all people have opportunities for meaningful inclusion (Bach, 2002; Labonte, 2004). It is about recognizing and utilizing the different ways of looking at and being in the world that formerly excluded groups can bring to efforts to effect meaningful change (Young, 2000).

Another assumption embedded in this dichotomy is that the “excluded” will feel deprived and want to be included, leaving no space for the counter-notion that some people may consciously choose to exclude themselves from particular processes, preferring, instead, to occupy alternative spaces. Despite being viewed as excluded

and as “other,” they might not regard this as negative or as detrimental to their quality of life (Sayed & Soudien, 2003).

It is also a mistake to see social inclusion as *only* a response to social exclusion. It has value on its own – both as a process and as a goal (Freiler & Zarnke, 2002). While often articulated as one end of a continuum, many argue it is not simply the opposite of social exclusion – these are not merely contradictory forces (Cameron, 2006). For example, if social exclusion is understood as the denial of different dimensions of citizenship, we cannot say simply that social inclusion then is the degree to which citizenship is achieved or that the solution to inequality is simply to give those who have been excluded the same formal rights as those who are included (Luxton, 2005). Similarly, we cannot assume that exclusion can be overcome and inclusion achieved by providing the same opportunities equally to all people (Labonte, 2004). This assumption fails to address the complexity of each of these measures of social inclusion, as well as the heterogeneous, asymmetrical, and unstable social, economic, and political positions of people. There is no single, one-size-fits-all approach to social inclusion (Sayed & Soudien, 2003).

While it is necessary to be able to examine institutional and other arrangements to determine how inclusive they are, equally important is the question of who determines if social inclusion has occurred and/or is successful. It is not just a question of what we are measuring but also the meaning ascribed by individuals, groups, and communities to the outcomes we measure. Social inclusion therefore has both objective and subjective components (Ware, et al., 2007). It is “the degree to which people *are and feel* integrated in the different relationships, organizations, sub-systems and structures that constitute everyday life” (Walker & Wigfield, 2004:12, emphasis added). For example, the experiences of people with disabilities with deinstitutionalization (Bach, 2002; Leff & Warner, 2006) and integrated education (Sayed & Soudien, 2003) policies and practices have demonstrated that inclusion in the physical spaces of community

and school alone is insufficient to achieve meaningful social inclusion.

While much of the literature speaks to the need for attention to a careful definition of social inclusion, Sayed and Soudien (2003) argue that it also demands ongoing reappraisal to ensure that, as a construct and a goal, it is indeed a social good and of benefit to society as a whole.

Cross-References

- ▶ [Human Rights](#)
- ▶ [Social Cohesion](#)
- ▶ [Social Exclusion](#)
- ▶ [Social Integration](#)
- ▶ [Social Participation](#)
- ▶ [Social Support](#)
- ▶ [Tolerance](#)
- ▶ [Well-being](#)

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(1983), and Michalos (1980). One of the pioneers in the field, ► **Mancur Olson**, wrote that a social indicator is:

a statistic of direct normative interest which facilitates concise, comprehensive and balanced judgments about the condition of major aspects of a society. It is, in all cases, a direct measure of welfare and is subject to the interpretation that if it changes in the ‘right’ direction, while other things remain equal, things have gotten better, or people are better off. Thus, statistics on the numbers of doctors or policemen could not be social indicators, whereas figures on health or crime rates could be. (U.S. Department of Health, Education & Welfare, 1969)

The word “quality” in the phrase “quality of life” has a descriptive sense meaning sort, type, or kind and an evaluative sense meaning briefly good or bad. So, for example, one might describe attendees to a football game by giving their quantity (e.g., 10,000) and their qualities in a descriptive sense as male or female and in an evaluative sense as properly behaved or hooligans. There is practically no limit to the ways in which one may specify or characterize qualities of human existence, including qualities of individual and collective lives themselves as well as the conditions in which individuals and collectivities live.

Broadly speaking, at least two kinds of social indicators may be distinguished. Subjective social indicators are statistics that have some significance for measuring the quality of life from the point of view of some particular subject(s), and objective social indicators are statistics that have some significance for measuring the quality of life from the point of view of any independent observer. Early accounts of both kinds of indicators may be found in Sheldon and Moore (1968) and Campbell and Converse (1972), and more recent accounts may be found in Glatzer, Von Below, and Stoffregen (2004); Møller, Huschka, and Michalos (2008); Diener (2009); and Diener, Lucas, Schimmack, and Helliwell (2009).

Although all social indicators are supposed to have normative significance or at least to admit of normative uses, the normative significance may be explicit or not. Given the two senses of “quality” and the two kinds of indicators, four notable species may be distinguished.

Social Indicators

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Definition

Social indicators are statistics that are supposed to have some significance for measuring the ► **quality of life** or overall ► **well-being**.

Description

In the 1960s the term came into use in several countries in Europe and North America, and several good historical accounts have been written sketching the development of what some called the social indicators movement, for example, Sirgy et al. (2006), Noll (2002), Berger-Schmitt and Jankowitsch (1999), Ferriss (1988), Land

1. Descriptive subjective indicators (e.g., self-reported income, weight)
2. Evaluative subjective indicators (e.g., self-reported good health, victims of criminal offenses)
3. Descriptive objective indicators (e.g., percentages of eligible voters casting ballots, university graduates)
4. Evaluative objective indicators (e.g., crime, poverty rates)

As explained in most of the references below and reviewed especially well in Berger-Schmitt and Jankowitsch (1999), social indicators of all species have often been assembled by government agencies into broad social reports that are supposed to provide the “comprehensive and balanced” views of societies referred to by Olson. As noted in Land (1983), more sophisticated and controversial social accounting schemes have also been constructed based on social indicators. Such reports and accounts are usually assembled along the lines of specific domains of life such as ► [health](#), ► [education](#), and leisure. In Michalos (2012) it is shown that some of the most salient domains of contemporary life are also the most durable, with roots going back to the late eighth century BCE. Cummins (1996) reported results of scanning 1,500 articles providing data on life satisfaction. A variety of data reduction techniques allowed him to distill seven broad domain names that captured 83 % of some 351 domain names that appeared in the original set of articles. The seven domain names were ► [material well-being](#), ► [health](#), ► [productivity](#), intimacy, safety, ► [community](#), and ► [emotional well-being](#).

Very often, but not always, subjective indicators provide measures of things that are relatively intangible and directly experienced, for example, generic feelings of ► [positive affect](#) or ► [negative affect](#), specific feelings of fear, ► [attitudes](#), beliefs, ► [knowledge](#), standards for evaluation, motives, goals, needs, wants, ► [happiness](#), or ► [satisfaction](#).

Researchers do not have direct, sensible access to other people’s felt feelings, beliefs, and so on, although it is precisely such attributes that supremely characterize our species. For such

attributes it is reasonable to give special privilege to self-reports unless there are good reasons for doubting their truth or validity. It would, for example, be unreasonable to accept self-reports provided under duress, under the influence of intoxicating drugs, or under some diseases, or reports of knowledge claims that are patently false. For a relatively brief period in the history of social indicators research, there was some discussion over the question of whether social reports ought to contain only subjective or objective indicators, but as suggested in Sheldon and Moore (1968) and Campbell and Converse (1972), very early the vast majority of researchers agreed that both kinds of indicators are necessary to comprehensively and accurately assess the ► [quality of life](#).

► [Social Indicators Research](#), carrying the subtitle *An International and Interdisciplinary Journal for Quality of Life Measurement*, was established under the editorship of Alex C. Michalos in 1973 and published its first issue in May 1974. In 2005, its thirtieth anniversary was celebrated with a collection of articles that became citation classics (Michalos, 2005). In 1984, with the support of the US Social Science Research Council, The Social Indicator Network News (SINET) began publication (Land, 1983). *SINET* is currently the official newsletter of the ► [International Society for Quality of Life Studies \(ISQOLS\)](#) and is edited by Ken C. Land. It includes news of activities of the Research Committee on Social Indicators and Social Reporting (formerly Working Group 6) of the International Sociological Association. ISQOLS was established in 1995 as “an international society whose purposes are to promote and encourage research in the field of quality of life studies” (ISQOLS website). In 1994 the ► [International Society for Quality of Life Research](#) was established, “to advance the scientific study of health-related quality of life and other patient-centered outcomes to identify effective interventions, enhance the quality of health care and promote the health of populations” (ISOQOL website). The first issue of its now official journal, ► [Quality of Life Research](#), appeared 2 years earlier, in 1992.

Discussion

Because people come to the field of social indicators from many different backgrounds, including many different academic disciplines as well as nonacademic areas like government, nongovernmental organizations (NGOs), and private industry, there is some diversity in language and definitions. Some researchers use the term “subjective well-being measures” as “subjective social indicators” as defined here and use the term “social indicators” only for “objective social indicators” as defined here (Diener, Lucas, Schimmack, & Helliwell, 2009). Diener (2006) and about 50 other scholars signed on to a short document attempting to bring some order to the rather disorderly array of terms and definitions used in social indicators research. A number of caveats and qualifications were required to get everyone’s comfort level high enough to put his or her name to the document, but it was a worthwhile effort.

Cross-References

- ▶ [Andrews, Frank M.](#)
- ▶ [Campbell, Angus](#)
- ▶ [European Union Indicators](#)
- ▶ [Olson, Mancur](#)

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Social Indicators Movement

- ▶ [History of Social Indicators and Its Evolution](#)

Social Indicators Research

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Synonyms

[Citation classics](#)

Definition

► *Social Indicators Research*, carrying the subtitle *An International and Interdisciplinary Journal for Quality of Life Measurement*, was established under the editorship of Alex C. Michalos in 1973 and published its first issue in May 1974.

Description

While working on the final chapters of the *Foundations of Decision-Making* (Michalos, 1978) in 1971, he read a lot of the current literature on ► *cost-benefit analysis*, planning-programming, and budgeting and public choice generally. That included things like *Toward a Social Report* (USGPO, 1969) and the US Senate *Hearings on the Full Opportunity and Social Accounting Act* (USGPO, 1968). The idea of a social report or, rather, what one would today call a social accounting system captured his imagination. He agreed with Ray Bauer and others who saw the first payoffs at least 30 years down the road, but to a man of 36 that was not a long time.

So, before the ink was dry on the *Foundations* manuscript, he began planning a preliminary comparative social report for Canada and the United States (Michalos, 1980a, 1980b, 1981a, 1981b, 1982). The problem was, however, that there was no recognized authoritative source for current research on ► *social indicators*. Important papers might turn up anywhere. More often than not, unpublished dittoed manuscripts were being circulated in non-intersecting circles of researchers.

Working within an established discipline, one has a good sense of where the frontiers are or at least how to find them. But social indicators research was not and is not a discipline. Nevertheless, people working in the area had a feeling that they were up to something that was roughly recognizable to others up to the same things. What was required was some coordination of efforts. The response of workers around the world was almost the same. They formed committees. Those that could find funding held

conferences. When the US Social Science Research Council set up its Washington Center for the Coordination of Research on Social Indicators (Land, 2000), it seemed that a journal was bound to be just around the corner. They had the expertise, the money, and the influence, everything apparently but the inclination. They put out a *newsletter* (► *SINET*) and were content.

In 1971 or 1972 Michalos met ► *Mancur Olson* at the University of Maryland. He had admired Olson's work in public choice and was delighted to get to know him personally. The two agreed that a journal would be a useful research tool and both hoped someone would start one. At one point during a conversation, Michalos asked Olson "Would you be interested in editing a journal on social indicators?" and Olson replied, "No, but I think you would be perfect for the job."

Michalos contacted the D. Reidel Publishing Company in Dordrecht, Netherlands, in November 1972 and received an enthusiastic reply in the same month. In April or May 1973, he was invited to a meeting of the steering committee of the US Center in Washington. He explained his proposal to them and told them that if they had objections to his editing the journal or if they knew of someone else who would be better suited, he would be glad to step aside. When he offered to step aside, O. Dudley Duncan, who was chairing the meeting, rocked back on his chair, half chuckled and blushed, and said that was not the role of the committee. As far as Duncan and the rest of the group were concerned, they were happy to let Michalos get on with it.

Immediately following that meeting, Michalos wrote to Reidel saying that the US group was completely behind his initiative, that 27 scholars from around the world agreed to serve on the journal's Editorial Board, and that we could go forward with publication as soon as Reidel could make the necessary contractual and production arrangements. In May 1973, he received his contract and production plans were laid for a quarterly journal, in 4 issues of 125 pages each.

Among others, the first Editorial Board included Patrick N. Troy (Australia); Lore Scheer

(Austria); Sylvia Ostry (Canada); Marshall Wolfe (Chile); Erling Jørgensen (Denmark); Erkki Laatto (Finland); Bernard Cazes (France); Wolfgang Zapf (Germany); M.S Gore (India); Yehezkel Dror (Israel); Yoshihiro Kogane (Japan); Robert A. Obudho (Kenya); Pablo Gonzales Casanova (Mexico); Jan Drewnowski and Jan Tinbergen (Netherlands); A.D. Robinson (New Zealand); Gudmund Hernes (Norway); Sten Johansson (Sweden); E.J. Mishan (United Kingdom); ► Daniel Bell, James S. Coleman, Bertram Gross, Otis D. Duncan, Irving L. Horowitz, and Mancur Olson (USA); and J.R. Revenga (Venezuela). By 1979 the Board included Carlos A. Mallmann (Argentina), Rudolf Rezhazy (Belgium), Erik Allardt (Finland), Henri Verwayen (France), ► Rudolf Andorka (Hungary), Ramkrishna Mukherjee (India), Siri Naess (Norway), Ibrahim H. Abdel Galil (Sudan), John Hall (United Kingdom), and ► Frank M. Andrews, Abbott L. Ferriss, Kenneth C. Land, and Frank W. Young (USA). As this entry is being written, nobody from the 1974 Board is left, but from the 1979 Board we still have Abbott Ferriss and Ken Land. Besides serving on the SIR Board since 1979, Ferriss edited ► SINET for many years and then passed it on to Land.

The aim of the journal was to provide a public forum for discussion of issues related to measuring aspects of the quality of life. The phrase “quality of life, two variable theory” was interpreted very broadly to include virtually all forms of systemic well-being, where the systems may be psychological, biological, social, economic, or whatever. Just as no constraints on the sorts of things whose well-being may be discussed in SIR, no constraints were put on the notion of well-being (Michalos, 2005).

In 2005, the journal’s thirtieth anniversary (2003) was celebrated with a collection of articles that were identified as citation classics (Michalos, 2005). There were a total of 1,392 titles published in the first 30 years. Since the journal seldom published book reviews, editorials, or letters,

most of those titles represented articles. Eight hundred and twenty articles (58.9 %) were not cited at all, which is a bit higher than the 55–57 % general average for the combined database of *Science Citation Index*, *Social Sciences Citation Index*, and *Arts and Humanities Citation Index*, lower than the 74.7 % for all social sciences material and higher than the 48 % for social science articles alone. The 572 (41.1 %) cited articles generated 4,979 citations, with a classic hyperbolic distribution curve in which relatively few articles attract many citations and relatively many articles attract few citations. The mean number of citations per published article was 3.6, with a mode and median value of zero and a standard deviation of 11.8. There were 34 articles with 35 or more citations each, and those 34 (2.4 %) articles attracted 2,208/4,979 = 44.4 % of all citations. The top 68 (4.9 %) articles attracted 2,997/4,979 = 60.2 % of all citations. Given their extraordinary contribution to the journal’s total citation count and the fact that articles with 35 or more citations were nearly three standard deviations above the mean, those articles form a fairly distinguished lot. Therefore, the threshold figure for designating citation classics from *Social Indicators Research* was set at 35. All but one of the 34 articles focused on some aspect of ► subjective indicators. At the time when the collection was put together, the top 10 articles were as follows:

- Andrews, F. M., & Withey, S. B. (1974). Measures of perceived life quality: Results from several national surveys. *1(1)*, 1–26.
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Cross-References

- ▶ [Applied Research in Quality of Life](#)
- ▶ [Journal of Happiness Studies](#)
- ▶ [Quality of Life Research](#)

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Social Indifference Curves

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Synonyms

[Social welfare indifference curves](#)

Definition

A social indifference curve consists of distributions of welfare of members of a group that the policy maker views as achieving the same social welfare.

Description

Suppose the government of a nation has a choice between three different policies to address its public debt problem: policy 1 cuts government expenditure, policy 2 raises taxes, and policy 3 involves a mix of both. In all likelihood the three policies will not lead to the same distribution of welfare (utility) of the country's citizens, and neither is it apparent that one of the policies will lead to a state of the economy in which everybody is worse off than under the other two policies. How should the government choose the policy? In order to make a decision, the government can choose the policy that yields the highest social welfare.

Social indifference curves are derived from social welfare functions (see, e.g., Tresch, 2002). A social welfare function maps distributions of individual welfare of a group into one value, the social welfare. If two alternative distributions of individual welfare lead to different social welfare, the higher of the two values indicates the preferred distribution. Social indifference curves consist of all the distributions

of individual welfare that lead to the same level of social welfare.

Social welfare can only be calculated from comparing welfare of individuals. Critics such as the New Welfare Economists have argued that such a comparison is impossible to achieve, and hence, social welfare functions should not be used in evaluating different policy options (Stigler, 1943). The New New Welfare Economists accept the idea of interpersonal welfare comparison and are interested whether more than one functional form leads to the same policy recommendation (Tresch, 2002). Other critics question the assumption that maximizing social welfare is a normative goal, as it is purely based on ends but not on means or process; society might prefer honesty even when it leads to a lower social welfare than an action that involves telling a lie to somebody (Sen & Williams, 1982).

Social welfare functions have a long tradition in economics, and the utilitarian welfare function is the most well known (see, e.g., Moulin, 1988). Utilitarian social indifference curves indicate all the distributions of individual welfare that sum up to the same amount. This means that one unit of individual welfare lost by one individual and one unit gained by another leads to a distribution of welfare that is as desirable as the original one. For that reason, utilitarianism has been criticized as not paying enough attention to inequality: since only the sum of individual welfare matters, a distribution of welfare that yields a very high level of welfare to a minority and very low levels of individual welfare to a majority of individuals in society can be preferred to a more egalitarian distribution as long as the first distribution sums up to a higher value than the latter. Rawls (1971) developed a different approach that equates social welfare with the individual welfare of the worst off individual in society. Giving more utility to an individual that is not the least well off in society without increasing the welfare of the least well off is no longer deemed a preferred distribution; it yields exactly the same social welfare as the original distribution. Utilitarians, on the other hand, would prefer the second

distribution as it increases the sum of individual welfare. Rawls' social welfare function is called the egalitarian social welfare function (Moulin, 1988). Other social welfare functions have also been proposed with distinctive social indifference curves. Rather than viewing all distributions of individual welfare the same when the sum is the same (Utilitarianism) or viewing all distributions the same that yield the same individual welfare of the least well off person, the class of generalized utilitarian social welfare functions allows for a compromise between the utilitarian and the egalitarian approach (Tresch, 2002).

Typically when economists refer to social welfare, they refer to groups with everybody in the economy included. Yet the relevant economies can differ in size and level of government: i.e., one can refer to social welfare functions of local or global governments, which, dependent on the context, can in turn refer to municipal versus state or provincial levels, state/provincial versus national, national versus international levels, etc. It is also possible to characterize potential policy makers by different social welfare functions. For example, candidates of different political parties will differ in their social welfare functions by putting different weights on different groups in the population.

Cross-References

- ▶ [Consequentialism](#)
- ▶ [Utilitarianism](#)
- ▶ [Utility](#)

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Social Inequalities

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Synonyms

Ascriptive inequalities; Cambridge Social Interaction and Stratification Scale (CAMSIS); Erikson-Goldthorpe-Portocarero classification (EGP); European Socioeconomic Classification (ESEC); Horizontal inequalities; Inequality crystallization; International Socioeconomic Index (ISEI); International Standard Classification of Occupations (ISCO); Meritocratic triad; Segregation; Social disparities; Treiman's Standard Index of Occupational Prestige Scale (SIOPS); Vertical inequalities

Definition

Social inequalities refer to the unequal distribution of, and unequal access to, highly valued and desired material and nonmaterial social goods. Social inequalities imply systematic advantages and disadvantages in life chances, living conditions, opportunity structures, and life outcomes of individuals and social groups.

Description

The conceptualization of social inequalities as restricted or unequal access to highly valued social goods emphasizes two core components: firstly, the social, cultural, economic, and institutional processes that assess and define certain goods as central and desirable and, secondly, the rules of access to, and allocation of, these central goods. The relative shortage of central social goods is often the result of social rarefaction. Social inequalities are institutionalized and socially embedded: the unequal

distribution of central goods is systematically linked to the social roles and positions of individuals and social groups in a given society. Social inequalities structure ► [social interactions](#) and are in turn structured by them. Social inequalities, therefore, have to be strictly distinguished from mere (individual and/or accidental) differences, peculiarities, or preferences.

Max Weber initially conceptualized the basic notion of social inequalities. His ideas have been elaborated on and developed further within the context of structuralist (Wright, Goldthorpe, Erikson), functionalist (Davis and Moore, Parsons), conflict-theoretical (Lenski, Dahrendorf), culturalist (Veblen, Bourdieu), and postmodernist perspectives (Beck, Giddens, Bauman). The concept of social inequalities is based on the principle of ► [equality](#) among humans that emerged in the era of enlightenment and characterizes modern society. Whether or not, and to what extent, social inequalities are considered as unjust or unacceptable (social justice, discrimination) depends upon one's theoretical, ideological, and/or political position. In this context two different concepts of equality and/or inequality are often contrasted: equality of opportunity, i.e., equal treatment, fairness, and nondiscrimination in selection processes, particularly regarding access to education and employment (► [employment discrimination](#)), and equality of outcome, i.e., equality and fairness in the distribution of central goods and rewards, particularly regarding material resources, like income and wealth. Equality of opportunity (which, however, does not guarantee equality of outcome) is emphasized by the functionalist perspective and the liberal, market-based view of the meritocratic society. In contrast, equality of outcome (together with equality of opportunity), implying ► [social policy](#) measures and programs of redistribution (particularly regarding income and wealth and ► [income redistribution](#)), is favored by structuralist and conflict-theoretical perspectives as well as socialist and social democratic positions.

Social inequalities have to be seen as a complex and multifaceted phenomenon that concern various societal, economic, and political spheres. Social inequalities have thus become a key concept and area of research and debate in sociology (Grusky, 2008), economics (Salverda, Nolan, & Smeeding, 2009), and political science (Moene & Wallerstein, 2001). Nevertheless, most approaches are disciplinary with a focus on specific dimensions of inequality without developing an integrated, interdisciplinary perspective of the various forms of inequality and their interrelationships. The most important dimensions of social inequalities and their respective resources or assets analyzed in the literature concern, firstly, income, wealth, and material inequalities (based on economic resources; Atkinson & Bourguignon, 2000; Salverda et al., 2009; McCall & Percheski, 2010), secondly, educational inequalities (based on cultural and educational resources; educational attainment; Shavit & Blossfeld, 1993, Breen & Jonsson, 2005; Breen, Luijckx, Müller, & Pollak, 2010), and thirdly, occupational inequalities (based on labor market status, occupational position, and organizational resources; Erikson & Goldthorpe, 1992; Ganzeboom, De Graaf, Treiman, & De Leeuw, 1992). Most researchers consider these three dimensions as the core of the inequality system in contemporary societies; some authors, particularly those adopting a functionalist perspective, use the term of the meritocratic triad to characterize the ► [social stratification](#) system of the three interrelated hierarchical core dimensions of inequality.

In addition to the three basic dimensions, other important inequality-related aspects are treated in the literature, notably, ► [health inequalities](#) (based on physical and mental resources; health), relational inequalities (based on social capital, social relations, and networks), and power-based inequalities based on political resources. Furthermore, ascriptive dimensions of social inequalities, i.e., gender, age, and race and ethnicity, which have also been characterized as “horizontal inequalities,” are often directly related to specific (vertical) dimensions of social inequalities (e.g., income or occupational

position). Empirical research points to the continuing importance of these ascriptive inequalities and their functioning as barriers to ► [social mobility](#). In contemporary societies ascriptive inequalities are regarded as particularly disturbing, since they are often not based on performance and meritocratic criteria. Finally, some authors are emphasizing the evolution of “new” forms and dimensions of social inequalities (e.g., life style(s), access to new technologies) which, however, in general do not eliminate, but rather cross-cut, “traditional” ones. The various dimensions and aspects of inequality are mutually related; the extent of this correlation is referred to as the degree of crystallization of the inequality system.

Inequality research has established a large number of different methods and indicators for measuring social inequalities, which are usually conceptualized on the level of each single inequality dimension. *Educational inequalities* are most often measured by educational degrees based on the International Standard Classification of Education (ISCED) or by the duration of schooling. More recently, standardized measures of pupils’ competences have been developed within the context of the ► [Programme for International Students Assessment \(PISA\)](#). More sophisticated indicators refer to the reproduction of educational inequalities, e.g., educational inheritance (comparison of educational levels of parents and children), educational homophily and/or homogamy (marriage or partnership between people with the same educational level), and ► [segregation](#) indicators like the dissimilarity indices (measures for under- and overrepresentation of various social groups). Regarding *income* and *wealth inequality*, summary measures like the ► [Gini coefficient](#) and the Atkinson and Theil indices are most often used but also simple measures like decile, quintile, and percentile ratios; income shares of particular income groups (► [low income](#), ► [poverty](#), rich people, ► [working poor](#)); frequency distributions (► [income distribution](#)); or graphic representations like the Lorenz curve. Income is usually measured as equivalent household income based on the disposable

income (effective income of all household members less compulsory payments like ► [taxes](#), social security contributions, alimony) and taking into account different household sizes (by weighting the disposable household income with equivalence scales). In addition to these monetary indicators of material inequalities, nonmonetary measures have been developed as well. In the context of research on consumption and ► [deprivation](#), summary measures, as well as synthetic indices of material deprivation, based on latent variable models have been developed (OECD, 2008). *Occupational inequalities*, finally, have been most often measured by occupational prestige scales (e.g., Treiman's Standard Index of Occupational Prestige Scale, SIOPS, Treiman, 1977) and occupational classification scales, which are usually based on the International Standard Classification of Occupations (ISCO), like the Erikson-Goldthorpe-Portocarero classification (EGP), Wright's social class model, or the more recently developed European Socioeconomic Classification (ESEC). In addition segregation indicators measuring vertical and horizontal labor force segregation are widely used, particularly in research on ► [gender inequalities](#). A relational conceptualization of occupational classification is provided by the Cambridge Social Interaction and Stratification Scale (CAMSIS), which measures the social distance/social interaction between occupational groups based on friendship or marriage as relational criteria. A more comprehensive multidimensional measure of socioeconomic status is the International Socioeconomic Index (ISEI) proposed by Ganzeboom et al. (1992), which combines the three basic dimensions of social inequalities, namely, occupational status, income, and education.

Social inequalities have traditionally been analyzed on the level of national societies. Only recently has a global perspective on social inequalities been developed. This research focuses primarily on economic inequalities and in particular on income inequality (e.g.,

Milanovic, 2005; Suter, 2010). Most authors agree that intracountry inequality (differences between individual incomes within countries), intercountry inequality (differences between the mean income in different countries), and global inequality (differences between individual incomes worldwide) have to be distinguished.

The temporal dynamics of income inequalities are important topics of recent research (Milanovic, 2005; OECD, 2008). There are different – and partially contradictory – developments over time in intra- and intercountry income inequality. Thus, in the long run (i.e., since the early nineteenth century), the importance of intercountry income inequality has considerably increased, although not continuously and not in the past few years, due to the fact that China and India have caught up to some extent. The importance of within-country income inequality, on the other hand, has decreased in principle, although not continuously and not in the past few decades. As to the evolution of income inequality during the past 30 years, (population-weighted) intercountry inequality decreased – mainly due to the higher-than-average growth of China and India (Milanovic, 2005). Conversely, intracountry inequality tended to increase in most, but not in all, countries. As a result, global income inequality is rather high today.

More detailed recent analyses of the evolution of income inequality among individual countries and country groups demonstrate that most countries experienced an increase in income inequality but that the individual country patterns vary substantially (Cornia & Addison, 2003; OECD, 2008). Regarding developing and transition countries, Cornia and Addison (2003) showed that there has been an increase in income inequality since the late 1950s in most of them (i.e., 63 %). There was, however, a reduction in income inequality in 12 % of these countries, and, for the remaining 25 %, results were ambiguous. Similarly, whereas most core countries (i.e., 75 %) showed rising income inequalities (notably in

the United Kingdom and the United States where a strong inequality upswing took place in 1980s), the extent, the pattern, and the structural characteristics of the rising inequality vary considerably, and several countries experienced stable or even decreasing inequalities (e.g., France, Greece; cf. OECD, 2008).

The most important driving factors of growing and persistent income inequalities highlighted by empirical research are processes of globalization and ► [social change](#), skill-based technological changes and sectoral transitions, the strength of counterbalancing forces (like unionization, cf. Alderson & Nielsen, 2002), but also the different national, institutional, and societal arrangements (i.e., employment regimes, welfare-state type, ► [social policy](#), tax system, educational system, family models). Other more “accidental” events which considerably affected inequality were wars, stock market crashes, and economic depressions, as well as inflation (cf. the discussion in Atkinson & Piketty, 2007).

There is a large amount of research which demonstrates the (adverse) consequences of social inequalities, particularly for health, social relations, and social cohesion (cf. Neckerman & Torche, 2007). How are social inequalities associated with quality of life, ► [subjective well-being](#), and ► [happiness](#)? While there is a large body of literature on the link between *levels* of objective living conditions (i.e., levels of one’s disposal of central social goods and material resources) and subjective well-being, the impact of the *distribution* of these central goods has so far received less attention. Research on income and well-being pointed to the importance of *relative* income, i.e., the comparison of one’s income with relevant others. This positive relationship between relative income and well-being, which has been demonstrated by several empirical studies (cf. Senik, 2005 for an overview), suggests a corresponding negative association between income inequality and well-being. However, empirical studies which explored the impact of

income inequality in more detail showed inconclusive results.

Thus, several researchers observed no or only weak relationships, some found the expected negative impact, and others report even a positive effect of income inequality on well-being (Alesina, Di Tella, & Mac Culloch, 2004; Berg & Veenhoven, 2010; Fahey & Smyth, 2004; Ferrer-i-Carbonell & Ramos, 2012; Graham & Felton, 2006). Based on data of the German Socio-Economic Panel Study, a recent analysis demonstrates that the effect of income inequality substantially varies by population groups, geographical units, and inequality measures and indicators (Schneider, 2012a). Moreover, this and other studies have been able to demonstrate the mediating effects of perceptions of social inequalities, social mobility, and fairness (Alesina et al., 2004; Oishi, Kesebir, & Diener, 2011; Schneider, 2012b). The ambiguity of the existing empirical evidence demonstrates that more systematic analyses and comparisons, taking into account methodological, conceptual, contextual, and perceptual variations, are needed, to achieve a better understanding on exactly how and why social inequalities impact on quality of life and subjective well-being.

Cross-References

- [Consumption](#)
- [Deprivation](#)
- [Educational Inequality](#)
- [Employment Discrimination](#)
- [Equity](#)
- [Gender Discrimination](#)
- [Gender Equality](#)
- [Gender Equity](#)
- [Gini Coefficient](#)
- [Happiness](#)
- [Health](#)
- [Health Inequalities](#)
- [Household Disposable Personal Income](#)
- [Income Distribution](#)
- [Income Redistribution](#)

- ▶ [Low Income](#)
- ▶ [Poverty](#)
- ▶ [Quality of Life](#)
- ▶ [Rich People, an Overview](#)
- ▶ [Segregation](#)
- ▶ [Social Change](#)
- ▶ [Social Cohesion](#)
- ▶ [Social Comparison Theory](#)
- ▶ [Social Exclusion](#)
- ▶ [Social Justice](#)
- ▶ [Social Mobility](#)
- ▶ [Social Policy](#)
- ▶ [Social Stratification](#)
- ▶ [Subjective Income Inequality](#)
- ▶ [Subjective Well-being](#)
- ▶ [Working Poor](#)

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Social Inequalities in Health

► Socioeconomic Determinants of Health

Social Innovation

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Definition

Social innovation is a new idea, method, or process that creates a social value. Though the concept is defined in a variety of ways by both researchers and practitioners alike, scholars commonly frame social innovation as a systematic change to an existing institution or procedure driven by the need to reach a social goal or solve a social problem. As a form of social change, more broadly it constitutes "... the generation and implementation of new ideas about social relationships and social organization" (Mumford, 2002, p. 253).

Description

While "innovation" has long been understood as a form of ► [entrepreneurship](#) linking development and human ► [well-being](#), social innovation has only recently entered into the lexicon of social scientists. Prior to 2000, only a single article featuring social innovation in the title could be found within the top social science databases (Nilsson, 2003). A little over a decade later, the usage of the term has become considerably widespread, though there remains relatively little consensus regarding its specific meaning as well as its analytic relevance within the social sciences.

A variety of factors contribute to the increasing salience of social innovation. Fueled by a broadly shared perception of social crisis, both with regard to the legitimacy and authority of the state in meeting social needs, as well as the capacity of civil society to reproduce and/or foster ► [trust](#) and ► [solidarity](#), social innovation has come to be viewed as an important mechanism to promote ► [community economic development](#). In light of persistent socioeconomic disparities and increasing cultural dislocation, rapid development of new information and communications technologies combined with increasing public awareness of the power of ideas, attention has been drawn to the need for new solutions to social problems. By underscoring the necessity of social adaptation and ► [social sustainability](#), these trends combine to open up a space for promoting social innovation as an antidote to the complex challenges of modern society.

Intellectually, the turn to social innovation is motivated not only by a changing empirical context but also by the development of interdisciplinary research agendas focused on related topics such as sustainable development, social inclusion, quality of life, and ecosystem well-being. As a result, researchers have been increasingly interested in social innovation as a concept useful for capturing organizational production at the microlevel, the dynamics of social change at the macro-level, and, more recently, a set of policy objectives that emerge from the intersection of community, business, and government.

Social Innovation at the Microlevel

At the microlevel, the interest in social innovation is frequently connected to entrepreneurship and institutional efficiency within the production process. Linking these concerns to the development of the economy more broadly, Joseph Schumpeter (1975) identified five types of innovation: product, process, market, supply source and organizational – the latter of which has come to be associated with social innovation within much of the management literature (Laville, Lévesque, & Mendell, 2005). Against a backdrop of rapid changes in

technology and economy, social innovation serves managers as “the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service” (Drucker, 1985). Thus, as applied to business, social innovation is seen as a means of wedding entrepreneurship to innovative management techniques in order to enhance the productivity of workers, the quality of goods and services, and the satisfaction of customers.

More recently, an attempt has been made to identify social innovation with a specific type of hybrid social and economic organization: the social enterprise. Focused on producing goods and services with social utility, social enterprises are seen as the natural vehicles of social innovation (Galera, 2007). Whereas normal businesses may utilize innovative techniques to benefit specific individuals, identified primarily as owners or consumers, social enterprises produce collective social benefits for communities. They do this both by generating products that help solve social problems (i.e., fair trade coffee, computer software for the blind, and solar-powered generators) and by creating and sustaining programs, projects, and services that help to promote social sustainability (i.e., access to credit for poor farmers, work training for people with disabilities, and eco-friendly dry cleaning). Thus, while on the one hand social innovation is conceived as a specific set of outputs that generate social value for socially disadvantaged populations, on the other, it is conceived as a process of collaboration among social actors (i.e., community members and social entrepreneurs), utilizing a unique set of skills, experiences, and ideas in order to realize their ► [social development](#) goals.

Social Innovation at the Macro-Level

As greater clarity has been gained in distinguishing “business” innovation from social innovation (Pol & Ville, 2009), greater attention has been paid to the ways in which social innovation can be used to illuminate broader dynamics of ► [social change](#) beyond the confines of the production process. Because the interest here is in understanding social innovation as

a catalyst for social and community development, most macro-level analysis of social innovation adopt a systems framework. Within this framework social innovation is conceived as simultaneously a product and a process (Phills Jr, Deiglmeier & Miller, 2008) as well as both a cause and consequence of desired social change. Located within politically and/or geographically bounded local or regional systems, social innovation crosscuts organizational and sectoral boundaries to “connect brokers, entrepreneurs and institutions [to] . . . people, ideas, money and power” (Mulgan, Tucker, Rushanara, & Sanders, 2007, p. 8). In so doing, it raises a number of interesting questions not only about the social content of innovation but also its scope: how are novel ideas adapted to specific environments? How can social innovation be diffused and/or scaled up to have broader impact? What enables social innovation to persist over time?

While theory related to social innovation is in its infancy, standard innovation theory provides a solid foundation for tackling a number of questions related to adaptation and persistence. For example, Andrea Westall (2007) draws on the three main divisions established by standard innovation theory, ideas creation, implementation of ideas to produce results, and diffusion or dissemination, to discuss how innovation exchange serves as a key mechanism for connecting innovators to others who might benefit from the new approaches they are pioneering. Similarly, substantial theoretical and empirical work has been undertaken on the way in which systems generate and promote sustainable social innovation by scaling up and connecting local realities through the creation of stable, crosscutting alliances that intermediate between the public, private, and third sector. Examples can be seen in universities, federations, unions, and social movements, specifically in places like Quebec in ► [Canada](#), the Basque country in ► [Spain](#), and Emilia Romagna in ► [Italy](#). In order to clarify the breadth and depth of social innovation, scholars such as Dr. Francis Westley and Annahid Dashtgard, director of Community Animation, have established

analytical frameworks for conceptualizing and operationalizing social innovation as a set of mechanisms for generating sustainable public goods, as well as specifying the steps by which dynamic interaction of inputs, processes, and outputs combine to disassemble the current systems resources, authority, and beliefs, and then reconstruct them in the new image (Westley & Antadze, 2009, p. 4; Christensen, Baumann, Ruggles, & Sadtler, 2006; Murray & Mulgan, n.d.).

Future Research

In promoting the application of social innovation, a number of authors have underscored the need for future work to look more specifically at the type of public policies most likely to facilitate social innovation (Centre for Social Innovation, 2011; Canadian Government, 2010; Moulaert & Hiller, 2009; Phills et al., 2008; Jolin, 2007). For practitioners, this will involve identifying the way in which social innovation fosters important values and ► [ethics](#) related to ► [social justice](#), ► [equity](#), ► [cultural diversity](#), and ► [well-being](#) and to specify social objectives relevant to different political and geographic contexts. For researchers, future work is needed to elaborate the mechanisms that both promote and hinder social innovation and to develop mid-level theory to explain the material, cultural, and ideational factors that contribute to social innovation within specific systems. This in turn will require more focused attention on tracking long-term value (Dees & Battle, 2003) as well as further explorations into the potentially negative and/or contradictory consequences of social innovation over time (Cho, 2006).

Cross-References

- [Canada, Quality of Life](#)
- [Community Economic Development](#)
- [Cultural Diversity](#)
- [Entrepreneurship](#)
- [Equity](#)
- [Ethics](#)
- [Italy](#)

- [Quality of Life, Two-Variable Theory](#)
- [Social Change](#)
- [Social Development](#)
- [Social Inclusion](#)
- [Social Justice](#)
- [Social Sustainability](#)
- [Sustainable Development](#)
- [Trust](#)
- [Well-being](#)

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Social Institutions

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Definition

Social institutions are a system of behavioral and relationship patterns that are densely interwoven and enduring and function across an entire society. They order and structure the behavior of individuals in core areas of society and thus have a strong impact on the quality of life of individuals. Institutions regulate the following: (a) ► **family** and relationship networks carry out social reproduction and socialization; (b) institutions in the realm of ► **education** and training ensure the transmission and cultivation of knowledge, abilities, and specialized skills; (c) institutions in the labor market and economy provide for the production and distribution of goods and services; (d) institutions in the realm of law, governance, and politics provide for the maintenance of the social order; (e) while cultural, media, and religious institutions further the development of contexts of meaning, value orientations, and symbolic codes.

Description

Social institutions are important structural components of modern societies that address one or more fundamental activity and/or specific function. Without social institutions, modern societies could not exist. Societies consist of a range of institutions that play myriad specific roles in facilitating human social life and their quality of life and which themselves are dependent upon one another for the performance of their respective functions. Institutional arrangements vary across modern societies, and a given institution can also perform different functions at once and/or over time. In this respect they differ from formal organizations, which are hierarchically differentiated via an organizational structure and serve primarily to facilitate rational action (*Zweckhandeln*) and the realization of particular interests.

In sociological theory, there are three prevailing interpretations of social institutions: functionalist approaches, Marxist-inspired conflict-oriented explanations, and neo-institutionalist approaches.

Functionalist approaches in the tradition of Durkheim and Parsons emphasize the importance of social institutions for the maintenance of social systems. Social integration is only possible when institutions perform core functions. Three such functions can be distinguished: first, institutions structure human social relationships and serve as a catalyst for the role expectations with which individuals are confronted in their everyday actions. Second, institutions regulate the distribution of gratifications and the allocation of suitable persons to positions of power. Third, by means of symbols, policies, and ideologies, certain social institutions represent and stabilize the value canons and contexts of meaning of social systems.

In contrast to functionalist approaches, conflict theory (Coser) has as its point of departure the insight that because conflict and inequality are inherent in modern societies, social institutions do not perform equally well for all members of society. From this perspective, institutions are seen as instruments for the realization of power and hegemony and help stabilize prevailing inequalities. For scholars in this tradition, it is

easy to demonstrate that ► **ethnic minorities**, women, and those in lower social strata benefit less from the functioning of institutions or are shaped by them in specific ways. Moreover, several members of the Frankfurt School of critical theory (Adorno, Horkheimer, Marcuse) underscore that institutions can function in manipulative and alienating ways, for they serve first and foremost to legitimate prevailing power relations. They can even have anomic and dysfunctional effects, as is sometimes the case in “total institutions” (Goffman, Foucault) such as psychiatric institutions, prisons, or military barracks.

Neo-institutionalist theory (Powell, DiMaggio, Williamson) argues that institutions are important for the enactment of action routines. In ever more complex environments, institutions unburden individuals and make their social environments more predictable. Institutionalized action routines often remain unquestioned, and individuals carry them out as adaptations to the situational and role expectations of their social environment. Institutions can hereby spare individuals costs and resources and also help them solve problems in their everyday lives. In this line of thinking, an essential element in the functioning of social institutions is the existence of trust and transparency.

Despite their varying points of emphasis, these theories agree that several institutions are particularly important to modern society. Among these are the institutions of the family and education; those regulating the labor market and economy; those in the realm of law, governance, and politics; and those in the sphere of culture, media, and religion.

The behavioral and relationship patterns institutionalized through family structures and kinship networks are of fundamental importance to modern society. Family and kinship networks are where children grow up and receive their primary socialization. A family is a group of people directly linked by kinship connections. Ideally, families are characterized by affection, care, and companionship and provide their members with love and intimate relationships, helping them to feel protected, secure, and satisfied. Thus,

families are crucial for the quality of life of individuals. Indubitably, families are also pivotal in the reproduction of status positions. Children inherit a social position because of a distinct family background, i.e., the socioeconomic status and prestige of their ancestors.

Institutions in the realm of education and training provide for the transmission and cultivation of knowledge, abilities, and specialized skills and for the broadening of the individual horizon. They can also be seen as instruments for the secondary socialization of individuals. These institutions can operate in myriad social settings. To oversimplify, one can distinguish between formal schooling and education by adults and family members and personal experience or experience within friendship networks. Like other social institutions, formal institutions in the realm of education and training have manifest and latent functions. Among the manifest functions are the transmitting/learning of (foreign) language skills, mathematical and natural scientific competencies, and knowledge in the areas of economics, geography, history, and government. Among the latent functions are transmitting cultural codes, maintaining social control and social hierarchy, and promoting social integration. Clearly, educational and training institutions and the content transmitted through them are societally contested terrain. The questions negotiated herewith include the following: what kind of values should underpin educational institutions? What kind of education should we promote and how? And should all children learn the same curriculum regardless of differences in gender, ethnicity, and wealth?

Economic and labor market institutions are also critically important to modern societies. Their function is to provide an environment that ensures the production and distribution of goods and services. In all societies, work is the basis of human existence. The nature of a society’s economic institutions depends on both its level of technological development and the extent of government regulation of the economy. In market-driven, capitalist societies, the primary economic institution is private property, in particular private ownership of the means of

production, and the main incentive for economic activity is the accumulation of individual profit and wealth. The enduring, densely interwoven behavioral and relationship patterns in the economic sphere are strongly shaped by conflicts between interest groups representing employees and the owners of capital. Institutional actors in the economic sphere negotiate working conditions and hours, compensation, occupational mobility, quality of work/jobs, hiring, and firing.

The existence and exercise of power and hegemony are common to all human societies. Critical decisions about how to utilize resources and how to allocate goods are always relegated to distinct groups of people. Institutions in this realm essentially have two functions: protection against external threats and upholding of the internal social order. The densely interwoven, enduring behavioral and relationship patterns in this realm can be realized by various social actors. Parties, unions, trade associations, and other civil societal organizations are just as integral to society's power relations as are individuals, lobbying groups, and large enterprises. Power relations can be highly conflictual. In developed capitalist societies, not until the widespread introduction of democratic and welfare-state institutions was the primary societal power conflict – namely class conflict – largely pacified.

Institutions in the domains of culture, media, and religion are responsible for the transmission of contexts of meaning, value orientations, and symbolic codes. For centuries, religious institutions had a monopoly here. In the twentieth century, institutions in the spheres of mass media and cultural production began to convey ► [values](#), ► [norms](#), and symbolic codes, reaching broad segments of the population.

A final point concerns the question of institutional emergence, continuity, and change. Consensus reigns among social scientists that institutions are not static. Processes of institutionalization and deinstitutionalization of behavioral and relationship patterns occur continuously. Over time, then, the meaning of institutions changes. They can also be a locus of social change. For example, the institution of the family has undergone fundamental change since the

middle of the twentieth century, with family forms becoming highly differentiated. Alongside the traditional middle-class Christian family model which linked sexuality, cohabitation, and child-rearing in a clearly defined form – namely marriage – a range of new family household forms have emerged. Here, the spectrum ranges from households led by unmarried lone parents, to homosexual households (with or without a certificate of marriage or civil union), to patchwork families, to so-called DINKs (double income no kids). The institution of the family has survived despite – many would say primarily because – of this process of ongoing transformation, and it continues to play a vital role in modern societies. Similarly, the institution of the church/religion has undergone a transformation in its meaning and function. In premodern societies, the production and transmission of new knowledge was one of the central functions of religious institutions, alongside the propagation of value orientations and cultural codes. In modernity, educational institutions have completely taken over the first task. The church has limited itself to its core mission of imparting meaning and interpreting the world. However, institutions in the cultural and media spheres have increasingly become competitors to the church in this realm. At the same time, modern societies have witnessed a marked differentiation of religious practices and a growing pluralism of world religions.

Cross-References

- [Civil Society](#)
- [Class Identification](#)
- [Education](#)
- [Family](#)
- [Family Structure](#)
- [Mass Media and Quality of Life](#)

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sociologist Emile Durkheim (1951). In studying suicide, Durkheim found that suicide rates were increased among individuals who were single as opposed to married, as well as among those with no children when compared to those with offspring. According to Durkheim, suicide stemmed from dysfunctions in how people related to their social world. He proposed that stable social structures, consisting of widely held norms, act to regulate behavior. This behavioral regulation, in turn, protects against alienation and suicidal behaviors. Durkheim emphasized the importance of particular social roles such as those formed through religion, occupation, and family (Berkman & Glass, 2000).

Research into the effects of social integration has continued to emphasize the positive and protective role it plays in regard to health and well-being. The importance of social contacts was demonstrated by Faris (1934), who connected social isolation with the development of mental illness, in particular schizophrenia. Later, social integration was associated with lower levels of physical morbidity and mortality in large prospective epidemiological studies. The first study implicating social integration as a contributor to mortality was conducted in Alameda County, California. Here, Berkman and Syme (1979) found that healthy adults who reported being married, having close family and friends, and being members of social groups were more likely to be alive at the 9-year follow-up than those who were less socially integrated at study onset. This result held up even in analyses controlling for health at baseline, socioeconomic status, year of death, smoking, alcohol consumption, obesity, physical activity, and other health practices. The association between social integration and longevity has been replicated in numerous other studies (see Berkman & Glass, 2000, and Holt-Lunstad, Smith, & Layton, 2010, for reviews) including a 17-year follow-up in Alameda County (Seeman, Kaplan, Knudsen, Cohen, & Quratnik, 1987).

The beneficial effects of social integration are not just seen in terms of overall mortality. Greater social integration has been shown to predict fewer deaths among persons suffering heart

Social Integration

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Definition

Social integration is the degree to which individuals participate in a wide range of social roles and relationships (Brissette, Cohen, & Seeman, 2000). Social integration is a multidimensional concept thought to include a behavioral component and a cognitive component. The behavioral aspect consists of an individual's active engagement in a range of social activities and relationships, and the cognitive aspect refers to the extent to which an individual feels connected to the community and can identify with their social roles (Brissette et al., 2000).

Description

The concept of social integration was introduced in the late nineteenth century by the French

attacks (review by Seeman, 1996), as well as less cancer recurrence (Helgeson, Cohen & Fritz, 1997), depression and anxiety (review by Cohen & Willis, 1985), and age-related cognitive decline (Bassuk, Glass, & Berkman, 1999). Social integration has also been found to be protective in the face of infection, a possible explanation for the other associations with physical health outcomes discussed earlier. For example, a study where social relationships were assessed in healthy participants who were subsequently exposed to a virus that causes the common cold found that susceptibility to viral-induced illness decreased with increasing numbers of social roles (Cohen, Doyle, Skoner, Rabin, & Gwaltney, 1997). This association withstood controls for demographics, season of the year, height and weight, and levels of immunity to the virus (viral-specific antibody) at baseline. Indeed, lack of social integration has been found to be an equal risk factor in health to cigarette smoking, blood pressure, and obesity and remains a significant predictor of health outcomes even when these risk factors are controlled for (Holt-Lunstad et al., 2010; House, Landis, & Umberson, 1988).

There are four categories of social integration measures: role-based, participation-based, perceived integration, and complex indicators (Brissette et al., 2000). Although all are thought to assess major components of social integration, there is little evidence in regard to how much they overlap. Role-based measures assess the number of active roles the individual is engaged in. Examples of these roles include parent, spouse, relative, worker, friend, neighbor, student, and church member. Cohen's Social Network Index (SNI) (Cohen et al., 1997) is an example of a role-based measure, and it assesses 12 types of social relationships or roles. In this measure, the criteria for an active social relationship is whether or not the participant reports talking to a person relevant to a specific role (e.g., spouse, fellow group member, workmate) either in person or by phone at least once every 2 weeks. Other role-based measures include Hirsch's Social Network List (Hirsch, 1979) and Stoke's Social Network List (Stokes, 1985).

Participation-based social integration measures assess how often individuals report participating in various activities with others. This includes items such as visiting with friends, having dinner, or engaging in leisure activities. For example, the Welin Activity Scale (WAS; Welin, Larsson, Svardsudd, Tibblin, & Tibblin, 1992) asks participants how often they engaged in activities over the previous year. It includes three categories of activities: social, home, and outside home. Another participation-based social integration measure is the Social Participation Scale (SPS), used in the Tecumseh Community Health Study (House, Robbins, & Metzner, 1982). Unlike the WAS, the SPS includes four categories of activity: intimate social relationships, formal organizational involvements outside of work, active and relatively social leisure, and passive and relatively solitary leisure.

Perceived integration measures assess how much the individual feels part of the community and can identify with social roles, thus focusing on the cognitive aspect of social integration (Brissette et al., 2000). The Malmo Influence, Contact, and Anchorage Measure (MICAM) developed by Hanson, Isacson, Janzon, Lindell, and Rastam (1988) includes subscales assessing behavioral components of social integration – contact frequency and social participation subscales – but also a measure of social anchorage that assesses participants' perceptions of how entrenched in their community they feel. For example, one question asks “would you say that you are rooted and have a familiarity with your neighborhood?” Other measures, such as the one developed by Heidrich and Ryff (1993), try to get at similar perceived integration by asking about belongingness as well as the meaningfulness of the social roles individuals hold.

Lastly, there are the complex indicators of social integration that combine items assessing roles with others assessing participation and/or perception. Examples of complex indicators of social integration include the Social Connections Index (Kaplan et al., 1988) and the Rand Social Health Battery (Donald & Ware, 1982).

What is it about social integration that confers benefits on an individual's health and well-being?

In the 1960s, several investigators proposed that social integration may actually be detrimental to one's physical and mental health. Goode (1960) and Slater (1963) speculated that having too many roles may cause life conflicts and stressful intersecting obligations. Goode termed this social strain and proposed two social strain components, role conflict and role overload. Role conflict refers to when two roles contradict one another, for example, both being in a full-time profession and a full-time mother. Role overload refers to having an accumulation of roles beyond one's capacity. Although these proposals about the negative nature of social integration seemed plausible and even intuitive, continuing research has found primarily benefits of social integration and left little support for the social strain theory as it relates to health outcomes.

Seiber (1974) on the other hand proposed that having multiple roles was actually beneficial, particularly to psychological well-being. In his scenario, the rewards reaped from social integration far outweighed any strain experienced. The rewards he proposed included increased social status, social security, and self-esteem. Seiber's ideas were further reinforced by Marks (1977) who hypothesized that social roles were potential sources of wealth, approval, sympathy, and self-image. Together, Seiber's and Marks' ideas formed the *role* accumulation theory. Simply stated, the role accumulation theory asserts that the more social interactions one has, the greater one's overall well-being.

Thoits (1983) took this theory a step further explaining the benefits of social integration via self-identity. The concept of self-identity was first described by Mead (1934), who proposed that the self was identified through social communication and interaction. Thoits argued that because people identify themselves through their social roles, they use these roles as markers of behavioral expectations. In turn, these expectations result in a sense of predictability and security. In addition, when people meet these role expectations, they experience enhancement in their self-esteem. Thoits further suggested that social roles provide people with a purpose in life. Given this, it is expected that the more social

roles one accumulates, the stronger the sense of purpose one has. This, in essence, leads to increased well-being and is referred to as the *identity* accumulation hypothesis.

More recently, Cohen (1988) expanded on this theme, arguing for specific benefits of social integration for physical health. He suggested that meeting role expectations has a range of cognitive and behavioral benefits for the individual. Cognitive benefits included increased self-worth and enhanced feelings of control over one's environment. These cognitive enhancements can decrease despair, in turn reducing concomitant physiological responses that place people at risk for disease and increasing health-promoting behaviors. Other benefits of increased social integration, according to Cohen, include social control and informational influences. Social control refers to the pressures one's social network places on individuals to take care of themselves and to the motivation to care for oneself that derives from being responsible for others (Rook, 1990; Umberson, 1987). Socially integrated people are thought to experience greater social control and in turn to increase health-promoting behaviors and decrease risky ones. By having larger and more diverse social networks, individuals may also be privy to larger sources of information and feedback that can assist them in maintenance of their health and well-being.

Another avenue of discussion surrounding social integration concerns its role in stress buffering. It is thought that perhaps social integration provides benefits to well-being by providing needed support when people are faced with a stressful situation. This theory however has not borne out in the research which by and large has shown support for a main effects model in which social integration asserts its influence independent of stress (see earlier explanations). However, it is likely that social integration could result in behaviors and information that would help individuals to avoid stressful and high-risk situations to begin with (Cohen, 2004). While it is difficult to glean this from studies that investigate social integration and morbidity and mortality, as they rarely measure stress, studies examining psychological well-being have generally found

that social integration does not buffer the effects of stress (no stress-by-social integration interaction) in physical health (Cohen & Willis, 1985; Funch & Marshall, 1983). (See encyclopedia entry on “► [Social Support](#)”).

One interpretation of the social integration literature is that it is not increases in social integration that lead to better health, but rather it is social isolation (low levels of social integration) that leads to poor health. Social isolation in this context is seen as a stressor, one that causes meaningful increases in negative affect, as well as decreases in control and self-esteem. The stressor of isolation could cause negative psychological states, leading to detrimental changes in endocrine, cardiovascular, and immune functioning, as well as interrupting important health behaviors (Cacioppo et al., 2002; Cohen, 1988; Uchino, Cacioppo & Kiecolt-Glaser, 1996). This view assumes that there is a threshold for social integration, and if one is below this threshold, they are marked by disease and decreased well-being. However, some research on social integration and health shows a graded relationship whereby the greater the integration the better the health (e.g., Berkman & Syme, 1979; Cohen et al., 1997). Despite this, one can also see effects in which the most socially isolated individuals are at greater risk for health problems than one would expect from a simple linear relationship (Cohen, 2004).

In summary, social integration predicts overall positive changes in one’s well-being. Although our knowledge on the topic has come a long way since the concept was first described by Durkheim in the nineteenth century, there are still many unanswered questions.

Cross-References

- [Goal Achievement](#)
- [Self-Concept](#)
- [Self-Esteem](#)
- [Social Norms](#)
- [Social Support](#)

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Social Integration and Suicide in Norway

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Synonyms

[Alcohol consumption and suicide in Norway](#); [Divorce and suicide in Norway](#); [Marriage and suicide in Norway](#); [Separation and suicide](#); [Unemployment and suicide](#)

Definition

Human individuals have a need for ► [social integration](#), i.e., to be part of a larger social whole and form supportive and enduring interpersonal bonds. “The need to belong” is a fundamental human motivation. In sociology, since the seminal contribution by the French sociologist Emile Durkheim, social integration has been seen as the most important characteristic explaining differences in suicide rates within and across societies. In this entry we will investigate whether social integration contributes to an understanding of changing suicide rates in ► [Norway](#) from 1948 to 2004. Further details can be found in Barstad (2008).

Description

Introduction

Trends in rates in modern society have been one of many reminders of the less than perfect correlation between ► [economic growth](#) and human well-being. Norway is no exception. Norway has seen great improvements in its level of ► [welfare](#), according to the UN ► [Human Development Index](#) (HDI). GNP per capita (in fixed prices) more than trebled between 1960 and 2004. However, compared to 34 other nations,

Norway had one of the strongest linear trends of increasing suicide rates in the period 1960–1990. After 1988, there has been a substantial downward trend. Still, in 2010, the suicide rate was considerably higher than in any of the years before 1960, both for men and women.

The Concept of Social Integration

Modern day Durkheimian studies have often equated integration with ► **social support**. Social control is also a part of the potential ► **health** benefits inherent in social integration. Microsociologically, social integration at the interpersonal level can be understood as filling certain role requirements, such as the roles of husband and colleague. These role requirements are a foundation for **identity** and ► **self-esteem** (Thoits, 1983). Social integration can also be conceptualized as the enacting of interaction rituals. In an interaction ritual, two or more people are physically assembled in the same place; there is a mutual focus of attention and a sharing of emotional experience. Successful interaction rituals lead to a feeling of group membership, of confidence and strength (Collins, 2004).

Linking Social Integration and Suicide

A number of studies have linked aspects of social integration to suicidal behavior. Retrospective studies of completed suicides (so-called psychological autopsies) indicate that persons who committed suicide were more isolated and had less social support than control groups (see Heikkinen, Hillevi, & Lönnqvist, 1993 for a review).

There are also a number of individual-level studies showing that people who fill family and work roles have a lower risk of committing suicide. Suicide rates are particularly high for divorcees and separated persons. A strong linear decrease in the risk of suicide with an increasing number of children in marriage has been reported for women. ► **Unemployment** and suicidal behavior have also been linked in many studies, more consistently in individual-level longitudinal studies than in aggregate longitudinal studies (Platt & Hawton, 2000).

What precisely are the mechanisms involved? Social support, social control, and the benefits of enacting social roles or “interaction rituals” are all relevant mechanisms. Support made available through interaction with family, friends, and colleagues constitutes important resources for coping, resources that enable the individual to cope with acute or chronic stressors. Social integration may also influence suicidal behavior through its interaction with substance abuse. The majority of studies on male alcohol abusers in treatment show an excess mortality by suicide ranging from 5 to 10 (Rossow, 1996). According to a number of studies, alcoholics are prone to social isolation (Skog, 1991). In some instances, heavy alcohol consumption contributes to social isolation and disintegration. On the other hand, social integration can diminish the risk of alcohol and other substance abuse developing in the first place. As an example, low marital integration increases the odds of heavy drinking, thereby having both direct and indirect effects on the risk of dying in suicide (Stack & Wasserman, 1993).

Several studies indicate that social integration variables influence suicide risks independently of depression and psychiatric admissions. However, there are also good reasons for believing that social disintegration can lead to depression and inflict emotional ► **pain**. Several theorists in the field of “sociology of emotions” stress how depression and shame can be a consequence of broken or otherwise inadequate social relations (Collins, 2004).

The use of aggregated time-series data has some advantages compared to microlevel data. One of them is the possibility of capturing what Norström (1995) terms direct and indirect effects of risk factors. Most directly affected are the persons who become divorced, unemployed, alcoholics, and so on. Indirect effects are effects on individuals outside the exposed population. Take divorce as an example: Divorce may, firstly, have an effect on individuals that become divorced, through loss of emotional support and a continuing conflict with the ex-spouse. Secondly, divorce has effects in the networks of divorced persons, most importantly for the

children. Thirdly, divorces may also have societal effects that go beyond divorced persons and their personal network. The impression of a rising number of divorces, given by the media or other sources, could create more insecurity in people that are still married or, in Durkheim's terms, contribute to sexual anomie.

Empirical Study

Barstad (2008) analyzes the suicide rate for males and females in Norway in the period from 1948 to 2004. The choice of indicators on social integration is strongly limited by the available official statistics for such a long period of time. For the period as a whole, the annual rates of unemployment and four variables measuring family integration (divorces, separations, marriages, and the total ► [fertility rate](#)) are used. Individual-level studies indicate the importance of these variables, and they represent either some disruption of social bonds (separation, divorce, and ► [unemployment](#)) or the forming of a new social bond. However limited, they represent the principal means of social integration: family and work.

Registered alcohol consumption is included as a control variable. In addition to total alcohol consumption, other measures based on sales of beer and spirits are considered. A finding both in Norway and Sweden has been the absence of any significant effect of wine consumption on suicide rates. Two variables indicating changes in national and private economies are also included as control variables: The first is gross national product (GNP) measured in fixed prices per 1,000 inhabitants. The second is cases of public assistance/social assistance per 1,000 inhabitants. In addition, some years with missing or uncertain statistics are entered as dummy variables.

The method used is the Box-Jenkins approach to time-series analysis. A semilogarithmic ARIMA model was applied, following Norström (1995). The semilogarithmic model assumes a curvilinear relationship between suicide rates and the explanatory variables.

A preliminary analysis showed strong trends and autocorrelation in the data, both for dependent and independent variables. The time series

have therefore been differenced. The unit of analysis is annual changes. This is also in accordance with causal thinking: Changes in x are followed by changes in y . The risk of omitted variable bias is reduced.

Results

Annual changes in the number of separations emerge as an influential predictor of changes in suicide rates. One of the other family integration variables (marriages per 1,000 inhabitants) is also influential. When the rate of separations (per 1,000 inhabitants) increases with 1, the male suicide rate increases by more than 40 %. In contrast, divorces do not influence the suicide risk for males in postwar Norway. Separations seem to represent a more sensitive measure of the consequences of marital breakups.

For women also, separations turn out to have a powerful influence on suicide rates, although the strength of the influence is lower than for men. A model using divorces as the indicator of family dissolution has a less satisfactory model fit.

One problem with the results, however, is the unexpected, nonsignificant effect of alcohol consumption, given findings in earlier research on Norwegian suicide rates. There are good reasons for assuming that the results should be interpreted in light of increasing measurement problems concerning alcohol consumption. One possible solution to these problems is to find other indicators of heavy alcohol consumption. Data on changes in deaths from alcohol-related causes has been readily available only from 1970 and onwards. Replacing the measures of registered alcohol consumption with male deaths from alcohol abuse (per 100,000 males) resulted in a better model fit and more plausible results for men, although the estimated effect was statistically insignificant. However, conclusions remain the same concerning the effects of separations and divorces, also in this shorter time period.

There is, of course, the possibility that effects of alcohol consumption really have changed. Several reasons could account for this, both less stigma connected to alcohol consumption in a more "wet" drinking culture and less overlap with psychiatric problems.

Does a weakening of social integration also contribute to the explanation of the rise in suicides among young men (age group 15–24)? Analysis starts in 1970, which marks the beginning of a long period with increasing suicide rates for this group. Age- and sex-specific marriage and divorce rates are used.

Since the time period is short, the analysis is troubled by collinearity when all variables are included in a full model. The most consistent finding is that a decline in the marriage rate for young males is related to an increasing number of suicides. Changes in beer consumption also turned out to have a sizeable effect, considerably stronger than for men in general.

Discussion

Consistently, different aspects of family integration contribute to the explanation (in a statistical sense) of Norwegian suicide rates. In the postwar period, a rising number of separations are clearly related to increasing suicide rates, both for men and women. Also, the male suicide rate drops when more people get married. Since 1970, a falling number of marriages combined with increased alcohol (beer) consumption seem to be relevant for an understanding of the suicide rate among young males. The estimated effect of beer consumption among young males is in accordance with a “post-Durkheim” reformulation of integration theory; heavy alcohol consumption is a risk factor for social isolation and conflicts.

All in all, the results point to the weakening of family integration as perhaps the most important factor associated with increasing suicide rates in postwar ► Norway. This conclusion fits well with conclusions from studies in other rich, western countries. The importance of changing relationship patterns for the increasing suicide rate among young males is underlined by Gunnell, Middleton, Whitley, Doring, and Frankel (2003), and divorces have been implicated as a factor behind a rising number of teenage suicides in the USA (Cutler, Glaeser, & Norberg, 2000).

There is also other evidence supporting a link between weaker family integration and higher

suicide rates. The family structure of different birth cohorts has changed. A rising proportion of births in the Norwegian postwar period have been nonmarital, indicating that an increasing percentage of children have been raised by a single parent in at least parts of their childhood. In a study of 14 nations (including Norway), Stockard and O’Brien (2002) found that the percentage of nonmarital births in a cohort has significant, positive effects on age-period-specific suicide rates. One of the hypothesized links is that children growing up in single-parent families receive less attention and supervision from adults and are more prone to be influenced by peers. Accordingly, a weakening of “cohort-related social capital” following rapid changes in the family structure could be one of the factors behind the strong increase in youth suicides.

Regarding the influence of marriage, one could perhaps have expected that marriages become less important as more people cohabit. But this could also increase the symbolic meaning of marriage. As it is no longer a social obligation, marriage becomes a stronger symbol of unity and “real ► love.”

There is no effect of divorces, neither for males nor females. This is similar to the finding of Norström (1995) in the case of Sweden. However, as we have seen, concluding that family dissolution is of no consequence for the risk of suicides would be premature. The estimated effect of separations is considerably stronger than the effect of divorces. Higher suicide rates for the separated compared to divorcees are confirmed by individual-level data (Ide, Wyder, Kolves, & De Leo, 2010). Does this make sense in a social integration perspective? Divorces are a consequence of a long-term process, often beginning with marital discord years before the resulting divorce. Separations are closer in time to the real marital conflict and breakup. For social integration, consequences are probably more negative in the short term than in the long term. By the time a divorce is granted, some may even have found a new partner. In terms of identity, it takes time to adjust, coming to terms with the loss. At least for some, “time heals all wounds.”

Limitations

There are several limitations to the study presented here. One of the strengths of the aggregate time-series approach is that selection effects, due to personality differences, pose less of a problem at the aggregate level. However, it is necessary to validate the findings from aggregate-level studies with results from other types of research. Results found at the aggregate level cannot necessarily be “translated” to the individual level. Another limitation is that the possibility of lagged effects is not taken into account. As an example, only current year alcohol measures are used to predict suicide rates from the same year. Distributed lag measures, presumably capturing the effects of chronic alcohol abuse, could give other results, as shown in a recent American study (Kerr, Subbaraman, & Ye, 2011).

A third limitation is that due to the lack of data, several important variables are not included. The increasing use of drugs from the 1970s onward could play a role. Drug use is a risk factor for suicide and suicide attempts. As with the use of alcohol, there is a connection between heavy drug use and poor social integration (Dark & Ross, 2002).

There are also limitations concerning the measurement of dependent and independent variables. Official suicide statistics probably underestimate the true number of suicides, an underestimation that has not been constant over time, according to some Norwegian researchers. Others have concluded that observed changes in suicidal behavior should be viewed as real. A general conclusion on the basis of many studies is that measurement errors do not substantially affect the results of most sociological work (Stack, 2000).

Regarding the independent variables, errors mentioned earlier are related to the measurement of alcohol consumption, since a substantial proportion of alcohol consumption is unrecorded, and this proportion varies over time. Unsystematic measurement errors in the independent variables will tend to reduce parameter estimates. The measures of family integration are crude but the best that are readily available for this long time period.

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Social Intentions

► Collective Responsibility

Social Interaction

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Definition

A social interaction is where an individual acts toward another individual using some form of communication, which the second individual responds to. Goffman describes it as “instances of two or more participants in a situation joining each other openly in maintaining a single focus of cognitive and visual attention - what is sensed as a single *mutual activity*” (Goffman, 1963, p. 89).

Description

Face-to-Face Encounters

In face-to-face encounters, the participants use various methods to signal and aid their interaction such as eye contact and gestures (Argyle & Dean, 1965; Graham & Argyle, 1975). Eye contact in particular is a valuable part of face-to-face encounters, and lack of it can lead to suspicion between the participants (Argyle & Dean, 1965). The distance between the participants is an important feature of social interaction, and people from different cultures are comfortable with different distances (Hall, 1969). The location of a social interaction can impact on distance and eye contact between the participants (Mehrabian & Diamond, 1971). Gestures are used to aid the communication, and the amount of gesturing tends to vary with the culture of the participants (Graham & Argyle, 1975). However, face-to-face encounters are a universal form of communication across all cultures.

An Example: The Impact of Social Interactions Between Neighbors

Social interactions are fundamental to a life in society (Goldschmidt, 1972, p. 59), and how people interact with one another can determine whether relationships are formed (Goffman, 1963, p. 105). The relationships that develop as a consequence of social interactions vary enormously in terms of depth, that is, the level of intimacy between the participants. Granovetter described these as weak and strong ties (Granovetter, 1973). Strong ties tend to reflect a high level of intimacy between two people, whereas weak ties do not. In an urban setting the relationships between family members and between friends are likely to be strong ties, and those between work colleagues or neighbors are more likely to be weak ties (Granovetter). Granovetter argues that information does not flow through a neighborhood that is made of separate groups of people with strong ties between them and with little or no ties beyond their group. He suggests that neighborhoods are more likely to come together as a community if there are people with weak ties to many people as well as strong ties to some people (Granovetter). However, the argument has been made that less intimate relationships with neighbors lead to a reduction in social capital and social cohesion in neighborhoods (Putnam, 2000). In order to redress the balance, calls have been made to encourage social interactions between neighbors to help foster a sense of community in neighborhoods (Sherlock, 1991; Stafford et al., 2003).

Empirical research has been carried out that suggests there is a positive correlation between social interaction between neighbors and a sense of community (for example, Farrell, Aubry, & Coulombe, 2004; Forrest & Kearns, 2001; Hunter, 1975). Farrell found that “the frequency of neighboring behavior was predictive of increased sense of community, consistent with previous findings that neighborhood relations predicted individuals’ sense of community” (Farrell et al., 2004, p. 20). As well as contributing to residents’ sense of community, positive social interactions between neighbors can lead to the development of social cohesion in

a neighborhood and deter crime (Bellair, 1997; Farrell et al., 2004; Forrest & Kearns, 2001; Foster, 1995; Hunter, 1975; McGahan, 1972; Riger & Lavrakas, 1981). Riger and Lavrakas (1981) investigated levels of community attachment which may result in a sense of community. They distinguished between social bonding and physical rootedness, the implication being that residents can feel attached to an area without having any local social interactions or they can be involved in the local community without feeling attached to the physical area.

Community attachment tends to be higher in neighborhoods where people are not highly mobile. The result is a sense of community among residents and a high degree of social control, that is, “practices developed by social groups of all kinds which enforce or encourage conformity and deal with behavior which violates accepted norms” (Jary & Jary, 2000, p. 566). The relationships between neighbors are likely to be made of strong ties because there is a high chance that neighbors are friends, family members, or work colleagues (Bott, 1971; Young & Willmott, 1957). However, it is more common in today’s society for people to have moved away from their parental home and to be living in a neighborhood that may be close by but where neighbors are less likely to be friends or family members (Department for Communities and Local Government [DCLG], 2010). People moving into established housing areas may find that among long-term residents there is a sense of community that can be tapped into (Hunter, 1975). In contrast, those who move into new housing developments must create a sense of community (if they want to) from scratch (Commission for Architecture and the Built Environment [CABE], 2007). To do this they need to make contact with other people in the locale, that is, their neighbors. Moving into a new development simultaneously may be a sufficient common experience for neighbors to build up relationships with one another.

The relationships that residents develop with one another can influence other aspects of their lives. In a review of the benefits of social interaction in terms of social support, Shinn,

Lehmann, and Wong (1984) concluded that negative social interactions are more likely to have an influence on health and well-being than positive social interactions and that it cannot be assumed that all social interactions are positive. Studies have shown that dealing with daily stresses, such as negative social interactions with neighbors, can have a deleterious effect on mental health (Kanner, Coyne, Schaefer, & Lazarus, 1981; Paquin & Gambrill, 1994). In one investigation Paquin and Gambrill found that “Neighbor annoyances can destroy the sanctity of home for those who feel helpless, afraid, or enraged” (1994, p. 30). Reactions to neighbor annoyances such as noise vary; the majority of people do nothing in order to avoid conflict, but in other situations the problem is only resolved through the involvement of a neutral third party (Levy-Leboyer & Naturel, 1991; Merry, 1979; Paquin & Gambrill, 1994). Often people are unaware that a neighbor annoyance is causing them stress and as a result blame other factors. Consequently they are less able to cope with major life events, such as divorce or death (Kanner et al., 1981).

Cross-References

- ▶ [Privacy, an Overview](#)
- ▶ [Social Cohesion](#)
- ▶ [Social Exclusion](#)
- ▶ [Social Inclusion](#)
- ▶ [Social Network Analysis](#)
- ▶ [Social Support](#)

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Social Interactions

► Relational Goods

Social Justice

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Definition

Social justice is commonly viewed as a guiding principle to achieve a just society, understood both as a means as well as an end (e.g., Bell, 2007). As put forth by Bell (2007), social justice includes a wide variety of social goals, including full and equal participation of individuals in all ► **social institutions**; fair, equitable distribution of material and nonmaterial goods (otherwise known as ► **distributive justice**); and recognition and support for the needs and rights of individuals (see Bell, 2007). Social justice is also associated with a variety of processes which challenge dominance and oppression, recognize the interconnectedness and ► **interdependence** of all human beings, and champion collaboration and ► **solidarity** (see Bell, 2007).

Description

Concepts, Theory, and Praxis

Because there are various justice beliefs, as well as different ideas about the purpose and the goal of social justice, the task of defining the concept of social justice is challenging. Political theorist David Miller (1999) argues that although social justice is central to current systems of ► [democracy](#), not everyone is for it; while some have argued against it on the grounds that it supports the status quo, others have argued that it is a disillusion. Though theorists may disagree about the utility and/or desirability of social justice, Miller argues that social justice is a central organizing principle of human society and therefore a worthy basis for theorizing about the good society in relation to three key principles: desert, need, and ► [equality](#). While contemporary philosophers and social theorists often consider social justice in terms of the distribution of particular goods in society, frequently conceptualized as a form of fairness, social justice is a highly expansive concept.

Classical and contemporary theories on justice, including social justice, appear in religious, secular, societal, and cultural scholarship. They also span a wide range of geographical locations and time periods. These distinct contexts inform not only how justice is conceived as a normative ideal but also as a basis for theorizing about the role of human values in social, political, and economic endeavors. For the ancient western philosopher Plato, social justice is represented as an ideal state, arrived at through a wide ranging dialog between characters discussing a broad range of philosophical and moral issues of the day. In Plato's classic work, *The Republic* (1894/2000), Socrates proposes the organization of an ideal state based upon the virtues of wisdom, courage, moderation, and justice. This view is considerably distinct from that of modern philosophers. In one of the most well-known twentieth-century works on social justice, *Justice as Fairness* (1971), John Rawls puts forward a view of social justice based on the notion of ► [distributive justice](#), that is, the just way of

distributing material and nonmaterial goods in a society. Social justice is also central to Catholic Social Teachings (see Office for Catholic Charities of St. Paul and Minneapolis, 2012) as a means of fulfilling God's word in the pursuit of his social ministry (i.e., social service and social action) and is likewise discussed in a number of theoretical positions ranging from ► [liberalism](#) and ► [utilitarianism](#) to ► [feminism](#) and ► [postmodernism](#) (see Johnson, Flett Prior, Abbott, & Ableser, 2011).

For many scholars and practitioners, social justice is firmly rooted in personal experience, grounded in the legacies of history, a perspective which underscores the ways in which theory and praxis are intertwined (see Gordon, 1994/2004). As highlighted by sociologist Avery Gordon, the lived experience of those who have been harmed by injustices, and those who struggle for justice, impacts and creates social theory. In this sense, theory can provide a foundation upon which individuals are challenged to pursue social justice. Gordon (2008) draws attention to the ways in which historical forces of injustice, such as slavery and racism, still haunt us today, calling upon many of us to reveal and address past social injustices. While a historical understanding of the impact of past injustices and inequities on today's society is critical to the contemporary study of social justice, social justice as praxis is also informed by a wide variety of analytical frameworks in law, sociology, political science, theology, and communications, as well as interdisciplinary scholarship in social justice, human rights, and peace and conflict studies.

While scholars vary in their specific concepts of social justice and how to achieve it, there are various areas of overlapping concern among those who pursue social justice in both theory and practice. Among the most salient include oppression and domination, hegemony and power, and the role of institutions. Those who pursue social justice frequently concern themselves with critiquing systems of domination and/or inequity, dismantling oppressive ideologies and institutions, and working toward a fairer and more fully representative society.

Oppression and Domination

Social justice scholarship is often based on an extended analysis of the ways in which systems of oppression and domination are created and maintained over time. Those interested in exploring social justice seek to expose and address the processes by which these systems support unequal participation of individuals in societal institutions as well as the nonrecognition of all individuals' rights and needs. The role of an unequitable distribution of material and nonmaterial goods in supporting and furthering structures of dominance is also a key focus of analysis.

One of the most prominent theorists on justice in the twentieth century, Iris Marion Young (1990), outlines and discusses "five faces of oppression." According to Young, if a social group experiences one or more of the following, they can be considered oppressed: exploitation, marginalization, powerlessness, cultural imperialism, and ► [violence](#)/harassment. On the basis of this analysis, she proposes a model for effective group representation of oppressed groups in a democratic society, one in which justice is achieved through addressing oppression and highlighting diversity and the voices of oppressed social groups.

Intersectionality and privilege are two additional concepts that highlight the complexity of oppression and dominance and thus the complex challenges of social justice work. Termed by Kimberle Crenshaw, a leading figure in law and the study of race and gender, intersectionality denotes the myriad of ways that individuals are impacted by their different social identifiers: race and ethnicity, sex, gender, class, ► [sexuality](#), ability, nationality, religion, and the like (Jordan-Zachary, 2007). For example, women of color with a lower ► [socioeconomic status \(SES\)](#) have a particular experience that is different from the experiences of men of color, white women, and other individuals from a lower socioeconomic class. On the flip side, dominant social groups experience taken-for-granted privileges, including the privilege of not having to think about a social identifier they possess: not having to think about being white, male, heterosexual, or

able bodied, for example (see Wise, 2000). Tim Wise (2000), a leading scholar focused on the issue of racism and privilege, argues that those who are in a position of privilege should take action to challenge privilege as well as the injustices and concrete harms it does to humanity as a whole. While people experience oppression and privilege in different ways due to the various identifiers they possess, often it is cultural and institutional forces that are highlighted as key sources of injustice.

Hegemony and Power

As conceived by Antonio Gramsci, hegemony is a process by which those in power maintain their dominance by making their ideologies appear commonsensical. When this process is working well, even individuals who are harmed by these ideas will support them. Consequently, we consent to a hegemony that supports the dominant elites. On the other hand, as hegemony is a continuous process and therefore ultimately unstable it can also be challenged through counter-hegemonic ideas and practices (Simon, 1991; Lull, 1995).

While hegemony can support the creation and maintenance of oppressive and socially unjust ideologies, social justice pursuits are also active in exposing and sometimes challenging hegemony. For example, the civil rights movement challenged oppression, domination, inequities, and injustice supported by hegemonic racial beliefs of the time period. Like other movements expressing counter-hegemonic viewpoints, those who championed civil rights achieved reforms (e.g., civil rights legislation) though not their most ambitious goals, such as the eradication of racism. Howard Winant (2004), a prominent sociologist and race theorist, argues that past work challenging hegemonic racial ideologies led to some important civil rights reforms within society but not their ultimate goals because of realities exemplified by hegemony: counter-hegemonic ideas on race are continually challenged and may be selectively incorporated into hegemonic ideologies.

To challenge ideas that appear commonsensical, and thus are rarely examined, the practice of

social justice requires critical thinking – a method of inquiry in which the individual critiques not only knowledge but the knowledge process and acquisition of knowledge as well. This in turn involves the way in which social agents interact with institutions.

Institutions

An analysis of legal, political, social and economic institutions helps facilitate our understanding of the mechanisms by which social justice is both thwarted as well as supported. Institutions have tended to be viewed as part of a broader structural apparatus, which both condition and reinforce perceptions of normal, everyday life. A variety of work has looked at the way in which the organization of everyday life, constituted by courtrooms, police departments, school systems, and family organization, serves as mechanisms and sites of injustice. Among the most noteworthy contributors to this scholarship is French philosopher and social critic Michael Foucault (1978/1995), whose critical work on social institutions, including the medical and prison systems, helped to illuminate the construction of social control and ► [deviance](#) in general. More recently Angela Davis (2003) has critically examined prisons and state institutions, arguing for a questioning of the current United States' system of punishment on the basis of its fundamental injustice.

Similarly, institutions are often viewed as the loci of a variety of practices such as racism, classism, and sexism, which impede the realization of social justice. Focusing on the criminal justice system in the United States, Jeffrey Reiman (1998) argues that individuals belonging to a lower socioeconomic class or racial minority are systematically disadvantaged. In the case of drug charges, for instance, crack, which is typically associated with nonwhite drug users, is penalized with longer prison sentences than cocaine, which is typically associated with white drug users, despite evidence that these drugs and their associated harms are more comparable than different. Reiman also points out the

lower sentencing practices in regard to white-collar crime despite its long-term and widespread negative impact on society in comparison with other types of crimes.

As an expression of social activism, however, institutions can also serve as the organizational infrastructure for promoting ideas, strategies, and mechanisms for challenging unjust ideologies and social conditions. Throughout history, different social agents working within various governance systems have successfully promoted ideologies and practices supportive of greater social justice. For example, the work of John Locke (1690/1980) was used to support the American Revolution and the United States' legal and political structure; the framers of the United States utilized Locke's works to challenge what they saw as unjust monarchical rule and define their natural rights to life, liberty and property. Additionally, social movements frequently seek changes within law in their pursuit for social justice, including supporting the rights and needs of individuals and social groups, as exemplified in the current work of the Human Rights Campaign.

Cross-References

- [Democracy](#)
- [Deviance](#)
- [Distributive Justice](#)
- [Equality](#)
- [Equity](#)
- [Feminism](#)
- [Ideology](#)
- [Interdependence](#)
- [Liberalism](#)
- [Norms](#)
- [Postmodernism](#)
- [Praxis](#)
- [Sexuality](#)
- [Social Institutions](#)
- [Socioeconomic Status \(SES\)](#)
- [Solidarity](#)
- [Utilitarianism](#)
- [Violence](#)

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Social Learning Theory and Violence

- [Family Features and Violent Behavior](#)

Social Life

- [Community Values](#)

Social Marketing

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Synonyms

[Social media marketing](#)

Definition

Social marketing is “the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of their society” (Andreasen, 1995, p. 7). The ultimate goal of social marketing is to motivate individuals to change their behavior for their benefit or for the benefit of society in general, not the marketer (American Marketing Association, 2012).

Description

Social marketing as a discipline has been in existence since the 1970s, when Philip Kotler and Gerald Zaltman (1971) applied commercial marketing principles to sell services and products that promote individual and societal health. Social marketing employs the core marketing concepts of the 4Ps (product, price, place, promotion), market research, exchange, target audiences, and segments to change health-related behaviors.

The 4Ps are referred to as the “marketing mix.” The *product* in social marketing extends

beyond the literal marketing interpretation of selling a commercial tangible item (contraception, nicotine replacement gum) to include services (free vaccinations), behaviors (eating a healthy diet), and policy changes (tobacco-free workplaces). *Price* refers to what the consumers must do, or in some cases give up, to obtain a product, such as money, time, or psychological effort. *Place* in social marketing refers to the context in which individuals make their health decisions or perform health-related behaviors. *Promotion* in social marketing can take many forms. It appeals to the consumer's emotions and gives them information (e.g., messages) in an effort to get them to perform a desired behavior, or to reduce or eliminate risky health behaviors.

A key component of commercial marketing is branding, such as the brands Campbell's soup or Coke. Similarly, branding is also used for social marketing promotions, such as the use of Smokey the Bear to promote fire safety or Mr. Yuk to promote poison control and prevention.

In their systematic review of public health branding, Evans, Blitstein, Hersey, Renaud, and Yaroch (2008) found that while most branded health messages are theoretically based, standardization of reporting, terminology, and measurement around such messages is lacking. Quinn, Ellery, Thomas, and Marshall (2010) also support the need for definitive criteria to categorize interventions such as social marketing, emphasizing formative research (i.e., pretesting) and audience segmentation in particular.

Discussion

Social marketing is rooted in the individual and his or her social context (French, 2009); however, given the recent influx of digital hardware and technology software platforms (e.g., smartphones, tablets), keeping a current pulse on the social context of individuals has become challenging. In addition, the opportunities to reach consumers using social media outlets are growing exponentially. Over the past decade, social marketing has been increasingly confused with social media, and there has been some

debate about the field's name in light of social media's burgeoning growth. An area that is emerging from the two fields is social media marketing. Although this term is not yet defined by the American Marketing Association, social media marketing blogs, organizations, and seminars are prevalent on the internet.

Commercial marketers are capitalizing on the growing digital market for their promotions; for example, there were over 1.3 trillion display ads on Facebook in 2011 (comScore, 2012). Given the wide reach of the digital market, social media marketers are sure to follow these trends. One study of 1,040 consumers found that one third of consumers use social media sites to find medical information and to track and share their symptoms (PwC Health Research Institute, 2012). An area of social marketing that is already reaching out to consumers digitally is mHealth. mHealth interventions, such as text4baby.org, an educational campaign that promotes maternal and child health, uses mobile devices to deliver health messages and support two-way communication between patient and provider. Other similar approaches are sure to follow in the future.

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Social Media and Leisure

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Synonyms

[Media and leisure](#)

Definition

Kaplan and Haenlen (2010, p. 61) define social media as “internet-based applications that build on the ideological and technological foundations of Web 2.0 and allow the creation and exchange of user-generated content.”

Description

Since their arrival on college campuses in 2005, social networking sites (SNSs) have diffused to a critical mass in the population, prompting interactivity to become mainstream (Phillips, 2008). Pew Research (2011) data indicate that half of all US adults now use these sites, a number that has doubled since 2008. The shorter form SNS, Twitter – which limits postings to 140 characters or less – is used by 13 % of online adults and averages about 40 million tweets per day (Smith, 2011).

Ellison, Steinfield, and Lampe (2007) found that level of Facebook use was the primary predictor of social capital, emerging as a key tool in helping college students maintain friendships and coordinate leisure activities. According to Pew Research (2010), 82 % of the US population

was online in 2010, and two-thirds of them were social network users – as she led all other nations in social network diffusion. Selected social network diffusion rates around the world during the same period include Britain at 43 % (with 84 % of Brits online), Russia at 33 % (with 44 % of Russians online), Brazil at 33 % (with 43 % of Brazilians online), Kenya at 19 % (with 24 % of its Kenyans online), China at 23 % (with 47 % of Chinese online), and India at 12 % (with 18 % of Indians online).

In the USA, social network use occupied 22.7 % of the time that the Americans spent online; combining that with the time they spent on playing online games (10.2 %) and e-mailing other users (8.3 %), over 40 % of the time spent online was devoted to connecting with other Internet users for social and/or leisure purposes (Nielsen Media Research, 2010, 2011). By the same token, as 52 % of the Twitter users post their tweets – from at least 3–5 days per week to several times a day – this online social network activity represents yet another form of how Internet users spend their leisure time online (Smith, 2011).

Fotis’s (2011) review of the nascent OSN literature revealed that social networks are gradually replacing commercial sources of information and evidence limited replacement of reference groups, in particular, dramatically changing (a) the traditional mass media and (b) the ways consumers communicate and exchange information with each other. Exploring the psychological dimensions of online use, Phillips (2008) underscores the value of online interactivity in helping people to plan and structure their leisure outlets to maintain their personal “public relations.” Audience-based research suggests that use of social media services leads to a *fear of missing out* (Cheng, 2011).

Arora (2011, p. 113) argues that, despite the utopian excitement over social networking as a platform for “experiencing, producing, and consuming leisure...there are skeptics who sound the alarm on these spaces, viewing them as diluting of human relations.” This latter dystopian perspective is rooted in a belief that social networking promotes fragmented silos of

like-minded individuals, ultimately displacing meaningful offline relationships and external forms of leisure. Putnam (2000) refers to external leisure involving participation in community groups as “social capital,” encapsulated in his “bowling alone” metaphor, famously coined to illustrate how the diffusion of the media colonize public leisure and displace community involvement. He argues that media, in particular, displaced numerous forms of group-based leisure (e.g., bowling leagues, hayrides), although online media were not a focus of his analysis.

Nonetheless, Arora (2011, p. 113) is neutral in the debate about whether social media promote or displace forms of external leisure, arguing instead that involvement in leisure activities is a basic human impulse wherein “. . .the history of the development of the public park, the product of a complex interplay of interests and agendas of different stakeholders, provides a particularly rich resource for gaining insights into the evolution of social networking sites.” Social media may thus represent a double-edged sword in our daily leisure allocations, displacing external events involving offline neighbors in favor of virtual interactions with online friends.

One thing is clear in this digital age, which is rapidly evolving into a mobile digital society: the separation of leisure and other nonwork-related activities is becoming increasingly blurred. Owing to the 24–7 access to a wide diversity of news, information, and entertainment content as well as the ready ability to connect and share digital content with other people in one’s social network and beyond anytime anywhere, most if not all nonwork-related activities are now closely linked to the ways that people utilize the Internet and especially the social networks online. Concerns about user obsession or even addiction with social media use are mounting (e.g., Phillips, 2008, “Students” 2011).

This type of psychological need for keeping constant social connectivity is not necessarily harmful, so long as users remain relatively unaffected by what they have read or seen via their social media use. For those people who are easily affected by what they have read or seen via social media, the potential danger here is similar to

the typical negative social consequences associated with dysfunctional Internet use. These consequences could range from cyberbullying, cyber cheating, and compulsive online video game playing to socially deviant behavior (e.g., addiction to online porn).

The fundamental reasons why people gravitate toward social network activities online during their leisure time can include the following:

- **Surveillance:** People want to know what’s happening to their environment and how they might be affected by any new events or emerging developments associated with others in their networks.
- **Cognitive stimulation:** People have the innate drive to seek arousal that could result in excitement or an adrenaline rush.
- **Habit:** People become accustomed to routine social media use as part of their second nature and may engage in the behavior without any normal forethought process.
- **Social identity:** People feel the need to be connected with others to establish their self-image (via self-presentation) and reaffirm their social membership.
- **Social voyeurism:** People enjoy observing the trials and tribulations of the lives of others in their social networks, which can be cathartic.
- **Mood management:** People often utilize social network activities online to relieve boredom, pass the time, and escape from their daily stress.

Marketers, media conglomerates, celebrities, popular culture figures, community organizers, political figures, and the like have been investing extensive amounts of time, energy, and/or capital resources in social media of late. This phenomenon underscores the power of social media – a venue designed for leisure use – as catalysts for engaging online users in leisure events, popular cultural trends, mass movements, community events, political activities, and alternative outlets for social involvement and connectivity.

In conclusion, the leisure functions of social media – which encompass a wide array of online activities – are similar to the leisure

functions of the traditional mass media and the multifaceted World Wide Web. Even as the social media venue remains an emerging channel for leisure, the preliminary effects of social media have already become apparent. Politicians, including President Obama, maintain a social media management team to make important announcements and explain his political agendas to connect with voters. Celebrities compete for more social media followers to keep their fan base mesmerized. Marketers are vying for electronic word of mouth to reach more consumers. Media are spreading entertainment information, content, and options across the social media landscape to reel in their audiences. Social scientific research on the leisure functions and effects of social media has only just begun. As the social media channels mature, it will be most interesting to ascertain the effects of social media on our leisure life and the larger digital information culture.

Cross-References

- ▶ [Communication and Personal Well-Being](#)
- ▶ [Communication, Computer-Mediated Support, and Satisfaction with Health](#)
- ▶ [Perceived QOL in the Community](#)

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Social Media Marketing

- ▶ [Social Marketing](#)

Social Mobility

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Definition

The concept of social mobility refers to the phenomenon of shifting from one social position to

another, either in comparison with family background or with previous employment (Social Stratification, Occupational Status, Class Identification, Socioeconomic Status (SES)). The former case, called intergenerational social mobility, studies the transmission of social status from parents to children (Life Chance, Social Justice, Social Inequalities), whereas the latter case, often named intragenerational social mobility or occupational mobility, investigates individuals' employment history over their life course (► [Life Course](#)).

Social mobility can be measured in absolute and relative terms (► [Measurement Methods](#)). Computed directly from mobility tables, absolute social mobility allows for the decomposition of measures such as immobility and mobility rates, vertical (long-range) and non-vertical (short-range) mobility rates, and upward and downward social mobility. In contrast, relative social mobility, also often referred to as social fluidity, tends to provide an intrinsic measure of social mobility as independent as possible from structural changes. In other words, it tells us about the degree of openness of a given society.

Description

The concept of social mobility is deeply rooted in the history of sociology (► [History of Social Indicators and Its Evolution](#)). By the beginning of the twentieth century, social and political issues raised by social mobility attracted attention (Sorokin, 1927). But even in the late nineteenth century, the question of transmission of characteristics from one generation to another was of eminent importance. For example, Galton (1886), who conceptualized the rationale behind the popular linear regression model, depicted what he called "the law of regression" of hereditary transmission by finding that offspring becomes more mediocre than their parents.

Since the post-World War II years, the study of social mobility has become more systematic with the express purpose of standardizing mobility data and analysis to quantify cross-national differences

in social mobility, as mentioned by Hout and DiPrete in their review of 50 years of social mobility research (Hout and DiPrete 2006, p. 3) (Comparative Analysis, Social welfare, Social trends). In fact, the study of social mobility in a comparative framework became a crucial issue in a context that faced conflicting theoretical propositions. On the one hand, the functionalist theory claimed that economic development would lead industrial societies to become more meritocratic and enjoy higher rates of social mobility (Blau & Duncan, 1967; Kerr, Dunlop, Harbison, & Myers, 1960; Parsons, 1960; Treiman, 1970). These societies would be characterized by greater equality of opportunity (► [Equality](#), Intergenerational equity). On the other hand, the Lipset-Zetterberg hypothesis (Lipset & Zetterberg, 1956), and later the renowned Featherman, Jones, and Hauser (Featherman, Jones, & Hauser, 1975), maintained respectively that mobility rates were invariant and that patterns of mobility would be very similar in industrial societies with a market economy and a nuclear family system.

To ascertain which thesis more accurately describes social mobility in industrial societies, large-scale empirical comparative research was conducted such as the Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) project. Findings, Erikson and Goldthorpe (1992) published under the title "The Constant Flux," demonstrated strong effects of class inheritance and similarities in patterns of social mobility over time and place.

However, over the last couple of decades, empirical research has placed greater emphasis on change and variation in social mobility (► [Social change](#)). Notably, further comparative research (Breen, 2004) has found a general tendency toward increasing social fluidity, although the trend is not statistically significant in every country (Breen & Luijkx, 2004, p. 389). As well, for differences in the strength of social fluidity between some countries and within some countries over time, little difference was observed in the patterns of social mobility, in line with Erikson and Goldthorpe's Constant Flux thesis (Breen & Luijkx, 2004, p. 400–401).

In other words, social changes such as globalization (► [Globalization and Well-being](#)), the expansion of the service sector (Labour force participation rates, Labour market(s)), and educational expansion (Education, Educational inequality) may have increased, at least a little, equality of opportunity in countries such as Sweden, France, and the Netherlands. Yet, a significant number of people in industrialized countries still reach similar social positions as their parents did.

Besides the fascinating issues that the study of social mobility raises in democratic societies, it is also dependent on a certain amount of measurement assumptions. First and foremost, since the fundamental analysis of social mobility is based on the relationship between social origin and the social position attained, people who never have a job (or whose parents never had a job) are excluded. Studies also usually make no distinction between full-time and part-time jobs. What is more, because the conception of social class is in itself a theoretical construct often embedded in ideological visions such as Marxist or Weberian (Erikson & Goldthorpe, 1992; Goldthorpe, 2000; Marshall & Rose, 1989; Wright, 1989), measuring social mobility is based on assumptions about the social world and how to measure it. The comparison of people's occupations with those of their fathers over time also implies that they are strictly comparable. This is an artifact, because the same occupations can encompass different realities according to periods and/or contexts (► [Contextual indicators](#)).

Apart from these fundamental measurement issues, the study of social mobility has tended originally to be highly normative. Insofar as social mobility was traditionally embedded into the conception of the "male breadwinner," the study of women's social mobility had been largely neglected at least until the 1980s and 1990s (Gender, Gender Inequalities, Gender Discrimination, Gender Equality). Accused of "intellectual sexism" (Acker, 1973), social mobility scholars argued that the limited participation of women in the labor force rendered it difficult to measure women's social positions (Occupational Sex Segregation, Women's Status, Women's

Employment). To get around this problem, some researchers adopted the "dominance approach" that consists of inferring married women's social positions according to that of their husbands. However, the extent to which this approach really captures women's situations has been questioned. Since then, the focus has been much more widely placed on the "individual approach," that is, women's own employment situations, and their social mobility has been more systematically analyzed (Wright, 1997).

Different kinds of causes and consequences can be drawn to understand the ins and outs of social mobility (Causal Inference). As to causes of social mobility, research has shown the eminent importance of education as a crucial resource to attaining higher social position in most industrialized countries (► [Human Capital](#)). Research on education and its effects is now a central question on the agenda of the International Sociological Association's research committee on social stratification and mobility (RC28).

Beyond education, macrostructural considerations can also have important effects on life chances (► [Contextual Indicators](#)). In fact, the historical context of childhood socialization can have a determining role on adulthood opportunities. For instance, Elder (1998) demonstrated how children who grew up during the Great Depression have seen their lives shaped by deprivations they experienced during their childhoods (► [Child Poverty](#)). As a consequence, because historical context can generate different mobility chances, some generations are more likely to benefit from ascending social mobility, while others benefit from descending. Authors such as Chauvel (1998) demonstrated the increase of inequality of opportunity across generations in France. He depicted how the members of the post-World War II generation, who enjoyed the rapid increase of higher education (► [Higher Education: Human and Social Capital Effects](#)) as well as favorable labor market entry conditions during the long boom period ("Trente Glorieuses"), still enjoy more advantages than do subsequent generations. Indeed, not only has this generation benefited from full-employment stability over their life course and major social

advances such as large pension benefits but also given that the governing elite tends to be more recruited from this generation, its members have enacted laws to protect their interests. In contrast, younger generations tend to be left behind. On average highly educated, they nonetheless face high obstacles in establishing themselves in the labor market for the long term (Working Poor, Workplace Flexibility). The difficulty of finding their first job, the increase of unemployment (► [Unemployment](#)), and the accumulation of insecure short-term work contracts may have long-term lasting effects on the life course of these generations – that is, a scarring effect.

Consequences of social mobility on individuals' well-being have not shown such strong trends up until now. Nonetheless, the dissonance between the social origin milieu and that of social destination can generate tensions among individuals. Although little is known about effects of these tensions on individuals' well-being, two distinctive visions that summarize these tensions can be cited. First, the socialization hypothesis states that socially mobile individuals adhere to the dispositions acquired from their social context of origin. In this sense, they are disassociated from their social destination class. Secondly, the adaptation hypothesis sustains that they adapt attitudes and dispositions that are viable in their new social environment. This corresponds to a situation of acculturation in which the culture of origin is given up. On empirical bases, Veenhoven (2011) finds no correlation between social mobility and happiness. However, these conclusions can be questioned when it comes to distinguishing between downward and upward social mobility. Indeed, are those in descending mobility more likely to preserve attitudes of the milieu of origin than those in ascending mobility? A recent study in Switzerland (Samuel, Hupka-Brunner, Stalder, & Bergman, 2011) suggested that the well-being of individuals in downward mobility tends to reach lower stability over time. Such studies support the idea to refine a little bit more reactions to social mobility, in order to reach a better understanding of its effects on well-being.

In sum, these results show interesting aspects of social mobility: This is not only a change in social position but also, very often, a change in social and geographical context (► [Mobility](#)) that is not without impact on social networks (► [Network Analysis](#)) and values (Value Theories, Subjective indicators). Therefore, to understand the relationship between social mobility and quality of life (► [Inequality in Quality of Life](#)), a more systematic focus on the whole life course, taking into account all changes that potentially influence such a transition, must be developed.

Cross-References

- [Child Poverty](#)
- [Class Identification](#)
- [Contextual Indicators](#)
- [Education](#)
- [Educational Inequality](#)
- [Equality](#)
- [Gender Discrimination](#)
- [Gender Equality](#)
- [Gender Inequalities](#)
- [Globalization and Well-being](#)
- [Higher Education: Human and Social Capital Effects](#)
- [History of Social Indicators and its Evolution](#)
- [Inequality in Quality of Life](#)
- [Life Course Transitions](#)
- [Measurement Methods](#)
- [Mobility](#)
- [Network Analysis](#)
- [Occupational Mobility](#)
- [Occupational Sex Segregation](#)
- [Social Change](#)
- [Social Inequalities](#)
- [Social Justice](#)
- [Social Stratification](#)
- [Social Trends](#)
- [Socioeconomic Status \(SES\)](#)
- [Subjective Indicators](#)
- [Unemployment](#)
- [Value Theories](#)
- [Women's Employment](#)
- [Working Poor](#)
- [Workplace Flexibility](#)

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Social Movement Strength in Ecuador and Peru

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Synonyms

[Ethnodevelopment laws in Ecuador and Peru](#); [Ethnodevelopment policies in Ecuador and Peru](#); [Indigenous movements in Ecuador and Peru](#); [Participatory policy development in Ecuador and Peru](#)

Definition

What Is Social Movement Strength?

Social movements themselves are “collective challenges, based on common purposes and social solidarities, in sustained interaction with elites, opponents and authorities” (Tarrow, 1994: 4).

Scholars of social movements differ in how they define and measure **social movement strength**, with many often either leaving the definition implicit or looking to proposed *outcomes* (such as changes in political elite behavior or in mass political opinion) as signifiers of movement strength. By using hypothesized *outcomes* to define strength, however, scholars and observers are left without the option to understand the actual *relationship* between social movements and these political outcomes. Thus, scholars have begun to construct more concrete, stand-alone definitions and measures of social movement strength.

Tilly (1999) begins to construct a general scheme by which to approximate social movement strength when he states the following:

Since the emergence and spread of social movements as distinctive forms of popular contention,

This entry is largely drawn from Chartock (2011)

participants in social movements. . . have implicitly adopted a standard scorecard for challenges according to the following formula:

$$\text{Strength} = \text{worthiness} \times \text{unity} \times \text{numbers} \\ \times \text{commitment}$$

If any of these values falls to zero, strength likewise falls to zero; the challenge loses credibility. High values on one element, however, make up for low values on another. (261)

Thus, Tilly argues, both those who participate directly and observers of social movements judge strength by the worthiness of the population to receive that which they demand, the unity they display, the numbers they can claim to represent, and their commitment to the cause (in the form of *persistence in costly or risky activity* among other signals). Elsewhere, Tilly and others discuss strength as also lying in having a diverse repertoire of mobilizational tools, and thus being able to choose from such tactics as lobbying at times, and disrupting politics-as-usual when perceived as necessary (Tilly, 1999; See also Andrews, 2001, Giugni, McAdam, & Tilly, 1999, Giugni, 2004). In her work on indigenous social movements in Latin America, Yashar conceptualizes social movement *organizational* strength as requiring “endurance, geographic scope, and mobilizational capacity” (Yashar, 2005: 22 fn 26). Thus, in Yashar’s estimation, to be considered strong, social movement organizations (or SMOs) must persist through time; must have affiliated organizations and leaders at national, regional, and local levels; and must be able to mobilize their supporters to protest.

Together, these sources suggest a cohesive conceptualization of social movement strength (Chartock, 2011). Specifically, social movement strength contains the following dimensions:

- Mobilizational capacity/commitment
- Endurance/institutionalization
- Numbers
- Unity
- Geographic scope/links on the ground

Since Tilly’s *worthiness* is a subjective indicator that depends on the perception of the social movement’s audience, and since this component can also be captured by the number of followers

the movement attracts, Chartock (2011) leaves this indicator out. A show of commitment often comes in the form of mobilization, and therefore, these two indicators can be folded together. Yashar’s *endurance* indicator is strongly related to the idea that strength lies in some institutionalization or a multilevel division of labor. Though there are ongoing debates in the social movement, literature regarding the relative weight of (and some say contradictory relationship between) the ability to disrupt (Piven & Cloward, 1979) and the ability to work within the system that comes with institutionalization (or the so-called disruption-moderation debate; Giugni, 2004), much of the most recent literature suggests that both are necessary tools at different times in the demand-making process (Andrews, 2001, Chartock, 2011, Giugni, 2004, Tarrow, 1994, and Tilly, 1999). Though mobilizational capacity depends on numbers and unity, these two dimensions are also important in how the social movement’s challengers and audience perceive them, and thus, they are included as separate dimensions. Finally, the degree to which the social movement has organizations at national, regional, and local levels determines the actors with whom the movement interacts and the stages where they can have potential impact. As Tilly argues, where the value of any one of these factors reaches zero, the movement is weak and strength in certain areas increases the overall strength of the movement.

Description

How Have Ecuador’s and Peru’s Indigenous Social Movements Scored on These Measures of Strength?

In the 1970s and 1980s, Latin American countries with large indigenous populations began to witness the mobilization of indigenous social movements on a large scale. Yashar (2005) and Van Cott (2005) are among those who have discussed the interesting variation in indigenous social movement strength that began to be apparent as of the 1990s. Thus, whereas movements such as those in Ecuador and Bolivia

Social Movement Strength in Ecuador and Peru, Table 1 Indigenous movement strength by indicator in Ecuador and Peru, 1985–2005 (Chartock, 2011)

	Ecuador		Peru	
Mobilization capacity	High	1990 (and 1992, 1994, 1997, 1999, 2000, 2001, 2002, 2005) national-level uprisings	Low	No similar national-level uprisings or protests (regional protests only)
Endurance/institutionalization	High	CONAIE: National federation since 1986 Forms national Pachakutik party 1996	Med	Amazon-based federations (e.g., AIDSESEP) have endured, though no national-level federations have endured more than several years
Numbers	High	CONAIE claims to represent 75 % of indigenous peoples as members	Med/ Low	AIDSESEP claims to represent most indigenous communities of Amazon, but no similar highland ethnic-identified federation exists
Unity	High/ Med	Three federations (CONAIE, FEINE, and FENOCIN) together claim to represent almost 100 % indigenous communities (but conflict has emerged among the three)	Low	No national-level federations (some conflict among regional federations in Amazon)
Geographic scope/links on ground	High	CONAIE (and others) has national-, regional-, and local-level structures (at least)	Low	Strongest federations are in Amazon; scaling up has not been successful

rose in national recognition and prominence, no such national-level indigenous movement appeared in neighboring Peru. Yashar attributes this variation to a host of factors such as the shift to neoliberal policies and approach on the part of Latin American states, democratization, and existing networks that had been previously created to serve religious and other purposes.

Chartock (2011) examines the Ecuadorian and Peruvian movements from 1985 to 2005 in order not only to measure their strength but also to discover how that strength impacts other political outcomes, such as policy enactment and implementation. Thus, using the components of social movement strength discussed above, Chartock (2011) examines the largest indigenous social movement organization in Ecuador, the Confederation of Indigenous Nationalities of Ecuador (CONAIE) as well as the Peruvian case, where no national-level movement of CONAIE’s strength appears during the period under review. What follows is a brief description of how those two movements fall on the social movement strength dimensions of mobilizational capacity, endurance/institutionalization, numbers

and unity, and geographic scope during the time period of 1985–2005 (see Table 1).

CONAIE and the Ecuadorian Indigenous Movement

Ecuador’s indigenous social movement has widely been recognized as the strongest in Latin America (Brysk, 2000; Lucero, 2006; Van Cott, 2005; Yashar, 2005). Many observers look to multicultural policies as indicators of the power of this movement. However, as the relationship between movement strength and policy is of interest, I use the five indicators of social movement strength outlined above to examine this strength:

- *Mobilizational Capacity:* CONAIE, or the Confederation of Indigenous Nationalities of Ecuador, is the country’s largest and strongest indigenous social movement organization. Its mobilizational capacity can alone be illustrated by the federation’s 1990 uprising that paralyzed most of the country for over a week (Cornejo Menacho, 1991; Zamosc, 1994). The uprising (which included protests, roadblocks, public space takeovers, utility cutoffs, market

boycotts, land invasions, and military kidnappings) took place across the country, though was particularly concentrated in the highlands. CONAIE and its member organizations confirmed their mobilizational capacity with national-level uprisings in 1992, 1994, 1997, 1999, 2000, 2001, and 2005 (Van Cott, 2005).

- *Endurance/Institutionalization*: That CONAIE has endured and become institutionalized is readily apparent. The regional federations that make up CONAIE came together over the 1970s and 1980s, with the national-level federation emerging formally in 1986 (see Yashar, 2005 for a description of that process). The federation has a specialized division of labor, with officers overseeing such areas of concern as education, international affairs, and land. Even more revealing of CONAIE's institutionalization was its 1996 decision to work within the political system with an electoral vehicle, *Movimiento de Unidad Plurinacional Pachakutik* (or Pachakutik, as it is familiarly called). In the party's first campaign, together with partner organization Nuevo País, Pachakutik candidates won 10 % of all congressional seats (Van Cott, 2005).
- *Numbers and Unity*: CONAIE has claimed to count as members between 75 % and 80 % of indigenous Ecuadorians (Brysk, 2000: 73, fn 14; Van Cott, 2005: 99). However, while CONAIE is the strongest national federation of indigenous peoples, it is not the only one. The Ecuadorian Federation of Indigenous Evangelicals (FEINE) and the National Federation of Peasant, Indigenous and Black Organizations (FENOCIN) have both had a national presence, with FEINE representing approximately 17 %, and FENOCIN, 12 % of indigenous Ecuadorians (Brysk, 2000: 73, fn. 14). The three organizations have generally competed over constituents and indeed have had widely publicized disputes. Nevertheless, the fact that three federations have credibly claimed to represent close to 100 % of indigenous Ecuadorians speaks to the overall unity and numbers of the movement. To be sure, in addition to the divisions between the three primary organizations, there have also been

notable divisions *within* CONAIE. These divisions have come particularly between those leaders in the national spotlight and those more connected to local communities. In fact, however, as Colloredo-Mansfeld (2009) contends, various divisions within the indigenous population in Ecuador (and the strategies to manage them) have been sources of indigenous movement strength.

- *Geographic Scope*: CONAIE is a multilayered federation, with organizations at the regional, subregional, and local community levels. In fact, the two regional organizations that primarily compose CONAIE (ECUARUNARI representing highland communities and CONFENIAE, representing the Amazon region) both began at the local level, eventually scaling up to regional and then national federations (Yashar, 2005: 100–131). As Van Cott (2005) reports, 2,300 grassroots organizations make up the base of the national federations and are connected to those federations through various levels of cross-community, regional, and national-tier organizations (110).

Regionalized Movements in Peru

In contrast to Ecuador, Peru's indigenous social movement has been characterized as the *dog that didn't bark* (Brysk, 2000: 248). To be sure, there are significant local and regional movements in some parts of the country (Garcia, 2005; Greene, 2005; Yashar, 2005; Van Cott, 2005). However, there has been no national-level organization able to mobilize constituents from around the country to protest, lobby, and make themselves known on the national stage. Ecuador and Peru are both primarily divided into three geographic regions: the Pacific coast, the Andean highlands, and the Amazon lowlands. While significant numbers of indigenous peoples live in the Amazon region of both countries, the highlands boast by far the largest population of indigenous people. In Peru, however, the approximately 350,000 indigenous peoples of the Amazon are far more organized and mobilized than are the between 7 and 10 million indigenous people of the Andean highlands. Thus, AIDSESEP, the Interethnic Association of the Peruvian Amazon, has become

a prominent actor in indigenous politics in Peru, though again is largely representative of the Amazon's indigenous communities, rather than claiming a national constituency. Importantly, Lucero (2008) and Lucero and Garcia (2007) warn against the assumption that the regional nature of Peruvian indigenous movements necessarily makes the movement a weak one. Indeed, Lucero's work (2008) points to the idea that fragmentation, rather than unity, can often lead to certain indicators of success for a movement (such as the election of Evo Morales as President of Bolivia in 2005). While this important research indeed calls into question whether the indicators of strength discussed here lead to *all* measures of *success*, as I show in what follows, unity is in fact important for the policy implementation outcomes discussed below:

- *Mobilizational Capacity*: No significant *national*-level protests, lobbying efforts, or campaigns took place on behalf of the indigenous population of Peru during the time period under study. AIDSESEP indeed mobilized their constituents to protest various domestic and international policies, though such protests again remained regional in nature. Furthermore, during this period, AIDSESEP generally favored a lobbying approach to a more confrontational style (Yashar, 2005: 265).
- *Endurance/Institutionalization*: As no national-level federation existed during the time period under study, the score for endurance and institutionalization of such a movement is of course low. To be sure, the regional AIDSESEP has endured since the late 1970s, and like CONAIE has a diversified division of labor, with officers overseeing various areas of concern to the organization. AIDSESEP has attempted to enter the electoral sphere with its own party, MIAP, though this has led to only *limited, local success* (Van Cott, 2005: 141). Thus, again, while regional federations have endured and become institutionalized, this has not been the case with national-level federations.
- *Numbers and Unity*: During the time period under study (1985–2005), there existed no national-level organization that could claim

to unify the diverse population of indigenous Peruvians nor to represent a particularly large percentage of indigenous peoples. This fact was especially apparent to international organizations such as the World Bank, which “found no organized way in which to bring together representatives of the Peruvian indigenous community” (as quoted in Chartock (2011) – Author interview with Carla Avellán, Quito, 4/26/05). As of 2002, AIDSESEP and smaller lowland federation CONAP together claimed to represent almost all of the 350,000 indigenous people of the Amazon region (Van Cott, 2005: 159). However, conflicts between these two organizations have, at times, impeded an organized front of indigenous organizations in the Amazon (Yashar, 2005; Van Cott, 2005). To be sure, there have been significant recent *attempts* to form a national movement. Thus, many of the strongest local- and regional-level organizations that exist (including AIDSESEP) began in recent years to come together in a series of meetings, calling themselves COPPIP, or the Permanent Coordinator of Indigenous People of Peru (Garcia, 2005).

- *Geographic Scope*: No national-level indigenous organizations exist that might link communities to scaled-up regional organizations to an even further scaled-up national organization representative of all indigenous Peruvians. At the regional level, AIDSESEP indeed does have a multilayered organization, however. As Van Cott (2005) reports, by 2000, both AIDSESEP and CONAP represented multiple regional federations and dozens of community-based organizations (158–159).

What Are the Political Outcomes of Strong Versus Weak Indigenous Movements?

If conceptualizing and measuring social movement strength has been a somewhat trying task for scholars, attempting to determine the relationship between this strength and political outcomes has been notoriously difficult. Recent studies have, however, pointed to the idea that social movement characteristics can in fact be linked to

presidential elections (Lucero, 2008) and participatory policy outcomes (Abers & Keck, 2009).

Chartock (2011) examines the case of ethnodevelopment policy-making and implementation in Ecuador and Peru in order to understand these outcomes' relationship to social movement strength. Ethnodevelopment policies are participatory social and ► **development** policies (such as targeted ► **social welfare** funds, communal land protections, and intercultural bilingual education laws) that target the disproportionate ► **poverty** of indigenous groups. Chartock finds, firstly, that social movement strength (as described above) does not in fact strictly determine which countries end up with ethnically targeted participatory *policies* (or ethnodevelopment), as both Ecuador (with a strong indigenous movement) and Peru (with a weaker national presence) have quite strong ethnodevelopment laws on the books. Secondly, however, Chartock does find a more direct link between indigenous social movement strength and the *implementation* of this participatory type of policy (Andrews, 2001; Giugni et al., 1999; Giugni, 2004 also find an effect on implementation).

Specifically, the cases of Ecuador and Peru show that indigenous social movements can create conditions that have long been tied to successful policy implementation. Four variables have in particular been long associated with successful policy implementation:

- Clearly **delineating a set of agents**, with structured incentives to carry out implementation *within* the content of the policy has been shown to positively affect policy implementation (Mazmanian & Sabatier, 1983: 28).
- Particularly **committed administrations**.
- Particularly **committed implementing agencies** also make service delivery more likely.
- The final variable is the number of competing interests and agencies (or veto points) that allowed a say in each step of the implementation process (Pressman & Wildavsky, 1973). The **fewer veto points** in the chain of implementation and the greater cooperation among implementing agencies, the more likely it is that implementation succeeds.

Thus, in the case of Ecuador, the strong, national-level indigenous movement led to a clear initial partner for the government when drafting its various participatory laws, thereby giving particular actors incentive to push for implementation in subsequent periods. This clear delineation of actors who would be responsible for carrying out ethnodevelopment implementation did not, on the other hand, take place in Peru, due in part to the absence of a clear go-to partner for the government when drafting policies.

The presence of CONAIE in Ecuador also meant that when Ecuadorian administrations dragged their feet in the establishment of bureaucratic agencies and the provision of funding for the ethnodevelopment laws, the movement had mobilizational power enough to nudge the government into action. AIDSESEP in Peru was certainly a source of mobilizational power nudging Peruvian administrations to move forward on indigenous rights implementation in the Amazon. However, again, the lack of mobilization on a *national* level meant that the national-level participatory laws were largely left on the books, with little movement by the government to implement them on any wide scale.

The strength of CONAIE in Ecuador meant that when the time came for the provision of services *on the ground* came, there were local partners available to make the chain of implementation a relatively smooth one. That is, the national-regional-local ties of this organization, now partnered with the government, constituted an ameliorative solution to the problem of multiple veto points so often a problem in policy implementation. In Peru, multiple veto points reigned dominant and have often been blamed for the lack of implementation of ethnodevelopment law. As the case of Ecuador suggests, a national-regional-local level movement organization might have been able to overcome this obstacle.

Overall, the cases of Ecuador and Peru highlight the role that indigenous movements can play in bringing about the real participation of beneficiaries in participatory policy, a wider scope and deeper reach of ► **social policy**, and the

continued funding of antipoverty programs, just a few of the constitutive elements of successful participatory policy implementation.

As alluded to in the above, the last several years have seen furthering divisions in Ecuador's indigenous movements and notable attempts to bring together Peruvian activists into a more cohesive national-level movement. Future research should focus on the outcomes of these changes.

Cross-References

- ▶ [Andean and Amazonian Native Conceptions of Well-being](#)
- ▶ [Collective Action](#)
- ▶ [Cultural Diversity](#)
- ▶ [Indigenous Health Disparities](#)
- ▶ [Political Activities](#)
- ▶ [Political Efficacy](#)
- ▶ [Program Implementation](#)
- ▶ [Social Activism](#)
- ▶ [Social Exclusion](#)
- ▶ [Social Inclusion](#)

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Social Network

- ▶ [Social Support](#)

Social Network Analysis

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Synonyms

[Structural analysis](#)

Definition

Social Network Analysis (SNA) is a multidisciplinary set of methods for the study of relational data.

Description

SNA is a set of methods, generally based in graph theory, applied to the study of social structures. An ample collection of quantitative techniques for handling with empirical relational data has emerged in recent decades (Carrington, Scott, & Wasserman, 2005; Wasserman & Faust, 1994), although SNA also offers a different theoretical standpoint for the systematic study of social structures, with a focus in the patterns of relationships among social entities (Degenne & Forsé, 1999; Wellman, 1998).

Several traditions from sociology, social psychology, and anthropology converged in the foundations of SNA. The pioneering studies of this area include the elaboration of *sociograms* of social interactions in classrooms (deployed by Moreno), the applications of graph theory to small groups (e.g., Bavelas, Cartwright, Harary, Newcomb), and the analysis of community networks by anthropologist of the Manchester School (e.g., Barnes, Bott, Mitchell) (Freeman, 2006).

SNA has been applied to understanding the “small-world problem,” which is the supposition that the chain of intermediaries to connect two people anywhere in the world is usually short.

The small-world phenomenon – which was first empirically documented in the “six degrees of separation experiment” by Stanley Milgram (Milgram, 1967) – is based in a structure with high local density and low average distance among a defined set of individuals. The same structural approach has been applied to explaining the diffusion of information and innovations. “The strength of weak ties” was a term introduced by Mark Granovetter to refer to the importance of weaker relations in the access to new information, ideas, or resources. Weak ties have a comparatively higher likelihood of being bridges between different social groups (Granovetter, 1973).

SNA offers a wide and varied tool kit for the study of centrality, cliques, clusters, and structural equivalence (Knoke & Yang, 2008; Scott, 2000). Recently, significant developments have also appeared in relationships’ measurement and evaluation, network sampling, block-modeling, random graphs, and “two-mode” networks (Carrington et al., 2005).

Social Network Analysis and Quality of Life

Both the structure and functions of social networks are related to the quality of life of individuals and communities. Epidemiological studies have shown the relationship between social networks and morbidity/mortality. A seminal longitudinal research in Alameda County (California, USA) showed that people who lacked personal and community ties were more likely to die in a follow-up period of 9 years than those with more extensive contacts (Berkman & Syme, 1978). In some studies, social ties are the best predictor of satisfaction with life: for instance, being married is the equivalent to quadruple personal incomes, whereas attending regularly a social club has the same statistical effect than duplicate incomes (Putnam, 2000). Also the assessment of social networks allows describing the impact of urbanization on individual well-being (Fischer, 1982).

The line of research on social networks and health outcomes evolved into the exploration of the relations between social support and subjective well-being. Social support is the set of

informational, instrumental, and emotional resources that are exchanged in social interactions. The availability of confidants, advice, and tangible support is directly related to satisfaction with life, individual well-being, and other quality of life outcomes, as well as inversely related to depression. Social support has also a buffering effect under stressful circumstances (Veiel & Baumann, 1992).

Recently, social contagion processes of happiness in social networks have been described. A person's happiness is related to the happiness of their contacts within three degrees of separation, and an additional happy friend increases a person's probability of being happy by about 9 % (Fowler & Christakis, 2008).

Cross-References

- ▶ [Family Support](#)
- ▶ [Marital Status Influence on Satisfaction/Happiness](#)
- ▶ [Sociability](#)
- ▶ [Social Structure and Happiness](#)
- ▶ [Social Support](#)

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Social Network Theory (Primarily in Sociology Literature)

- ▶ [Policy Networks](#)

Social Networks

- ▶ [College Student Quality of Life and Social Capital](#)
- ▶ [Relational Goods](#)

Social Norms

- ▶ [Community Values](#)

Social Participation

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Definition

At its core, *social participation* can be understood as “a person's involvement in activities

that provide interaction with others in society or the community” (Levasseur, Richard, Gauvin, & Ramond, 2010, p. 2148). However, there are many definitions related to the broad-ranging understandings of the forms this interaction may take, its purpose(s), and the potential processes and outcomes associated with it. As a growing matter of concern globally, it has been taken up by a broad range of disciplines with many different population groups. It has both subjective and objective dimensions and associated quantitative and qualitative measures. Linked to numerous other constructs, it is further regarded as influenced by numerous factors: individual, structural, local, and global. While typically constructed as a positive event, there is no single experience of social participation. That is, it is socially and historically contingent, varying within and between individuals, across groups and communities, and over space and time.

Description

Interest in *social participation* has been documented for centuries (van Ingen, 2008) but has been a particular focus of much research, theorizing, and practice-related work since the 1920s (Parker, 1983). It is currently receiving increased attention worldwide at all levels of government and among policy makers, researchers and academics, professional practitioners, and grassroots and community organizations. Among the various disciplines identifying social participation as a concern are gerontology, public health, medicine, rehabilitation, psychology, social work, education and special education, disability, mental health, sociology, and social science, as well as researchers and practitioners who address quality of life. It has been linked to processes and outcomes such as mortality and morbidity (Levasseur et al., 2010); quality of life (Broer, Nieober, Strating, Michon, & Bal, 2011; Hjelle & Vik, 2011; Levasseur et al., 2010; WHO, 2008); improved mental health (Broer et al., 2011; McPhedran, 2011; Rubio, Lázaro, & Sánchez-Sánchez, 2009), overall well-being,

and life satisfaction (McPhedran, 2011); improved social competence and social inclusion (Koster, Nakken, Pijl, van Houten, & Spelberg, 2008; Wendelborg & Tøssebro, 2011); better aging and decreased risk of future dependence (Levasseur et al., 2010; Mars, Kempen, Mesters, Proot, & Van Eijk, 2008; Rubio, Lázaro, & Sánchez-Sánchez, 2009); higher levels of physical activity (Legh-Jones & Moore, 2012); improved physical health, intellectual functioning, and survival (Rubio et al., 2009; WHO, 2008); access to more resources (Szreter & Woolcock, 2004 cited in Legh-Jones & Moore, 2012); stronger and more resilient communities (McPhedran, 2011); improved care practices and service provision (Broer et al., 2011); and more responsive health-care policies and practices (WHO, 2008). At present, there is a growing acceptance that the right to social participation is universal (Hjelle & Vik, 2011).

There is no universal agreement on the definition of social participation or its underlying dimensions (Koster, Nakken, Pijl, & van Houten, 2009; Levasseur et al., 2010; Wendelborg & Tøssebro, 2011). A review of the research literature demonstrates that social participation is also linked to, and sometimes used interchangeably with, a number of other constructs. This use of varying definitions is explained, in part, by the fact that social participation has taken up by a wide variety of disciplines, in different contexts, and with numerous population groups. The ensuing lack of consensus and clarity in definition is not without consequences: “communication difficulties between those using the concept, problems in the development and selection of instruments to measure social participation, and blurred or incomplete social policy efforts” (Levasseur et al., 2010, p. 2142) makes it difficult to compare research results. Consequently, our knowledge of social participation is, at best, ambiguous (Koster et al., 2009; Parker, 1983; Wendelborg & Tøssebro, 2011).

The World Health Organization (WHO), for example, understands social participation as a social determinant of health (SDH) (WHO, 2008). In this context it is regarded as a crucial

policy direction to promote health equity. Seeking greater participation from civil society and the empowerment of affected communities, including members of vulnerable and excluded groups, to facilitate the shaping of their own health, is viewed as a way of increasing and strengthening people's control over the various factors that impact upon their health and quality of life. This is justified on ethical and human rights grounds, but also pragmatically and strategically in that such public participation and ownership of the SDH agenda is believed to be vital to the sustainability of the SDH and health equity agendas (WHO). This understanding of social participation as an "important modifiable health determinant and a key outcome measure as well as a common emerging intervention of health professionals" (Levasseur et al., 2010, p. 2141) has been taken up by a number of researchers in, for example, the fields of aging and disability.

Another example of how social participation is understood and used can be seen with the quality improvement collaborative in the Netherlands. This is part of a larger quality improvement program for the country's long-term mental health-care sector (Broer et al., 2011). Social participation is believed to be a means by which to improve care for people with mental health issues and those with intellectual disabilities. The understanding is that increasing people's social networks will decrease their loneliness leading to improved mental health and lives. In this context, social participation is achieved when people with mental health or other disabilities have opportunities to participate with non-disabled people in typical activities in the society in which they live (Broer et al.).

In an inventory of 43 definitions of social participation in older adults from a broad range of disciplines, Levasseur et al. (2010) discerned that the two most commonly cited dimensions in these definitions were (1) involvement and (2) social activities and social interactions. Involvement with others is a critical dimension of social participation. And social activities and social interactions require at least a minimal level of involvement of the person, although

involvement can span a continuum from relatively passive to very active. The authors then define social participation as "a person's involvement in activities that provide interaction with others in society or the community" (Levasseur et al., p. 2148). They acknowledge that this definition does not address particular elements of social participation of different disciplines, fails to distinguish social participation from other similar concepts, and is a simplistic synthesis that is unable to provide the detail necessary to understand complex phenomenon.

Congruent with an emphasis on involvement and social activities and social interactions, others define social participation as a person's level of engagement in formal and informal groups (Hodge & Tremain, 1968; van Ingen, 2008), which provides them opportunities to gain access to resources to which they might not otherwise have had access (Szreter & Woolcock, 2004 cited in Legh-Jones & Moore, 2012). Formal groups are defined as voluntary organizations or associations with a distinct legal status and meaning. Informal groups lack fixed rules of membership, are more self-organized, and more flexible and spontaneous. Typically characterized by familiarity and equity, they include, for example, regularly having coffee with a group of people at a coffee shop and having friends over for dinner (van Ingen, 2008).

Social participation is generally regarded as a positive, beneficial, and typically desired goal (Koster et al., 2009; Levasseur et al., 2010; Mars et al., 2008). Koster et al. (2009) believe it includes positive (not negative) social interaction, acceptance (or the perception of acceptance) by others, and social relationships and/or friendships. Mars et al. (2008) suggest it requires one or more of three dimensions: social contact, contributing resources to society, and/or receiving resources from society.

Social participation is believed to be higher in environments with less income disparity, fewer class struggles, and less racial and ethnic segmentation (Antoci, Sacco, & Vanin, 2007; Hodge & Tremain, 1968). One's level of social participation may be affected by time period (the current

state of a given society), by the stage she/he is at in their lifecycle, and by the cohort to which she/he belongs (different cohorts typically demonstrate different patterns of social participation). Consequently, social participation will vary within and between individuals, across groups and communities, and over time (Antoci et al., 2007; van Ingen, 2008). It may also be affected by one's geographic location (e.g., north/south, urban/rural) and its effects on distance and ease of access to others, economic constraints/opportunities, and availability of resources to facilitate social participation (McPhedran, 2011).

Other identified dimensions and components include the productive, meaningful, recreational, and cultural dimensions of social participation. Broader understandings of environment and recognition of the impact of social media mean that "society" and "community" are not restricted to physical environments; social participation also occurs in the virtual space: mobile phones, Internet, and social media (Levasseur et al., 2010; van Ingen, 2008).

The term *social participation* has been used alongside and even interchangeably with many other terms, for example, *social connectedness* (McPhedran, 2011), *social life* (Broer et al., 2011; Hjelle and Vik, 2011), *sociality* (Broer et al., 2011), *social networks* (Broer et al.; Legh-Jones & Moore, 2012), and ► *social integration* (Legh-Jones & Moore; Wendelborg & Tøssebro, 2011). In some cases, social participation is regarded as different from, but included in, other constructs such as *participation* (Hjelle and Vik (2011); Jette, Tao, & Haley, 2007; Levasseur et al., 2010). Social participation is thought by some authors to include the construct of *social engagement* (Levasseur et al.), while others use the two terms interchangeably (Rubio et al., 2009). Social participation has also been identified as a "behavioural/structural aspect of social capital that facilitates the development of one's social networks and sense of social integration" (Swaroop & Morenoff, 2006; Szreter & Woolcock, 2004, cited in Legh-Jones & Moore, 2012, p. 1363). In this sense, it is believed that one's social capital will accumulate if her/his social participation is high enough to both

maintain existing relationships and create new ones (Antoci et al., 2007). Elsewhere, social participation is seen as an element or a reflection of *social status* (Hodge & Tremain, 1968; Parker, 1983).

Social participation is sometimes linked to ► *community participation*. For example, Rubio et al. (2009) appear to regard community participation as connected to an individual's participation in formal organizations as opposed to informal engagement with family and friends. Alexiu, Lazar, and Baci (2011) however make a distinction between community participation and social participation: community participation is understood both as a means for an efficient use of available resources and as an instrument for increasing social solidarity, especially among marginalized citizens deprived of access to services that others take for granted. In this way, it works toward improving the welfare of the entire community and is a thus concern of individuals, grassroots organizations, practitioners, and policy makers.

Social participation is strongly linked to notions of social inclusion/exclusion (Wendelborg & Tøssebro, 2011). This link is apparent when social exclusion is understood as material deprivation and the lack of opportunity to participate in the social, political, and economic arenas typically available to the citizens of a particular society (with social inclusion being the converse) (McPhedran, 2011). It follows, then, that marginalized individuals and groups experiencing discrimination and social exclusion will have fewer opportunities for social participation. Important here is that social participation requires more than just physical inclusion (being physically present in a community). Physical inclusion does not, in and of itself, equate with opportunities for successful social participation. Meaningful inclusion must attend to the social dimension, and it is this that is most directly linked to social participation (Koster et al., 2009). For example, social participation is generally considered a key component and goal of inclusive education for children with disabilities who are increasingly being placed in regular education settings with non-disabled peers

(Wendelborg & Tøssebro, 2011). There is a tendency to attribute the degree and quality of a disabled student's social participation to her/his level of impairment. However, educational arrangements and organization; teacher and support staff knowledge, attitudes, and biases; and the amount, type, and distribution of resources have been identified as the key factors in determining the degree and quality of social participation among disabled children and their peers in regular schools (Wendelborg & Tøssebro). Inclusion itself does not guarantee social participation, nor does impairment itself lead to social exclusion and the lack of social participation. Whether disability is accompanied by social participation will be determined by the opportunities (or lack thereof) in the social, economic, material, physical, and attitudinal environments in which they find themselves (Hjelle & Vik, 2011; Koster et al., 2009; McPhedran, 2011; Wendelborg & Tøssebro, 2011). Arguably, this would hold true for other marginalized groups as well.

It is increasingly argued that many of the debates over social participation have been limited by an overemphasis on theoretical concerns with insufficient attention paid to the individual and collective perspectives of people (particularly those from marginalized and socially excluded groups) as to what "social participation" is, how it is experienced, and how it might be improved (Hjelle & Vik, 2011; Mars et al., 2008; McPhedran, 2011).

Cross-References

- ▶ [Participation in Community Organizing](#)
- ▶ [Social Change](#)
- ▶ [Social Cohesion](#)
- ▶ [Social Competence](#)
- ▶ [Social Exclusion](#)
- ▶ [Social Health](#)
- ▶ [Social Inclusion](#)
- ▶ [Social Indicators](#)
- ▶ [Social Integration](#)
- ▶ [Social Interaction](#)
- ▶ [Social Support](#)
- ▶ [Social Well-being](#)

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Social Participation of Older Adults

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Definition

► **Social participation** (SP) is one of the main outcomes of rehabilitation and a common intervention goal of most health professionals. Social participation not only includes active engagement in life situations (World Health Organization; WHO, 2001) at the societal level; it also refers to the personal meaning and satisfaction resulting from that engagement (Hammel et al., 2008). A new challenge for future ► **quality of life** research is therefore to consider not only the accomplishment level of SP but also satisfaction with SP.

Description

To examine the correlates of accomplishment level and satisfaction with SP, a cross-sectional design was used with a convenience sample of 155 older adults (mean age = 73.7; 60 % women) having various levels of activity limitations. Participants were living in the community and receiving services from a local community service center, geriatric day hospital, or geriatric day center. Accomplishment level and satisfaction with SP (dependent variables) were estimated

Social Participation of Older Adults, Table 1 Characteristics of the participants (n = 155)

Independent categorical variables	Frequency (%)
Personal factors	
Gender (women)	93 (60.0)
Self-perceived stability of activity level (Yes)	132 (85.2)
Health and impairment	
Self-perceived health: excellent	38 (24.5)
Good	62 (40.0)
Fair	44 (28.4)
Poor	11 (7.1)
Recent stressing event (No)	93 (60.0)
Continuous variables	
Dependent variables	
Social participation (Life-H social roles)	
• Accomplishment level of participation (/9)	6.9 (1.8)
• Satisfaction with participation (/5)	4.0 (0.5)
Independent variables	
Personal factor	
• Age (years)	73.7 (8.0)
Health and impairment	
• Well-being (GWBS; /110)	75.0 (17.0)
Activity level	
• SMAF (/87)	13.4 (12.6)
Environmental factors (MQE; # weighted)	
• Facilitators	
Social support and attitudes	20.1 (7.2)
Income, labor, and income security	12.0 (4.2)
Government and public services	26.0 (6.3)
Physical environment and accessibility	25.6 (12.2)
Technology	27.4 (6.8)
Equal opportunities and political orientations	8.8 (5.5)
• Obstacles	
Social support and attitudes	−1.2 (2.9)
Income, labor, and income security	−0.5 (1.4)
Government and public services	−0.8 (1.9)
Physical environment and accessibility	−13.5 (8.9)
Technology	−3.4 (2.8)
Equal opportunities and political orientations	−1.5 (2.0)

with the social roles items of the Assessment of Life Habits (Life-H; Fougeyrollas & Noreau, 1998). Potential correlates were human functioning components (personal factors, health and

impairment, activity level, and environmental factors) which were identified using multiple regression analysis (blockwise strategy).

Results

Among the clinical characteristics of the participants, the Life-H accomplishment level of participation score of 6.9 indicates that social roles are generally accomplished with difficulty but without help (Table 1). The MQE scores indicate that the environment is generally perceived as being more of a facilitator than an obstacle. Finally, activity level scores vary between 0 and 45, with the mean indicating slight-to-moderate activity limitations.

Best correlates of accomplishment level and satisfaction with SP were different. Higher accomplishment level of SP was best explained by younger age, activity level perceived as stable, no recent stressing event, better well-being, higher activity level, and fewer obstacles in “physical environment and accessibility” (R2 = 0.79; Table 2). Greater satisfaction with SP was best explained by activity level perceived as stable, better self-perceived ► health, better

well-being, higher activity level, and more facilitators in “► social support and attitudes” (R² = 0.51; Table 3).

Best correlates of accomplishment level and satisfaction with SP did differ according to personal factors, health and impairment, and environmental factors. Some useful approaches to take in clinical interventions aimed at maintaining or improving SP are:

- Consider well-being and activity level of individuals.
- Improve accomplishment level of SP by reducing obstacles in “physical environment and accessibility.”
- Improve satisfaction with SP by increasing facilitators of “social support and attitudes.”

Conclusions

With some exceptions, these best correlates may be positively modified and thus warrant special attention in rehabilitation interventions. Future research must continue to include both accomplishment level and satisfaction with SP and should also include psychological characteristics such as coping to better explain satisfaction with SP.

Social Participation of Older Adults, Table 2 Best correlates of accomplishment level of social participation (n = 155)

Life-H accomplishment level of participation in social roles score	Regression coefficients	p value	Cumulative R ²
Best model			
Intercept	9.7	<0.001	–
1. Personal factors	–0.03	<0.001	0.52
Age (–)			
Self-perceived stability of activity level (yes)	–0.8	0.001	
2. Health and impairment	0.6	<0.001	0.64
Recent stressing event (no)			
Well-being (GWBS; +)	0.02	0.01	
3. Activity level	0.08	<0.001	0.78
Activity (SMAF; +)			
4. Environmental factors	0.02	0.047	0.79
Obstacles of physical environment and accessibility (MQE; –)			

Social Participation of Older Adults, Table 3 Best correlates of satisfaction with social participation (n = 155)

Life-H satisfaction with participation in social roles score	Regression coefficients	p value	Cumulative R ²
Best model			
Intercept	4.1	0.04	–
1. Personal factors	–0.2	<0.001	0.26
Self-perceived stability of activity level (+)			
2. Health and impairment	–0.1	0.02	0.42
Self-perceived health (+)			
Well-being (GWBS; +)	0.01	0.01	
3. Activity level	0.01	0.001	0.45
Activity (SMAF; +)			
4. Environmental factors	0.02	<0.001	0.51
Facilitator of social support and attitudes (MQE; +)			

Life-H Assessment of life habits

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Social Policy

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Definition

The use of public funds of the state, in the profit of social goals, is a social policy. In these terms, the social policy implies the action of the state in diverse scopes satisfying social demands, assuring human well-being and quality of life.

Description

In order to understand the meaning of social policy, making an approach of two parallel topics is useful: the role of state in economy and the establishment of welfare essentials for people.

About the role of state in economy, it is important to underline the permanent discussion about economic intervention and take for granted that today we have no consensus about it (Chang, 1995; Evans, Rueschmeyer, & Skocpol, 1995). In reference to essentials for people, discussion has been also complex, especially since Welfare State crisis (Offe, 1990; Pierson, 1991) supposed the emergence of neoliberal proposals (Grannovetter, 1993; Esping Andersen, 1990; 1996).

Role of State in Economy

In historic terms, to distinguish between assistance, welfare, and equity is absolutely necessary. These three concepts are significant as antecedents to consider state economical functions.

If we think about social problems around the last two decades of the nineteenth century, we note that discussion about intervention of state in economics is not new. Consolidation of capitalism model implies structural contradictions that mean, in a liberal perspective, nonintervention at all. In this context, social problems that were traditionally attended as an expression of charity by church or rich people were supplied with state actions in some social and economic areas. Expressions like Providential State (*État providence*) in French liberals around 1860, Assistance State (*Wohlfahrtsstaat*) for germane socialists in 1870, and Social State (*Sozialstaat*) that appears since Bismark reforms in 1880 come up to be common in political practice.

Consequences of World War I and the 1929 world economic crisis demonstrate that market and society could not autocontrol by themselves in order to transcend contradictions and crisis. With both historic incidents, free market theory found its limits. As an answer for this economic depression period, liberalism proposes an option that starts to draw a line between state and development. Since World War II, welfare began to be part of this state function.

Welfare State

As an alternative for liberal theory, this perspective put forward a direct state intervention in economy to guarantee complete employment

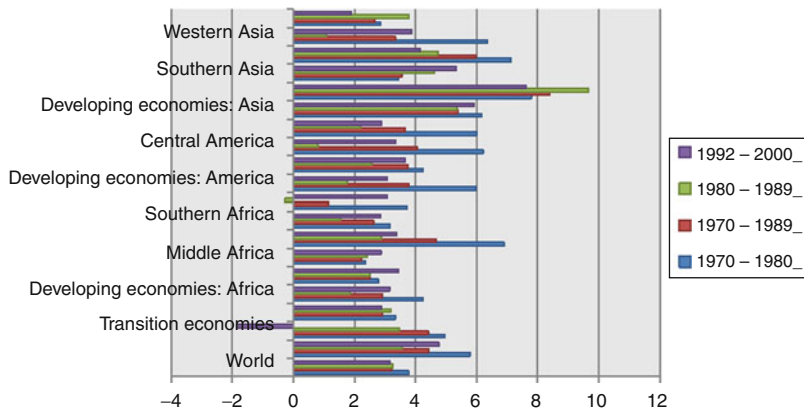
and with that, economic development. In the beginning, we can observe that these functions were defined as a governmental protection of minimum standards for life: rent, feeding, health, social security, education, and income. This protection was for all citizens as a political right (Briggs, 1961). Later, it was understood as an answer for demands that starts in European societies at the beginning of the twentieth century and that has to be associated with the modernization concept (Flora & Heidenheimer, 1981). In this order of ideas, it is important to say that Welfare State tries to make permanent and universal all social benefits acquired with social state. From the center of Welfare State, assistance implies state action to guarantee essentials of life needs for people, and when it involve a relation of assistance for a big sector of society, we are talking about well-being. In this sense the application of public funds, state attributive, for social goals is associated with social policy. Before liberalism ideas, this achievement started with a frame of assistance for those who need, this means, a group of decisions and economical actions that were focused on the assurance of equal opportunities for society. Social policy in Welfare State is a result of political agreement. It is a planning function of state, which recognized social rights for citizens and looks for a quality of life for people.

Social Policy and Quality of Life

Nowadays the increase of absolute poverty and inequity in population was an evidence that suggests promoted public policies have no results in the well-being and life quality for people (Figs. 1, 2). To face up this situation, different governments support a structural reform program for some countries which finally propose where to equilibrate global system in economical, political, and social areas. This consent between rich economies was a result of Washington Consensus in 1989, and it holds ten basic points: fiscal discipline, reordering public expenditure priorities, tax reform, liberalizing interest rates, competitive exchange rates, trade liberalization, liberalization of inward foreign direct investment, privatization, deregulation, and property rights.

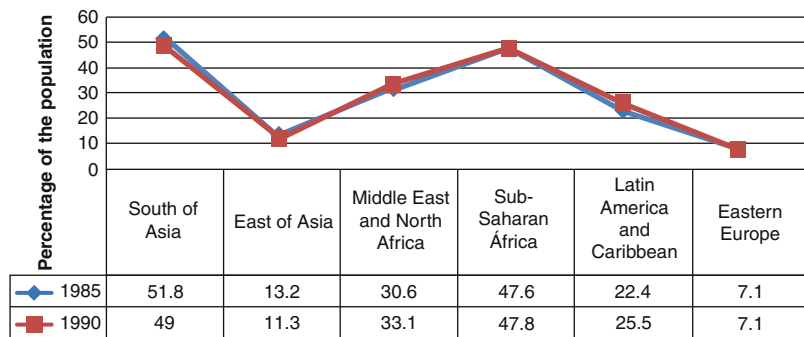
Social Policy,

Fig. 1 1970–1990 real GDP growth rates, total (Graphic elaborated with data from United Nations Conference of Trade and Development [UNCTD]: <http://www.bancomundial.org/temas/globalization/cuestiones2.htm>)



Social Policy,

Fig. 2 Percentage of the population below the poverty line: 1985–1990 (Graphic elaborated with data from: World Social Situation in the 1990s (United Nations, 1994))



After a decade, some fails of this adjust program consist in determinate social policies subordinated to economic policy (Ocampo, 2004). One first revision to the consensus was made starting this century and looks forward to make emphasis in social polices (Birdsall & de la Torre, 2001; Kuczynski & Williamson, 2003). Still in our days, critics for neoliberal ideas are reconsidering state role in economy.

In summary, state functions and its relations with development is an old discussion that does not have a satisfactory response yet. In new order context and transformation, tendencies in the world have a target to define economic and political development for countries almost in three dimensions (Valverde, 2005):

1. Recognition of different options for economical and social policies but with non-common theory support.
2. Reorientation of some concepts as development, trying to include an integral perspective. This

means a development concept not dominated by economic area and that includes a human view, adding some quality indicators (Sen, 1992).

3. According to economical, political, and social reality, it is a tendency in each country to build its own model of development.

In these circumstances, social policy is fundamental. Trying to minimize economic model contradictions, governments need to design actions from state. These set of actions are link with public policies, specifically, with social policies that try to promote human well-being in all societies (UNCTAD, 2011).

Today, social policy function supposes a possibility to reduce with state actions' differences between diverse social sectors. This opportunity refers to an important concept: equity (Rawls, 1971; World Bank, 2011).

Traditionally social policies were designed to assist population; later they center the assistance to most vulnerable groups. In our days, a good

number of countries promote social policies that mixed assistance and focus attention.

In addition, it is important to emphasize that the institutionalization process, that in society has a place for social policy, has a direct impact in some other concepts, such as quality of life (Land, Michalos, & Sirgy, 2011). Now, if we study social policies, we cannot separate it from understanding quality of life as a complex term that includes multidimensional interdisciplinary scopes that focus on perception of people about their circumstances of life and their cultural context, both aspects in relation between his beliefs, interests, and goals (Tonon, 2009).

Cross-References

- ▶ Development
- ▶ Economic Development
- ▶ Equity
- ▶ Poverty
- ▶ Public Policy
- ▶ Quality of Life
- ▶ Social Development
- ▶ Welfare State(s)

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Social Programs

- ▶ Workers' Compensation

Social Progress

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Synonyms

Social QOL

Definition

► **Social progress** refers to progressive advancements over time in the capacity of nations to satisfy at least the basic **social**, **material**, and **spiritual** needs of their populations (Estes, 1984). A well-established construct in the literatures of **sociology** (Esping-Anderson, 1990), **political science** (Weingast & Wittman, 2006), **economics** (Buchholz, 2007; Sachs, 2008), **philosophy**, and **comparative religion**, **social progress** embraces both the means required for realizing fuller levels of individual and collective development as well as the ends that are to result from that development (e.g., improved educational status, improved housing and sanitation conditions, better health, increased ► **spirituality**). Thus, social progress is both an **intrinsic** and **instrumental** value in ► **social development** and, as such, reflects the processes and outcomes associated with positive changes that take place on an **intentional** basis in the lives of people over time (Moeller, Huschka, & Michalos, 2008).

Description

Social progress has been the primary objective of national and international development efforts since at least the nineteenth century (Bury, 1920; Spalding, 1939). Today, the pursuit of increasing levels of social progress guides the development assistance activities of specialized agencies of the United Nations as well as those of the great majority of international nongovernmental

organizations (e.g., Amnesty International, the International Red Cross and Red Crescent Society, Medecins Sans Frontiers, Save the Children) and scholars working in the field of international development (Estes, 2010, 2011; Midgley & Conley, 2010).

The document that best captures the meaning of “social progress” at the global level is the 1969 United Nations *Declaration on Social Progress and Development* (United Nations, 1969).

Article 3 of The Declaration identifies the prerequisites necessary for societies to pursue social progress:

- (a) National independence based on the right of peoples to self-determination;
- (b) The principle of non-interference in the internal affairs of States;
- (c) Respect for the sovereignty and territorial integrity of States;
- (d) Permanent sovereignty of each nation over its natural wealth and resources;
- (e) The right and responsibility of each State and, as far as they are concerned, each nation and people to determine freely its own objectives of social development, to set its own priorities and to decide in conformity with the principles of the Charter of the United Nations the means and methods of their achievement without any external interference;
- (f) Peaceful coexistence, peace, friendly relations and co-operation among States irrespective of differences in their social, economic or political systems.

Article 10 of The Declaration identifies the central goals and objectives of national and international social progress over time:

- (a) The assurance at all levels of the right to work and the right of everyone to form trade unions and workers’ associations and to bargain collectively; promotion of full productive employment and elimination of unemployment and under-employment; establishment of equitable and favourable conditions of work for all, including the improvement of health and safety conditions; assurance of just remuneration for labour without any discrimination as well as a sufficiently high

- minimum wage to ensure a decent standard of living; the protection of the consumer;
- (b) The elimination of hunger and malnutrition and the guarantee of the right to proper nutrition;
 - (c) The elimination of poverty; the assurance of a steady improvement in levels of living and of a just and equitable distribution of income;
 - (d) The achievement of the highest standards of health and the provision of health protection for the entire population, if possible free of charge;
 - (e) The eradication of illiteracy and the assurance of the right to universal access to culture, to free compulsory education at the elementary level and to free education at all levels; the raising of the general level of life-long education;
 - (f) The provision for all, particularly persons in low income groups and large families, of adequate housing and community services.

Article 12 of The Declaration focuses on the structural inequalities that exist between rich and poor countries and suggests remedies for eliminating these impediments to national and international social progress:

- (a) The creation of conditions for rapid and sustained social and economic development, particularly in the developing countries; change in international economic relations; new and effective methods of international cooperation in which equality of opportunity should be as much a prerogative of nations as of individuals within a nation;
- (b) The elimination of all forms of discrimination and exploitation and all other practices and ideologies contrary to the purposes and principles of the Charter of the United Nations;
- (c) The elimination of all forms of foreign economic exploitation, particularly that practised by international monopolies, in order to enable the people of every country to enjoy in full the benefits of their national resources.

In 2005, the United Nations' *Millennium Development Campaign* (United Nations Millennium Project, 2005) superseded the 1969

Declaration on Social Progress and Development as the major statement of the world body concerning the relationship between social progress, human rights, and the pursuit of national and international development (United Nations, 2010a). Among other outcomes, the MDC specified eight **Millennium Development Goals** (MDGs) toward which the United Nations and its network of specialized agencies would devote the majority of their financial and human resources for the 10-year period 2005 thru 2015: (1) eradicating extreme ► **poverty** and ► **hunger**; (2) achieving universal primary ► **education**; (3) promoting ► **gender equality** and the ► **empowerment** of women; (4) reducing child mortality; (5) improving maternal health; (6) combating HIV/AIDS, malaria, and other diseases; (7) ensuring environmental sustainability; and (8) developing a global partnership for development. As with the earlier *Declaration on Social Progress and Development*, the MDGs place social progress at the center of **human capacity development** and **international cooperation**.

Unique among United Nations declarations, the MDC and its eight MDGs have embedded within them a discrete set of fully operational, time-sensitive ► **social indicators** (N = 60) that are used to monitor national, regional, and worldwide social progress (United Nations, 2010b). Successes (and failures) in achieving these objectives are reported annually for each of three levels of analysis: (1) country reports, (2) regional reports, and (3) global reports (United Nations, 2010c). Electronic copies of all MDG reports, including their rich statistical tables and spreadsheets, are made available to scholars without cost. The United Nations commitment to an empirical approach to advancing social progress has attracted broad political support from governments, cooperative programmatic support from major **nongovernmental international development assistance organizations**, and financial support from private donors including from such wealthy **philanthropists** as Warren Buffett, Bill and Melinda Gates, George Soros, and Ted Turner (United Nations, 2010d).

The MDC is scheduled to conclude in 2015 whereupon a new campaign, one with an even

more ambitious set of international development objectives, will be announced. In the end, the goals associated with both campaigns are intended to reduce the disparities in socioeconomic development that persists between the world's richest and poorest countries – which make up 17 % and 83 % of the world's total population, respectively. Throughout these campaigns, the realization of increasingly higher levels of personal and collective social progress serves as the standard against which human progress is measured.

Cross-References

- ▶ [Physical Quality of Life Index \(PQLI\)](#)
- ▶ [Well-Being of Nations](#)

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Social QOL

- ▶ [Social Progress](#)

Social Quality of Life

- ▶ [Social Support](#)

Social Relationships and Roles

- ▶ [Breast Cancer](#)

Social Rented Housing

- ▶ [Social Housing](#)

Social Resources

- ▶ [Social Support](#)

Social Responsibility

- ▶ [Collective Responsibility](#)

Social Rules for Emotion

- ▶ [Emotions, Sociology of](#)

Social Safety Nets

- ▶ [Welfare State\(s\)](#)

Social Self

- ▶ [Independent/Interdependent Self](#)

Social Service Users

- ▶ [Spanish Social Service Recipients](#)

Social State of the Netherlands

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Synonyms

[SSN](#)

Definition

The social state of the Netherlands (SSN) is a monitor which is about the life situation of the citizen.

Description

How is the Dutch population faring? That is the central question addressed in the report, in which the Netherlands Institute for Social Research describes the present status of the Netherlands and the Dutch in a number of key areas of life.

The societal domains analyzed in this report are:

- Education and training
- Work and income
- Health and care
- Social participation and engagement
- Culture, media, sport, recreation, and tourism
- Safety
- Housing and the residential setting

Each domain is described in a separate chapter. Preceding these chapters, there are two chapters that outline the social context at macro-level. One focuses on economic and demographic trends, while the other looks at the opinion climate.

Following the domain chapters, there is a special chapter that does not look at one specific domain, but outlines the trend in life situation based on a composite life situation index (see Boelhouwer, 2010 for a history of this index). This summarizing measure integrates eight indicators of the life situation: health, housing, social participation, participation in sport, ownership of consumer durables, mobility, leisure activities, and holidays. Using this index, a single life situation “score” can be produced, and it is possible to show which population groups have moved ahead or fallen behind in recent years.

The concluding chapter offers a change of perspective compared with the earlier chapters. Following a discussion of the most striking developments in society, it looks at things which have gone well and gone badly and at the population groups for which this mainly applies (Bijl et al. 2009).

SSN

The social state of the Netherlands has its origin in a report called “Social and Cultural Outlook.”

This new publication was launched in 1985 at the special request of the Lower House of

Parliament, which wanted to see a counterpart to the annual “Macro Economic Outlook” published by the Netherlands Bureau for Economic Policy Analysis (CPB). In 2001, this report was replaced by the biannual SSN and broadened to include more domains and have a sharper focus on the life situation.

The most important target groups of the publication are the Lower House and the Cabinet. The report provides them with information on the social situation in the Netherlands. Policy-makers who are already well informed can use the SSN as a framework in which the developments in their particular field can be placed. The SCP is also seeking to reach the socially interested public with this publication (Boelhauer and Roes, 2004).

As the SSN concentrates on the life situation of the individual citizen, little attention is devoted in this report to the collectivity of Dutch society and its institutional characteristics. These are reported in the Social and Cultural Report (SCR), which is nowadays more thematic of nature and published in a biannual routine with SSN.

As a time frame, the report uses a 10-year period to describe the changes that have taken place in people’s life situation. The Netherlands is also compared with other European countries – in so far as the data allows. Where relevant and possible, the data are broken down by population groups, after all, people’s capacities, opportunities, and preferences for the way in which they structure their lives differ and are related to their age, sex, whether or not they are disabled, their ethnic origin, and their financial position.

Social Monitoring

The SSN is part of a long and international research tradition in which an attempt is made using social indicators to monitor the living conditions and quality of life of citizens over time and to identify trends in these areas. The availability and comprehensiveness of data are improving, and this is creating better opportunities for charting social trends within the population as a whole (Berger-Schmitt and Noll, 2000).

We use the term “life situation” to describe people’s quality of life, expressed in terms of

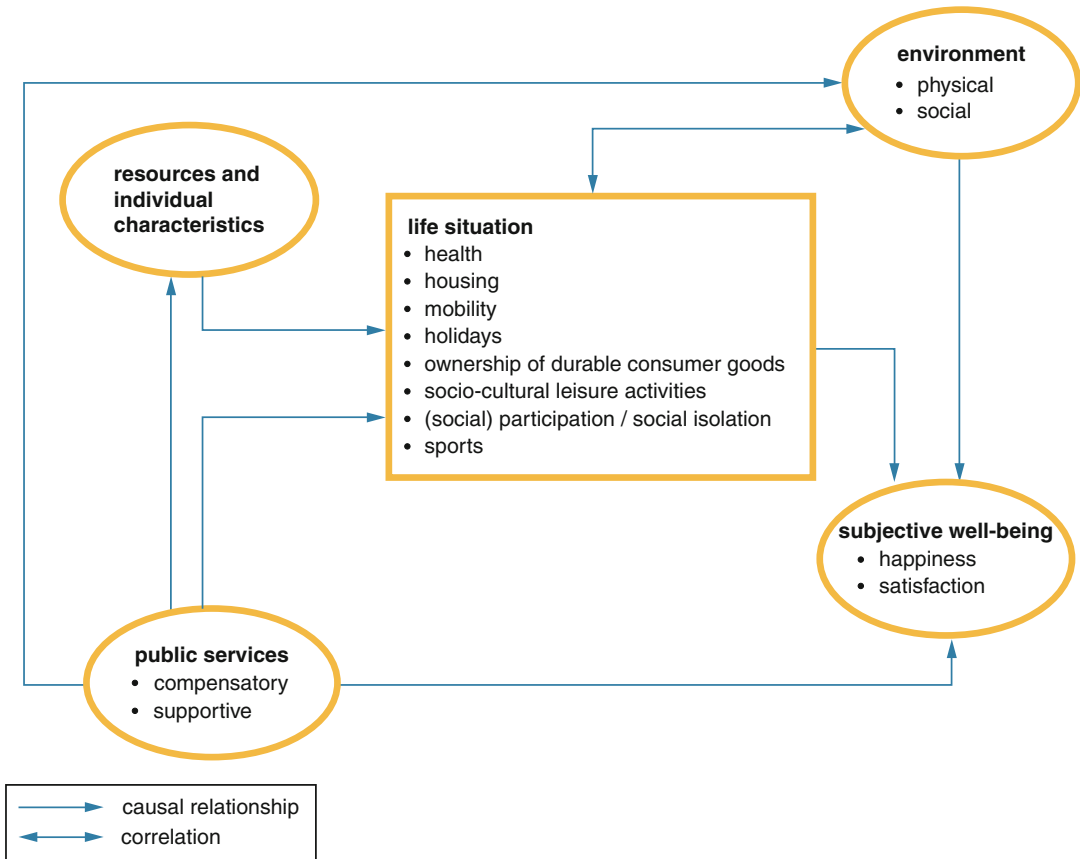
prosperity and well-being. In the first instance, quality of life refers to objectifiable living standard. This is defined as access to resources that are capable of influencing a person’s own living conditions. Examples include income, education, and employment, which can be employed in the various domains of life in order to make social progress, and are reflected in the way people live, spend their leisure time, participate in society, exercise, and travel. It depends not only on general social, economic, and demographic trends but also on all manner of resources to which individual citizens have greater or lesser access. This approach is heavily slanted towards monitoring in the interests of social policy. The Scandinavian countries in particular follow this approach (Vogel, 1995).

There is also a subjective side to quality of life. People’s opinions about their own lives, their degree of satisfaction with life in general or with specific aspects of their life situation, also form part of their quality of life. This approach was developed in the United States in the 1960s but found major resonance in the Netherlands in the 1970s when the concept of well-being – as the counterpart of prosperity – was introduced as a policy concept. Veenhoven developed this approach further for international comparative research (Veenhoven, 1996).

The final important questions concern the scope of the monitor and the way in which a particular outcome is labelled good or bad. Life situation is a multidimensional concept, and therefore, most monitoring systems include indicators for a number of life domains. The choice of domains is prompted by policy considerations or based on empirical research. In practice, this is dealt with pragmatically. Most monitoring systems cover a number of key domains, such as family and friends, welfare and health, material prosperity, productive employment, personal safety, and participation in local society (Hagerty et al. 2001).

A Model-Based Approach

It is against the background of these considerations that social state of the Netherlands is compiled. A broad approach has been adopted, under



Social State of the Netherlands, Fig. 1 Conceptual framework used for the description of the life situation. Source: Boelhouwer (2010)

which the various types of data are presented as an interrelated whole. The SSN is based on the conceptual framework shown in Fig. 1 (Boelhouwer and Roes, 2004).

As noted, the life situation of the citizen and the quality of their life have been taken as the central themes. Citizens have individual resources to help them achieve a good life situation. In present-day society, the main resources are education, employment, health, and income. To these might be added indicators such as self-reliance. Age – especially old age – is also relevant for the extent to which people are generally self-reliant. The household situation provides an indication of the extent to which people will receive support in the event of problems. Finally, ethnic and/or cultural origin is also an indicator for the availability of social resources.

The model is based on a causal relationship between resources and life situation: the more resources at a person’s disposal, the greater their chance of a good life situation. The government, which is concerned with the creation of equal opportunities, exercises influence over the availability of such resources. It redistributes income and helps citizens to acquire social resources through public provision (Roes, 2008).

The social and physical settings are also important conditions for the life situation of the individual citizen. Socio-scientific research reveals the physical and social environment to be an autonomous factor affecting the life situation of the citizen either directly or indirectly.

In line with the Scandinavian approach, the reporting in the SSN concentrates both on the resources and the factual situation in the

aforementioned domains. As such, the SSN largely presents primary output or situational indicators. The resources and life situation of individuals and households are identified on the basis of objective indicators.

Something different from the actual situation in which people find themselves is the way that people rate their life situation (or elements in it) and the extent to which people are more or less happy. Where data are available, each chapter therefore establishes the relationship between the (objectively measured) life situation and the subjective assessments of it. This then casts a more detailed light on the objectified results. An objectively good life situation will not always be recognized as such by public opinion or the individual himself or herself, for example, because of high expectations. Knowledge of such perceptions is not just important for the political process in a narrow sense – the securing of public support for a particular policy – but is also relevant for the process of formulating social objectives.

Although the purpose of the social state of the Netherlands is not to carry out a policy evaluation, we are able on the basis of output indicators to determine for a range of societal domains whether the formulated policy objectives are being achieved. It is by no means always possible to ascertain whether government policy has played a decisive role in this, in either a positive or negative sense (Bijl et al. 2010). This would require a different research approach. In Fig. 1, government policy is just one of the determinants of the life situation and quality of life of Dutch citizens.

The (causal) relationships presented in Fig. 1 are not all identified for each domain. Where relevant, a relationship is established in each chapter between age, household situation, education, labor market position, and income on the one hand and the results in a particular domain on the other. The Life Situation Index is discussed in a separate chapter and provides a means of exploring the correlations more systematically.

Choice of Indicators

Although this causal model provides a certain frame of reference for ordering and selecting

from the numerous possible topics, it does not help greatly in the practical choice of indicators that best represent the situation in a particular field. In this regard, empirical research, drawing as it does on public opinion concerning what is important for the standard of living and well-being of citizens, provides a guide for determining what is usable and for making a selection. SCP has a solid tradition in reporting on social trends and quality of life. The choice of concrete indicators for the SSN is accordingly based to a significant extent on previously conducted empirical research (Roes, 2008).

In addition, prevailing political and policy considerations have played a role in the selection. These must be discounted in the system of indicators if the SSN is to fulfill an identifying and policy-evaluating function.

Finally, a number of practical considerations played a role in the determination of the domains and indicators. Needless to say, the availability of relevant research data is of decisive importance. In particular, there is a need for databases containing information on a large number of life situation aspects. For the SSN, SCP is able to draw on the results of a number of large longitudinal surveys, conducted mainly by SCP or Statistics Netherlands.

Cross-References

- ▶ [Domain Satisfaction](#)
- ▶ [Netherlands Social and Cultural Report](#)
- ▶ [Objective Quality of Life](#)
- ▶ [SCP Life Situation Index](#)
- ▶ [Subjective Well-being](#)

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Description

Human history has known varieties of stratification systems associated with different degrees of ► [social inequalities](#) and ► [poverty](#). Kerbo (2003) relates the development of social stratification in human societies and notes that “Social scientists are not in complete agreement on the most useful typology or method of comparing types of social stratification systems that have existed throughout history, but five general types are most commonly described: *primitive communal, slavery, caste, estate or feudal, and class systems*” (p. 50). The same author compares these stratification systems according to five basic characteristics: “normatively closed versus open divisions, the actual method of status or class placement, the major method of legitimation, the predominant form of inequality, and the comparative level of inequality in each type of stratification system” (Kerbo, 2003).

The different systems of social stratification are associated with various rules defining the ranking of individuals and groups; theories of social stratification are meant to discover and understand these rules (Kerbo, 2007). According to Grusky (2001), the history of stratification theory is mainly a history of debates about class, status, and prestige hierarchies in advanced industrial societies. In this framework, five major schools of thought can be distinguished (Grusky, 2001): Marxists and post-Marxists, Weberians and post-Weberians, Durkheim and post-Durkheimians, elite studies, and gradational approaches of social standing such as prestige scales (Treiman, 1977), socioeconomic scales (Blau & Duncan, 1967), or social interaction and stratification scales (Stewart, Prandy, & Blackburn, 1980).

The contemporary stratification system, that is, the (ideal type of) class system, is characterized by the normative notion of primarily open divisions, a set of ► [mobility](#) mechanisms consisting of a mix of ascription and achievement, a legitimizing legal ideology, a primary basis of ranking grounded on economic and bureaucratic authority, and an overall medium

Social Stigma

► [Disadvantaged Populations](#)

Social Stratification

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Definition

Social stratification (see Grusky, 2001; Hout & DiPrete, 2006; Sørensen, 1986) refers to the fact that all known societies are characterized by a systematic ranking of people or groups of people, this ranking being associated with unequal distribution of resources (► [social inequalities](#)), and access to life chances. Systems of social stratification require some form of legitimation to be stable.

level of inequality (Kerbo, 2003). In modern societies, in particular, the (vertical) class stratification system is crosscut and complexified by ascriptive stratification such as gender, race, and ethnicity.

As stated by Grusky, “(t)he task of contemporary stratification research is to describe the contours and distribution of inequality and to explain its persistence despite modern egalitarian or anti-stratification values” (2001). In this framework, some important distinctions must be made. The traditional distinction between inequality of opportunity and inequality of condition (Breen & Jonsson, 2005) tends to hide a central issue: that of the social structure (occupational and/or class structure, gender stratification, etc.). Only social structure gives full meaning to the mentioned dimensions of stratification research: analyzing inequality of opportunity basically means analyzing mechanisms that distribute individuals into social positions that constitute the class structure; studying inequality of condition fundamentally means studying the distribution of (valuable) goods and outcomes associated with those positions. In sum, we can distinguish three main fields of stratification research: (1) the social (class) structure itself (and its evolution); (2) the different forms of position or status attainment and mobility, including topics such as educational attainment, occupational mobility, and social mobility; and (3) the consequences of stratification in various domains such as health, income and wealth, lifestyle(s) and ► [consumption](#), ► [class identification](#), and regarding the overall life course and ► [quality of life](#) (QOL).

With respect to the class structure, the use of the class concept at least in quantitative research suggests a common shared concept in recent stratification research (Sørensen, 1991): “Classes are sets of structural positions. . . . Class positions exist independently of individual occupants of these positions. They are ‘empty places’.” (p. 72). Beyond this common concept, various main approaches (and operationalizations) exist in sociological research: neo-Marxist class analysis, neo-Weberian, neo-Durkheimian, Bourdieu’s, and rent-based class analysis (Wright, 2005).

Parallel to this tradition of class analysis, researchers have developed and used gradational measurements of social position. However, it can be argued that such scales are more a measure of status than of class position (for the conceptual distinction, see Chan & Goldthorpe, 2007). Regarding the evolution of the contemporary social structure, accounts may be found in Gagliani (1985), Myles and Turegun (1994), and Wright (1997) and more recently in Davies and Elias (2009). One of the main results of research is that the class structure of contemporary Western societies does not correspond to a “middle-class” society and, more generally, that empirical testing neither supports the liberal nor Marxist theories of long-term change in the class stratification of advanced Western societies (Goldthorpe, 1992).

Whereas inequality of opportunity, that is, placement mechanisms, refers to a person’s chance of upward mobility as related to ascribed characteristics such as race, sex, or class origin, stratification research focuses on attainments of educational qualifications, status, and social positions and how these phenomena are associated with ascribed characteristics (Breen & Jonsson, 2005). Classics in the field are Blau and Duncan (1967), Breen (2004), Erikson and Goldthorpe (1992) and Shavit and Blossfeld (1993). Recent developments regarding mechanisms of placement within the social structure clearly show that origin effects are stronger at earlier than later educational transitions, that ► [education](#) mediates an important part of the association between (social) origins and (social) destinations, that women experience more social fluidity than men, and that the pattern of social fluidity is principally shaped by inheritance, hierarchy, and sector effects (Breen & Jonsson, 2005). Beyond this, research on placement mechanisms displays persisting disagreements, leading to the elaboration of models to understand how such associations between origins and destinations are generated or upheld. In this framework, a part of the research is based on a model of rational action theory for sociology (Goldthorpe, 2006), another on the influence of institutions (Bourdieu & Passeron, 1997). To date, little relation has been found between social mobility and happiness (see ► [Social Mobility](#)).

With reference to inequality of condition (i.e., the consequences of stratification), research mainly looks at the distribution of goods, rewards, living conditions, and behaviors according to social class and other factors of social stratification. The term “intersectionality” (Crenshaw, 1989) refers to the finding that in contemporary societies, social class intersects with numerous other dimensions of stratification (especially race and gender) in various domains such as income and wealth (McCall & Percheski, 2010; Neckerman & Torche, 2007) or lifestyles and patterns of cultural taste and consumption (Chan, 2010). Including a temporal and micro perspective on social class, recent research reveals that the entire life course is characterized by phenomena of cumulative (dis)advantages (DiPrete & Eirich, 2006). Studies on the relationships between social stratification and quality of life are scarce with the exception of the focus on the lowest positions, namely, in classical poverty studies (Charles Booth; Seeböhm Rowntree). Here clearly the association between the lowest position in stratification and quality of life is discussed extensively as well as their consequences for the individuals and society. The links between income and well-being (Frey & Stutzer, 2002) or socioeconomic status and ► [health](#) (Elo, 2009) seem well established.

Cross-References

- [Class Identification](#)
- [Consumption](#)
- [Educational Inequality](#)
- [Health](#)
- [Occupational Mobility](#)
- [Poverty](#)
- [Quality of Life \(QOL\)](#)
- [Social Inequalities](#)
- [Social Mobility](#)

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Social Stress

► [Duke Social Support and Stress Scale \(DUSOCS\)](#)

Social Structure and Happiness

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Synonyms

[Structure of society and happiness](#)

Definition

Social structure is a complex term concerning the social characteristics of people, the typical

structure of societies, and the stratification of the world society. Most often social structure refers to social-demographic characteristics like age and gender as well as their arrangement with respect to scarce goods like occupational positions, income, education, and social prestige (Zapf, 1994). Social structures exist on each level of human organization, mainly within countries and states, but also on the level of regions, continents, and the world society. Closely related is social stratification which is divided between vertical/hierarchical and horizontal stratification. Social structures in their various meanings are correlated with the happiness and well-being of people. Over the years, the word happiness has been used in different meanings, but recently it is mostly used in the sense of life satisfaction, that is, subjective appreciation of life.

Description

As a general definition of social structure says, “The social structure may be considered in terms of the demographic characteristics, the institutional composition, the culture patterns and social psychological milieu of the community/society” (Ferriss, 2006: 118). Here three aspects are considered: *the social-demographic characteristics of people, the structural types of societies, and the stratification of world society.*

Social-Demographic Characteristics of People

Happiness in the sense of subjective well-being (SWB) is related to various social-demographic characteristics of people. Age, gender, income distribution, ethnicity, etc., are correlated to happiness, and happiness can be analyzed in connection with these characteristics.

For some selected demographic characteristics, the correlates are as follows:

Age: The correlation of age and happiness is a controversial topic. Some early studies show that happiness increases with age. Other studies in recent years have found no age effects and several have found a positive correlation (Diener, 2009a). The influence of age with respect to happiness has not yet been

clarified, and current investigators have begun to focus more on life cycle patterns than on age per se (Diener, 2009a).

Education: On the one hand education has a positive influence on SWB, but education is closely linked to income and occupational status (Diener, 2009a). On the other hand, although education may serve as a resource for people, it can lead to raised aspirations that will reduce satisfaction (Campbell, 1981).

Employment and Occupation: Unemployed people were in various studies unhappier than people who are working (Diener, 2009a). The reason for that is not just the situation of greater vulnerability; unemployment also affects self-esteem and social status. Excluded are retired people, who are not obliged to work anymore. Their happiness is not affected by unemployment. Generally, unemployment affects happiness depending on its social acceptance as normal or not (Argyle, 1999).

Ethnicity/Race: In different studies it has been found that Blacks are lower in subjective well-being than Whites in the USA (Diener, 2009a). In South Africa the happiest people are Whites, followed by Indians, coloreds, and Blacks (Moller, 1989). The reason for the lower happiness is the smaller income, less education, and less-skilled jobs (Argyle, 1999). The general lower social status of ethnic minorities is the main factor which makes the differences in the happiness levels.

Gender: There are no significant differences between women and men, but although women report more negative life events, they experience also greater joy. This is why only a small difference in overall happiness or satisfaction is usually found between the sexes (Diener, 2009a).

Income: Richer people are on average happier than poorer ones. To live in a wealthy society appears to be beneficial, but placing great emphasis on the acquisition of wealth can be counterproductive to happiness (Diener/Biswas-Diener, 2009). Easterlin's position is that raising the incomes of all does not increase the happiness of everybody because

the material aspirations of people increase in the same amount as the actual income (Easterlin, 1995). But Easterlin's position is controversial. For example, Hagerty and Veenhoven came to the conclusion "that increasing national income *does* go with increasing national happiness" (Hagerty & Veenhoven, 2003). Nevertheless, the studies suggest that not only purchasing power or mean levels of income are important factors but also the overall distribution of income, including the range and skewness, influences subjective well-being (Diener, 2009a).

Marriage and Living Alone or Not: There are differences between people who have a life partner or are married and unmarried people who are alone or widowed. Married or people who have a life partner turn out to be happier than people who are alone without a partner. Even if the influence of variables such as income, age, and education is controlled, the positive relationship between marriage and happiness exists (Frey, 2002). Nevertheless, there have been some studies which have failed to find a statistically significant effect on SWB for marriage (Diener, 2009a). Although one is unmarried, one might not live alone. It is possible that one lives together with parents, siblings, or friends. In several studies it was shown that people who live together with someone are happier than those who live alone (Veenoven, 1984). Besides this living factor, social contact itself is somehow related to SWB, but the direction is uncertain (Diener, 2009a).

Social Class: Social stratification is about individuals' positions within a social system or society. Individuals and groups of individuals can be classified into horizontal (higher and lower) and/or vertical differentiated strata or social classes. Stratification refers to inequality in a society. The class someone belongs to depends on occupational status, income, and education. It involves one's values and one's position in society. The correlation studies suggest that class has more effect on happiness in countries that are highly stratified, like India, with high inequality of

incomes. Also in less stratified countries, for example, Australia, there is still a connection, but the differences among the classes and their happiness is less than in India. The correlation is weaker, but still there. People who are in higher classes are happier than people in lower classes (Argyle, 1999). The reason why there is a correlation between social status and happiness is that “there is a multiple effect of better jobs, housing, relationships, and leisure” (Argyle, 1999: 356).

Social Mobility: This refers to the shifting upwards or downwards among social classes. Social mobility seems to be unrelated to happiness. Veenhoven (1984) concludes that maybe positive effects exist, but are counterbalanced by negative ones, like lost contacts with family and friends (Veenhoven, 1984).

Although these social-demographic characteristics have correlations with happiness, they are rather small. As Diener suggested, they influence the happiness of people but their influence is limited. Social characteristics explain no more than 15 % of the variance of happiness (Diener, 2009a). Others think that age, gender, race, income, education, and occupation explain just 8 % (Campbell, Converse, & Rodgers, 1976) or even 3 % (Lykkes & Tellegen, 1996). Campbell, Converse, and Rodgers suggested that it may be that in subjective well-being, the gap between the level of aspiration and the perceived situation is reflected, but the level of aspiration adapts to its circumstances. Lykkes and Tellegen have found in 1996 that 44–52 % of the variance in well-being is linked to genetic variables. So while genes play some role, beliefs and values are also important.

The Structural Types of Societies

This section examines structural types of societies with respect to economic and political dimensions which are correlated to happiness. Societies are structured in terms of organizational and institutional composition.

A happiness-supporting society is economically prosperous and gives people the opportunity to gain a good standard of living where they can fulfill their basic needs. In history economic

growth was accompanied in some countries with increasing happiness of the people. Especially in westernized regions, where people have achieved a high standard of living, this correlation is strong (Veenhoven, 1984). If certain needs are fulfilled over a long period, they are taken for granted and other needs arise. This may lead to a change in the priorities and values of a whole society (Inglehart, 1989).

With respect to political characteristics, which refer mainly to freedom in the country, the development of democracy and the incidence of political violence and protest are important for extending happiness in a country. Freedom has a positive effect on happiness, as strong as economic prosperity and the level of democracy. In countries with a high incidence of political violence and political protest, happiness is relatively low (Veenhoven, 1984). So “sharp declines in a society’s level of well-being can lead to the collapse of the social and political system, while high levels of well-being contribute to the survival and flourishing of democratic institutions” (Inglehart & Klingemann, 2000).

These characteristics of societies are different in the nations of the world. Also because of that, in some nations people are happier than in other nations. It has to be mentioned that, for example, smaller north European countries score higher in happiness than the ones with larger populations in the South (Glatzer, 2011).

A change of these characteristics can lead to a change in the happiness of people. Especially, economic growth in the history of many nations has influenced the happiness of people in a positive way. Life satisfaction in richer countries with a solid democracy and a balanced income distribution is higher than in countries without these aspects. Happiness is also higher in well-developed welfare states and in politically free countries (Haller & Hadler, 2006).

Stratification of World Society

Differences exist not just within nations; differences are even greater among nations. These differences can be measured to categorize and compare the nations of the world. One way to classify countries is to use the GDP per capita as

Social Structure and Happiness, Table 1 Types of selected western and non-western societies and happiness around 2006/2007

Four-step verbal happiness scales in selected western and non-western countries around 2006/2007								
	Western nations			Average	Non-Western nations			Average
Nation	U.S.A.	Switzerland	United kingdom		South Africa	Brazil	India	
Year	2006	2007	2006	3,35	2007	2006	2006	3,14
Range 1-4	3,27	3,36	3,43		3,15	3,24	3,02	
Mean								

Question: Taking all things together, would you say you are?: - very happy, - quite happy, - not very happy, - not at all happy, very = 4not at all = 1.

Source: R. Veenhoven, World Database of Happiness, collection Happiness in Nations, Overview of happiness surveys using Measure type: 111C/4-step verbal Happiness, viewed on 2011-11-25 at <http://worlddatabaseofhappiness.eur.nl>

an indicator and to rank nations from rich countries (developed nations) to poor countries (less-developed nations), for example, used by the World Bank. Another classification is used by the United Nations; besides the GDP they use weak human assets and high degree of economic vulnerability to classify the least-developed countries. Furthermore, countries are classified into developed market economies, economies in transition, and developing economies (United Nations, 2010). As examples for indices – in the Context of Quality of Life – there are the Human Developed Index (HDI), the Human Well-being Index (HWI), the Weighted Index of Social Progress (WISP), etc. (see for a summary of the indices: Glatzer, 2011). These are indices which try to use certain criteria to stratify the world and to rank the nations beyond (or in addition to) the GDP. These indices, with which the countries of the world are stratified, can be related to the happiness of the people. However, a country which ranks high with respect to an index, for example, HDI, may rank low in terms of subjective well-being.

The selected western nations on Table 1 are on average happier than the selected non-western countries (3.43–3.14). Always the world is stratified into the better offs and the worse offs; the happiness is a societal trait which follows the hierarchical structure of the world.

The extent of happiness or unhappiness of people is an essential quality of the economy and the society, and it is clear that economic conditions influence the happiness of people (Frey, 2002). Nevertheless, the differences

between better offs and worse offs are rather small, although there are some differences. “All in all, it is fairly probable that the differences in happiness, as observed in survey studies, do reflect differences in livability of nations” (Veenhoven, 1993). The question is also if misery is compensated somewhat by other factors.

For the feeling of happiness, one’s subjective perception and evaluation (e.g., of one’s own and others’ income) are important, which significantly influences the extent of happiness. So with respect to comparisons, some argue as followed: “Because standards of comparison vary across individuals, the same objective conditions may lead to different amounts of SWB for different people. Thus, objective conditions are hypothesized to correlate only weakly with SWB” (Diener & Lucas, 1999). With respect to the need-fulfillment aspect, basic needs have to be fulfilled for happiness to occur. With chronic hunger, isolation, or threats of dangers, happiness is usually much harder to achieve or maybe not possible, even if one never knew better and if one’s neighbors are worse off (Veenhoven, 1990). Also individual needs and claims, which differ from individual to individual, have to be fulfilled.

As we can see, happiness of people partly depends on the social structure which exists in a nation and where people are classified in their social system. Empirical evidence indicates that happiness is somewhat stable and durable, like social structure. Although individuals of a society may change a lot in their happiness levels during a certain time period, the happiness level often remains balanced and the happiness structure as

a whole stays the same because the same events influence one group of people positively and another negatively.

Generally speaking social structure and its components have certainly a relationship to the happiness of people and seem to influence it. But there are also other factors (e.g., personal, cultural, biological, and genetic) which influence the happiness of people sometimes stronger. More significant than objective aspects of reality are usually their subjective appraisals. Cultural aspects are linked to happiness as well, but yet there are many unknowns about cultural differences in well-being (Diener 2009b). The happiness of people is not the immediate result of social structures, but they have a relevant influence.

Cross-References

- ▶ [Education](#)
- ▶ [Happiness](#)
- ▶ [Livability](#)
- ▶ [Need Fulfillment](#)
- ▶ [Social Stratification](#)
- ▶ [Subjective Well-being](#)

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Social Support

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Synonyms

[Social inclusion](#); [Social integration](#); [Social interaction](#); [Social network](#); [Social quality of life](#); [Social resources](#); [Social well-being](#); [Support network](#)

Definition

Social support is a broad construct that describes the network of social resources that an individual perceives. This social network is rooted in the concepts of mutual assistance, guidance, and validation about life experiences and decisions. This social system plays a role in providing a number of forms of support, including informational, instrumental, and emotional support.

Description

In times of distress following exposure to a life stressor, being able to access social support has frequently been associated with positive adjustment. Across the spectrum of populations, from healthy to those recovering from acute or chronic illness, regardless of ethnic or religious or sexual orientation and socioeconomic status, the salutary effects of social support have been consistently found (Wills & Fegan, 2001).

Structure of Social Support

There are two main aspects of social support. One is the structure of social support. This describes aspects of social support that relate to the number of social relationships an individual has, the frequency of contact with that network, and the framework of that network (Friedman &

Silver, 2007). Following a seminal study which tracked a group of California residents over the course of 9 years (Berkman & Syme, 1979), a wealth of research has supported the association of increased levels of social network with positive physical health outcomes, such as longevity, fewer illness, and healthy lifestyle behaviors (Cohen & Janicki-Deverts, 2009).

In studies with general populations, higher levels of structural support have been linked to a myriad of positive physical health benefits. For example, a greater number of social ties has been associated with reduced susceptibility to the common cold and, even with lowered mortality (see Cohen & Janicki-Deverts, 2009 for a review). In chronic illness populations, the benefits of increased social integration have also been apparent. Strong evidence suggests that structural social support confers lower risk for cardiovascular disease development (Uchino, 2004). This may be through a stress-buffering mechanism affecting the individual's cardiovascular reactivity to stressful situations. In a laboratory study, the presence of a friend was associated with lower blood pressure reactivity to a laboratory stressor task (Kamarck, Manuck, & Jennings, 1990). Longitudinal studies investigating survivors at risk for developing cardiovascular disease show that more socially integrated individuals developed less arterial calcification (Kop et al., 2005), experienced fewer strokes (Rutledge et al., 2008), and had reduced mortality (Rutledge et al., 2004) compared with control populations. The effects of structural social support are also seen prominently in cancer survivors. Breast cancer survivors who reported greater social network diversity had a lower rate of cancer recurrence (Helgeson, Cohen, & Fritz, 1998). Furthermore, a greater number of social ties have been related to better immune system functioning in ovarian cancer survivors, particularly for older adults (Uchino, 2004).

The positive effects of structural social support have also found on psychological health. Overall, it appears that increased structural support is associated with protective effects, while lower levels of structural support (such as

with socially isolated individuals or those experiencing a loss of social ties) are associated with lower levels of mental quality of life. For example, as Uchino (2004) has reviewed, persons with a higher number of social ties were less likely to experience reduced cognitive decline during the aging process, less mental distress in day-to-day living, and fewer depressive symptoms. On the other hand, the loss of close social ties, such as death of spouse, has been associated with increased levels of depression and poorer overall mental health.

Function of Social Support

The second aspect of social support is the function of that support, which refers to the quality of the social support that is perceived to be available. There are multiple domains of functional support that can be considered when evaluating the quality of the support provided: instrumental, emotional, and informational support (Friedman & Silver, 2007). Instrumental support describes the various forms of tangible assistance that an individual receives in their day-to-day life, such as being provided a ride to a doctor's appointment or cooking dinner for a patient. Emotional support refers to the non-tangible support that helps to make an individual feel cared for and which serves to improve their sense of self-worth. Finally, informational support is the process of receiving information, help, and advice from others regarding stressors (House, Landis, & Umberson, 1988).

It has been noted that it is the perception of, rather than the actual quality of the functional support provided that is the most important factor in predicting its effects on physical and mental functioning and quality of life. As reviewed in Gidron and Ronson (2008) and Uchino (2004), the perception of greater available support has been associated with lower mortality among healthy adults. In chronic illness populations, perceptions of greater levels of support have been associated with less functional disability and pain and reduced mortality following heart attacks or a diagnosis of HIV. Likewise, breast cancer survivors who perceive greater availability of functional support experience a longer

disease-free interval and lower mortality. On the opposite end, breast cancer survivors who report being unable to access functional support have been more likely to report declines in functional status. In men with prostate cancer, perceptions of poorer functional support have been associated with lower physical quality of life.

The effects of functional support on psychological adjustment are similar to those found with physical adjustment. In a healthy adult population, perceptions of more functional support were associated with higher levels of emotional well-being (Antonucci & Akiyama, 1987). In individuals who have recently experienced a heart attack, or an HIV, or cancer diagnosis, those who reported greater levels of support were less likely to report depressive symptomatology (Manne, Winkel, Ostroff, Grana, & Fox, 2005; Neuling & Winefield, 1988).

Negative Support

While there may be benefits to be accrued from positive social support, there may also be costs associated with support that is viewed as being negative in nature. Therefore, in recent years, the opposing side of the picture – perceptions of negative social support – has been investigated. Support interactions can be maladaptive as they may involve criticism and hostility, causing the support recipient to want to avoid such interactions in the future (Frick, Motzke, Fischer, Busch, & Bumedder, 2005).

Gender Effects

Existing research has suggested that there may be gender differences that affect the impact of structural and functional support. Structurally, it appears that women tend to perceive more support from a broader support base and to be more comfortable disclosing personal information with this range of resources. In research conducted within a population of elderly women, it was reported that they tended to report having larger social networks than men (Antonucci & Akiyama, 1987). Women's networks tend to be more multifaceted, and they report more support

from friends and other family and being more comfortable confiding in people other than just their spouse (Antonucci & Akiyama; Harrison, Maguire, & Pitceathly, 1995). These gender effects are not limited to just the structure of social support; there also appear to be differences in how males and females perceive the quality of their support. Women appear to perceive more support from their social support networks (Antonucci & Akiyama, 1987), and men reported perceiving significantly less emotional and informational support from friends and being less satisfied with their friendships than women (Antonucci & Akiyama; Olson & Shultz, 1994). Interestingly, women tend to report receiving less support from their spouses than men do and that this gap trends towards increasing as the dyad ages (Schwarzer & Gutiérrez-Doña, 2005). In direct contrast, men tend to report greater satisfaction with the relationship they have with their spouses than women do (Antonucci & Akiyama, 1987).

Cross-References

- ▶ Alienation
- ▶ Cancer Survivor(s)
- ▶ Cardiac Rehabilitation
- ▶ Caregiver Burden
- ▶ Changes in Quality of Life
- ▶ Community Support
- ▶ Coping with Diagnosis
- ▶ Duke Social Support and Stress Scale (DUSOCS)
- ▶ Emotional Well-being
- ▶ Family Support
- ▶ Friendship Satisfaction
- ▶ Household Composition
- ▶ Partner Support
- ▶ Psychosocial Adjustment (Includes Psychosocial Functioning and Well-Being)
- ▶ Quality of Life (QOL)
- ▶ Sense of Belonging
- ▶ Sense of Community
- ▶ Sociability
- ▶ Social Exclusion
- ▶ Social Inclusion
- ▶ Social Integration
- ▶ Social QOL
- ▶ Social Well-being

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Social Support and Depression Among Adolescent Mothers

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Description

Adolescent pregnancy continues to be a significant problem in the United States. Although rates of teenage pregnancy are gradually declining, in 2010, 367,752 infants were born to teenage mothers between the ages of 15 and 19 years, with a rate of 34.3 births per 1,000 women (Hamilton & Ventura, 2012).

Adolescent mothers suffer from high rates of prenatal and postpartum depression. Estimates of adolescent prenatal depression range from 16 % to 42 % (Troutman & Cutrona, 1990; Barnett, Joffe, Duggan, Wilson, & Repke, 1996), and

estimates of adolescent postpartum depression range from 20 % to 67 % depending on the population and measures used (Reis, 2001; Troutman & Cutrona, 1990; Logsdon, Birkimer, Simpson, & Looney, 2005). In longitudinal studies, these rates have been relatively stable over time. One study found that 42 % of the sample was depressed in the third trimester, compared to 36 % and 32 % at 2 and 4 months, respectively. Furthermore, having depressive symptoms in the third trimester greatly increased the risk of depression in the postpartum period (Barnet et al., 1996). Longer term, approximately 50 % of depressed teenagers continue to have symptoms for at least 1–3 years after delivery (Brown, Harris, Woods, Buman, & Cox, 2012; Leadbeater, Bishop, & Raver, 1996). Hence, it appears that without intervention, depressive symptoms persist.

Young mothers suffer from higher rates of postpartum depression than older mothers. One study found that 53 % of older adolescent mothers (ages 17–19) and 67 % of younger adolescent mothers (age 16 or less) were depressed, compared with 35 % of adult mothers (Reis, 2001). Another study showed that 15- to 17-year-old adolescents were more than twice as likely as adult mothers to be depressed. Much of this difference was attributed to family income and marital status differences (Deal & Holt, 1998). Women who are not employed full-time and those with less education also report higher rates of postpartum depression (Mayberry, Horowitz, & Declercq, 2007). Adolescent mothers are more likely to be unmarried, poor, and have lower education levels compared with adult mothers (Deal & Holt, 1998). Consequently, adolescent mothers appear to be particularly vulnerable to postpartum depression.

One drawback to most studies on depression in adolescent mothers is that it is difficult to establish a causal relationship between childbearing and depression. It is possible that depressive symptoms among adolescents predispose them to becoming pregnant, rather than being the result of the pregnancy itself. In fact, one study found that at baseline half of the adolescent mothers had a prior history of psychotherapy, and over one

quarter had a history of a suicidal gesture or ideation. These subjects were more likely to report ongoing depressive symptoms (Brown et al., 2012).

It is also possible that adolescent mothers do not have higher rates of depression than their non-childbearing peers. One study that included non-childbearing adolescents as well as childbearing adolescents found no differences in the rates of major or minor depression in the two groups, but most studies do not include a non-childbearing group (Troutman & Cutrona, 1990). Epidemiologic studies estimate the prevalence of all forms of depression to be about 28 % among adolescents and moderate to severe depression to be about 9 %, suggesting that adolescent mothers do have higher depression rates than their peers (Rushton, Forcier, & Schectman, 2002). It is difficult to compare depression rates directly, however, given the wide variation in study samples and tools.

The high ► [prevalence](#) of depression among adolescent mothers is particularly concerning given the potential consequences for their children. Studies suggest that maternal depression negatively influences parenting style. Depressed mothers are more likely to be unresponsive, irritable, and provide less stimulation to their infants. Depressed mothers are also more likely to use harsh forms of punishment and less likely to obtain appropriate preventive healthcare services and follow safety guidelines (Field, 2010).

Maternal depression has also been shown to negatively affect child outcomes. Infants are less responsive to faces and voices as well as to inanimate stimuli when their mothers are depressed (Field, Hernandez-Reif, & Diego, 2011). They are also more withdrawn and fussy with fewer positive facial expressions. At 1 year of age, infants of depressed mothers perform less well on developmental tests, are less securely attached to their mothers, and have more behavioral problems. And at older ages, children whose mothers are depressed exhibit more behavioral, academic, and psychiatric problems (Murray & Cooper, 1997; Downey & Coyne, 1990).

Depressed adolescent mothers may be particularly susceptible to the negative consequences

of depression. In addition to their frequent socio-economic disadvantages, they are still in a critical phase of their own development as they struggle to establish themselves as individuals and adults. A study examining the role of depression by maternal age found that young adolescents were more punitive with their children, less knowledgeable about child development, and also more likely to be depressed than their older counterparts (Reis, 2001). Another study found that depressed teen mothers were more likely to have negative feeding interactions with their infants and report less maternal confidence and satisfaction than their nondepressed peers (Panzarine, Slater, & Sharps, 1995). Depressed adolescent mothers also were more hostile and indifferent toward their children, as well as dissatisfied with their maternal role. They were less likely to understand the developmental needs of their children (Colletta, 1983). Maternal ► [self-esteem](#) may play an important role in maternal-infant interactions and bonding, but again depressed adolescent mothers have decreased levels of maternal self-esteem and self-perceived caretaking ability compared with nondepressed adolescent mothers (Cox et al., 2008). There is a paucity of data comparing parenting styles and child outcomes among depressed adolescent mothers with depressed adult mothers. Hence, despite the increased theoretical risk, it remains unclear whether depression is a more significant risk factor in adolescent than adult mothers.

Adolescent mothers encounter many challenges but generally have fewer resources, higher levels of ► [stress](#), and less ► [social support](#) than older mothers (Passino et al., 1993). Lack of social support is a well-documented risk factor for depression in young mothers. Social support has been defined and measured in a variety of ways in the literature. It is generally viewed as consisting of both concrete and informational help, as well as emotional support. Most researchers focus on the number of people in the adolescent's ► [support network](#). However, others focus on the nature of the relationship with the adolescent, the frequency or quality of support, or the adolescent's satisfaction with the support. This variation in definitions complicates the

interpretation of findings. However, the relationship between social support and depression has been demonstrated fairly consistently across studies.

Young women often look to informal support networks for help with the practical and emotional challenges of pregnancy and motherhood. Most adolescents cite their mothers and the babies' fathers as their primary sources of support. They also note friends, the father's family, and other relatives with less frequency and rarely mention professional or community sources of support (Barnet et al., 1996; Chen, Telleen, & Chen, 1995; Nitz, Ketterlinus, & Brandt, 1995). Primiparous adolescents report larger support networks than multiparous teens. Furthermore, the individuals supporting adolescent mothers seem to play different roles. For primiparous teens, their mothers most frequently provide knowledge, financial support, and childcare, whereas the fathers usually provide emotional support. For multiparous teens, the father plays a larger support role, including financial and childcare, and the mother's role decreases (Chen et al., 1995). While these individuals are significant sources of support, they may also be sources of conflict and ► [stress](#) for the teenager. Conflict with the adolescent's mother and the infant's father may increase rather than decrease depressive symptoms in pregnant adolescents, thus outweighing their helpful function (Barnet et al., 1996). Mothers who identify more people as sources of conflict also have less positive parenting behaviors (Nitz et al. 1995). One form of support may also modify another. For example, one study found that adolescent mothers who maintained contact with their boyfriends tended to have less contact with family and friends (Thomas, Rickel, Butler, & Montgomery, 1990).

Insufficient social support has consistently been shown to be a risk factor for depression in adolescent mothers. This association seems to be most significant in mothers with higher levels of depression and stress and persists long after the child's birth (Barnet et al., 1996; Brown et al., 2012). A minority of studies suggested increased depression rates in teenagers with more

social support (Logsdon et al., 2005; Collins, Dunkel-Schetter, Lobel, & Scrimshaw, 1993). This finding may simply reflect a difference in measurement tools or populations, but it is also possible that the relationship between social support and postpartum depression is not linear. Too much social support may have detrimental consequences by sending a message to a teen that she is incompetent or inadequate. A large amount of social support may also reflect the mobilization of a community after the onset of a teen mother's depression.

Research suggests that the quality of support rather than the amount is the best determinant of prenatal and postpartum depression. In one study, women who reported higher quality support during and after their pregnancies experienced lower prenatal and postpartum depression rates than women with lower quality support (Collins et al., 1993). Higher levels of satisfaction with father involvement rather than amount of care provided have also been associated with fewer depressive symptoms (Fagan & Lee, 2010). Another study found the frequency of support contacts for depressed and nondepressed adolescent mothers was comparable, but the depressed teens were less satisfied with the support they received (Panzarine et al., 1995). Whether these findings reflect a true difference in the quality of the support or simply a difference in the perception of the support in the setting of depression is unclear.

Support levels have been shown to fluctuate over time. One longitudinal study found that the number of people adolescents listed as providing support decreased significantly from the third trimester to 4 months postpartum (Barnet et al., 1996). Another study found a significant decrease in social support between 6 and 18 months postpartum (Herrmann, Van Cleve, & Levisen, 1998). Adolescents also tend to overestimate the amount of support they will receive after giving birth, which can result in disappointment and dissatisfaction. These results suggest that pregnant teenagers might have unrealistic expectations regarding the amount of help they will receive after delivery and that postpartum depression may in part be related to their subsequent

disillusionment (Logsdon et al., 2005; Quinlivan, Luehr, & Evans, 2004).

Strong social support may be able to mitigate some of the negative parenting and child outcomes associated with adolescent motherhood and depression. For example, studies show that adolescent mothers with larger social support networks are more likely to demonstrate a nurturing parenting style, use less punitive discipline, and have better knowledge of child development (Reis, 2001; Thomas et al., 1990). Furthermore, support from family and friends has been shown to decrease the incidence of behavioral problems in young children with depressed mothers (Leadbeater & Bishop, 1994). Social support also moderates the negative effects of interpersonal conflict on parenting behaviors in adolescent mothers (Nitz et al., 1995). Hence, even in the setting of multiple risk factors, child outcomes may be better with high levels of social support.

Better screening tools and interventions are needed to address the high rate of depression among adolescent mothers. Brief screening questionnaires exist that can alert the provider to the need for further evaluation and possibly a referral to a mental health professional. Due to the chronic nature of the illness, screening should begin during pregnancy and continue postpartum. Given the negative association between social support and depression, some providers have designed social support interventions to help pregnant women and new mothers identify sources of social support and learn how to obtain more support. Results of these interventions have been mixed. One program, which included a video with role-playing demonstrations and a pamphlet with tips on how to obtain help, did not impact depression levels in adolescent mothers at 6 weeks postpartum (Logsdon et al., 2005). Postpartum support groups, support manuals, and home visitation programs have similarly been unsuccessful (Reid, Glazener, Murray, & Taylor, 2002; Barnett et al., 2002). However, some interventions have had a significant impact on depression rates. A recent pilot study using interpersonal psychotherapy to help pregnant adolescents identify and establish social support networks resulted in a significant decrease in

depression symptoms over a 12-week period. Treatment gains were maintained at 20 weeks postpartum (Miller, Gur, Shanok, & Weissman, 2008). Given these mixed results, more research is needed to identify effective intervention strategies for depressed adolescent mothers.

Discussion

Depression is a significant problem among pregnant and parenting adolescent mothers. The high rate of depression in teen mothers is particularly worrisome given that depressed mothers are likely to have more negative maternal-infant interactions than nondepressed peers, and their children are at risk for a variety of behavioral and cognitive problems. Insufficient social support has been demonstrated to be a risk factor for depression in adolescent mothers. Hence, intervention programs designed to help teens identify and access social support resources may be effective at reducing depression rates in this population. However, results from intervention studies have been mixed. Further work is needed to identify effective intervention strategies using the social support model.

Many of the studies on adolescent depression are limited by their cross-sectional designs and lack of control groups. As a result, several questions remain unanswered by the literature: (1) Are teen mothers at higher risk for depression than their peers? (2) Does pregnancy lead to depression, or does preexisting depression place an adolescent at increased risk for becoming pregnant? (3) Do depressed teen mothers experience more negative consequences from their illness than adult mothers? Clearly further research must be done to fully elucidate the relationship between adolescent pregnancy and depression.

Cross-References

- ▶ [At-Risk Children](#)
- ▶ [Parental Depression and Child Well-being](#)

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Social Support and Self-Worth Among African-American Youth

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Synonyms

African-American youth informational support; Emotional support and self-worth; Instrumental support for African-American Youth; Tangible support

Definition

► **Social support** can serve different functional roles, including emotional/esteem, tangible/instrumental, and informational (Cohen & Wills, 1985). Emotional support enables people to talk about their feelings and feel validated. Tangible or instrumental support involves providing material aid, such as money, resources, and help. Informational support can take the form of advice, knowledge about how a system works (such as how to access resources), or skills required to accomplish a goal (such as how to solve a problem with a classmate). Parents, extended family, teachers, and peers can all provide necessary support to at-risk youth.

Global ► **self-worth** is a discrete value judgment that a person makes regarding him- or herself that is greater than the sum of domain-specific self-competencies (Harter, Waters, & Whitesell, 1998). When growing up in highly stressful communities that can erode competencies and well-being, global self-worth may be a particularly salient asset. Few studies have focused on self-worth among African-American adolescents, and the urban poor are particularly neglected in this arena.

Description

There are many factors that affect a child's sense of him-/herself, including the amount and type of social support the child receives from parents, teachers, and peers. Social support may affect a child by directly increasing his/her sense of self-worth and/or buffering the adverse effects of stressors on self-worth (Cohen & Wills, 1985). A growing body of empirical work has begun to explore social support among African-American youth (e.g., Brown, 2008; Gaylord-Harden, Ragsdale, Mandara, Richards, & Petersen, 2007; Kerpelman, Eryigit, & Stephens, 2008, McMahon, Felix, & Nagarajen, 2011; Paxton, Robinson, Shah, & Schoeny, 2004; Trask-Tate, Cunningham, & Lang-DeGrange, 2010); however, few longitudinal studies have been conducted. Further, parents, extended family, teachers, and peers can all provide necessary support to children in African-American communities, yet it is not clear who provides what types of support, and many studies investigate only one source of support.

Models have been proposed to describe how social support can influence psychosocial adjustment in the context of stressors, with a particular emphasis on the main-effect and stress-buffering models (Cohen & Wills, 1985). The *main-effect model* suggests that social support has a general positive effect on psychological outcomes, even while controlling for stressors; it is tested as a direct effect. Large social support networks provide individuals with many resources, including consistent positive interactions and affect, sense of stability, and avoidance of negative situations that directly influence adjustment regardless of stress level. The *stress-buffering model* suggests differential effects of support, depending on the level of stressors (a moderating influence tested by an interaction effect). Youth with higher levels of stressors will benefit more from support than youth with lower levels of stressors (compared to similar benefits for everyone in the main-effect model). Social support may offset the negative effects of ► **poverty**, ► **racism**, and exposure to ► **violence**. Both models take into account stressors and are important to assess among at-risk youth.

Social support has been linked with improved academic performance, self-confidence, and behavioral adjustment (e.g., Gaylord-Harden et al., 2007; Kerpelman et al., 2008). The amount of social support provided by various sources (parents, best friends, classmates, teachers, and romantic interests) has been associated with sense of self-worth, and family support has specifically been linked with general social competence and self-worth among diverse populations. Of studies that included stressors for a test of the main-effect model, there is support for the main-effect model of social support among urban, minority adolescents (e.g., Benhorin & McMahan, 2008; Hill, Levermore, Twaite, & Jones, 1996; Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000). Zimmerman et al. (2000) found main effects for parental support when examining stressful life events in relation to anxiety and depression among African-American adolescent males. Benhorin and McMahan (2008) found that friend support, but not classmate support, was associated with lower rates of teacher-reported aggressive behavior, taking into account exposure to community violence. Hill et al. (1996) found both family and peer support helped reduce anxiety symptoms among African-Americans exposed to community violence. Thus, although social support has been linked with self-worth, most research examining the main-effect model has examined psychological problems, rather than strength-based outcomes, such as self-worth.

The findings supporting the stress-buffering models among youth, particularly urban adolescents, have been somewhat mixed. Some studies show evidence of moderation (e.g., Benhorin & McMahan, 2008) and others do not (e.g., Paxton et al., 2004). Zimmerman et al.'s (2000) test for stress-buffering effects found that in most cases, there was not buffering; however, parental support did have a concurrent, but not a longitudinal, buffering effect on the relation between stressors and mental health for African-American males. The buffering effect of social support depends on the outcome, and more research is needed to test these models with urban

at-risk youth in relation to strength-based outcomes.

McMahan, Felix, and Nagarajen (2011)

McMahan et al. (2011) conducted a study of social networks of urban, at-risk, African-American adolescents to determine who provided different types of support. In addition, they tested two theoretical models of support, the main-effect model and the stress-buffering model, to examine support from different sources in the context of chronic neighborhood stressors in relation to global self-worth. Participants included 133 low-income students in grades 6–8 from two Chicago Public Schools. Neighborhood disadvantage; social support networks; the amount of perceived support from parents, teachers, classmates, and close friends; and global self-worth were assessed.

Students identified various people who provided them with emotional (helping them when they need to talk to somebody about their feelings), tangible (providing them with something they need or want but do not have), and informational (helping them when they need to know something they are not sure of) support (See Table 1). Youth consistently listed the female members of their families – mothers, grandmothers, sisters, and aunts – as support providers. For each of the three types of support (emotional, tangible, and informational), they most often named their mothers as providing the support followed by their friends for emotional and instrumental support. Teachers were most likely listed as sources of informational support versus emotional or instrumental support. Participants frequently named other female supports, mostly great grandmothers and godmothers, as providing all three types of support. Male family members that were listed included mother's boyfriend/stepfathers, fathers, brothers, and grandfathers, with fathers being listed most often. These findings are significant, given the dearth of research that has explored the social networks of African-American at-risk youth, as more published work has focused on adults.

Social Support and Self-Worth Among African-American Youth, Table 1 Types of social support reported from various sources

Source of support	Type of support		
	Emotional % (n)	Tangible % (n)	Informational % (n)
Mother	60.0 % (78)	48.5 % (63)	54.6 % (71)
Father	23.8 % (31)	23.8 % (31)	21.5 % (28)
Grandmother	28.5 % (37)	24.6 % (32)	22.3 % (29)
Grandfather	2.3 % (3)	6.2 % (8)	5.4 % (7)
Sister/ stepsister	26.2 % (34)	26.9 % (35)	26.9 % (35)
Brother/ stepbrother	15.4 % (20)	20.0 % (26)	16.2 % (21)
Mom's boyfriend/ stepfather	1.5 % (2)	5.4 % (7)	4.6 % (6)
Friend	31.5 % (41)	29.20 % (38)	23.8 % (31)
Aunt	14.6 % (19)	20.0 % (26)	16.9 % (22)
Uncle	12.3 % (16)	13.1 % (17)	6.2 % (8)
Teacher	8.5 % (11)	6.2 % (8)	26.2 % (34)
Boy-/ girlfriend	1.5 % (2)	2.3 % (3)	0.8 % (1)
Cousin	17.7 % (23)	12.3 % (16)	15.4 % (20)
Other	17.0 % (22)	15.4 % (20)	16.2 % (21)

Source: McMahan et al. (2011)

The tremendous support provided by women in this study underscores the pivotal role of women in African-American families. Women have traditionally played the role of caretaker in this community, not only for their own children but for others' children as well. Kinship networks include both extended biological and nonbiological family members, and these family members share in family responsibility, thereby providing alternative role models, sources of support, and respite for mothers. Common listings of extended family members are consistent with research demonstrating that even at young ages, African-American children were likely to include extended family as central support figures and rely heavily on them (Bost, Vaughn, Boston, Kazura, & O'Neal, 2004).

The lower levels of support by men should not underestimate the importance of fathers and male relatives in the African-American community, as

paternal support has been associated with less depression (Bean, Barber, & Crane, 2006) and, for girls, less distress (Trask-Tate et al., 2010). However, some children may be without this support. This may be caused by the oppression that men face in this community, leading to difficulties in obtaining gainful employment and overrepresentation in jails.

In many cases, students named the same people at similar frequencies for emotional, tangible, and informational support, and these similarities across support function are consistent with research indicating stability in support network structures among African-American preschool students (Bost et al., 2004). There were also some interesting patterns of differences in functional support that emerged. Mothers were named most frequently as providers of emotional support, then informational support, and tangible support least frequently, while brothers, aunts, and uncles were noted as providing more tangible support compared to other types of support they provided. Although mothers were still the primary providers of tangible support, given the economic challenges represented within this sample, it makes sense that youth may need to look to others to ask for additional things they need or want.

Regarding informational support, teachers were listed as informational support providers (26 %) much more frequently than providing other types of support (6–8 %). Of course, this may in many cases apply to coursework, but it is also likely that teachers serve as role models and help students with other types of problems and decisions. Teacher support and acceptance have been associated with better academic (e.g., Elias & Haynes, 2008) and behavioral outcomes (e.g., Benhorin & McMahan, 2008). Students reported receiving less informational support from friends, grandmothers, and uncles compared to other types of support they received from these individuals.

We examined the main-effect versus stress-buffering models of social support in relation to global self-worth in the context of neighborhood disadvantage. Our results support the main-effect model of social support

Social Support and Self-Worth Among African-American Youth, Table 2 Main-effect model results: Relations between social support and global self-worth

Predictor variable	B	SEB	Beta	t	R ²	F
Cross-sectional: predicting global self-worth at time 1					0.22	7.15**
Neighborhood disadvantage	-0.44	0.21	-0.17	-2.10*		
Parent support	0.18	0.10	0.18	1.89		
Teacher support	0.04	0.10	0.03	0.39		
Classmate support	0.11	0.10	0.10	1.04		
Close friend support	0.28	0.09	0.28	3.30**		
Longitudinal: predicting global self-worth at time 2						
Step 1					0.32	39.47**
Global self-worth T1	0.56	0.09	0.57	6.28**		
Step 2					0.38	7.84**
Global self-worth T1	0.48	0.11	0.48	4.50**		
Neighborhood disadvantage	-0.11	0.24	-0.04	-0.46		
Parent support	0.29	0.12	0.26	2.39*		
Teacher support	-0.04	0.12	-0.03	-0.35		
Classmate support	-0.08	0.12	-0.08	-0.67		
Close friend support	0.08	0.11	0.08	0.71		

Source: McMahon et al. (2011)

* $p < 0.05$; ** $p < 0.01$

(See Table 2). Cross-sectionally, support from close friends was related to global self-worth. Parent support was the only source of social support found to have a significant longitudinal effect on self-worth. Students did perceive the highest levels of support as coming from their parents, and this is consistent with the network findings described above, in which mothers were listed most frequently as giving emotional, tangible, and instrumental support. Increased parental support has been associated with increased self-esteem (Greene & Way, 2005) and adolescent global self-worth (Laursen, Furman, & Mooney, 2006), as well as lower suicide risk (Matlin, Molock, & Tebes, 2011).

Whereas parental support is often associated with positive outcomes in youth, findings on peer support have been less consistent, with some showing positive effects and others reporting negative effects (Zimmerman et al., 2000). This mixture in findings may be due in part to the fact that the effects of peer support depend on the values of the peer group. In our study, friends were identified as providing all three forms of social support; however, there was not a longitudinal relationship between friend

support and self-worth. These findings suggest that at any moment in time, support from friends is associated with a child's current sense of self-worth, but over time, parental support is more influential in shaping and maintaining an adolescent's sense of self-worth and mental health (e.g., Dubow, Edwards & Ippolito, 1997; Matlin et al., 2011; Zimmerman et al., 2000). This may be due to the relatively transitory nature of some friendships compared to family relationships. It is also possible that close friends provide youth with certain types of competence over time, but not global self-worth. Indeed, Laursen et al. (2006) found that social support from a close friend is longitudinally related to certain types of interpersonal competence, such as social acceptance, friendship competence, and romantic competence.

Although previous research has shown that a close relationship with a teacher is positively correlated with the social, emotional, and academic adjustment of the child, we did not find a relation between teacher support and global self-worth in the current study. Perhaps this is due in part to the fact that in this study, although teachers provided informational support to

students, they did not provide very much emotional or tangible support. Further, children who attend inner-city public schools may not receive sufficient individual time and attention from their teachers unless their behavior is disruptive.

Discussion

There is a need to further examine the complicated relations among different types and sources of social support, stressors, and psychosocial outcomes with diverse samples. It appears that parent support plays an especially important role in promoting global self-worth, so providing services to parents as well as children may be beneficial. There is a need for further research in the conceptualization and measurement of these constructs as well as theory-driven, longitudinal studies with at-risk populations to better understand the roles of various types and sources of support in promoting positive outcomes and reducing risk. Finally, studying potential protective factors for youth who experience chronic stressors should not diminish our efforts to reduce these larger systemic issues related to poverty, racism, violence, gangs, and drugs that must be addressed.

Cross-References

- ▶ [At-Risk Children](#)
- ▶ [Neighborhood Disorder](#)
- ▶ [Neighborhood Safety](#)
- ▶ [Self-Worth](#)
- ▶ [Stress](#)
- ▶ [Youth Violence](#)

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Social Support in Gay Men, Satisfaction with

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Definition

This entry concerns satisfaction with ► [social support](#) among men who report a gay or bisexual ► [sexual orientation](#) or who have sex with other men. Satisfaction with social support is a domain-specific facet of ► [subjective well-being](#).

Description

Differences in Social Support Relative to Heterosexual People

The connection between ► [sexual orientation and mental health](#) disparities is described by the minority stress model (Meyer, 1995, 2003), which ascribes increased distress among sexual minority (i.e., gay, lesbian, and bisexual)

individuals to stressors generated by ► [stigmatization](#). These stressors include internalized homonegativity (i.e., learned negative attitudes toward one's own sexual orientation, also called internalized homophobia or internalized heterosexism) and exposure to discrimination. Stigmatization also has implications for the structure, availability, and appraisal of social support among gay men.

First, in terms of structure, the makeup of gay men's social support networks may be unique. Relative to heterosexual people, the confidants of sexual minority adults are comprised of a larger proportion of friends and a smaller proportion of family members (Dewaele, Cox, Van den Berghe, & Vincke, 2011). Gay identity differs from some other stigmatized identities, as it is often not held in common with one's parents. On the contrary, parents may be rejecting of a child's gay identity (Corrigan et al., 2009). Thus, sexual minority individuals with inadequate family support often seek support from a family of choice comprised of friends (Institute of Medicine, 2011).

Second, in terms of availability and appraisal, there are potential differences in the quality of social support available to gay men. Gay identity also differs from some other stigmatized identities due to its potentially concealable nature (Corrigan et al., 2009). Disclosure of sexual orientation poses risks to one's social support system, including possible loss or deterioration of relationships (Institute of Medicine, 2011; Pilkington & D'Augelli, 1995). However, concealment of sexual orientation is itself a minority stressor (Meyer, 2003). Failure to disclose information regarding the self may restrict the social support that can be provided (Cuming & Rapee, 2010) and decrease satisfaction with social support (Corrigan et al., 2009; Grossman, D'Augelli, & Hershberger, 2000). Further, availability of social support from a romantic partner, which is a primary source of social support in heterosexual individuals, may vary for gay men depending on the sociopolitical climate in which they live and their own internalized homonegativity (Peplau & Fingerhut, 2007). The interaction of gender role-typed behavior,

discrimination, and social support must also be considered for sexual minority individuals in general and for gay men in particular (Friedman, Koeske, Silvestre, Korr, & Sites, 2006). Gender atypical behavior may expose gay men to higher rates of discrimination and restrict the availability of social support from heterosexual peers; however, in such cases, access to support is critical for reducing negative mental health outcomes.

Importance of Social Support in Gay Men

The psychological mediation framework (Hatzenbuehler, 2009) posits that minority ► **stress** contributes to mental health disparities among sexual minority people through non-group specific psychological mechanisms (mediators) such as decreases in perceived ► **social support**. A prospective study using daily assessments provided evidence of psychological mediation. On days when lesbian, gay, and bisexual (LGB) individuals reported discrimination, satisfaction with social support was also decreased (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009). Decreased satisfaction with social support was, in turn, associated with psychological distress. Further, low perceived social support has been repeatedly associated with mental health difficulties among sexual minority individuals (Hatzenbuehler, 2009), and the relationship between perceived social support and mental health has borne out longitudinally in gay men (Lackner et al., 1993).

Although social support predicts mental health outcomes among the general population, the impact of social support may differ for gay men. For example, while a multi-school study did not suggest that sexual minority and heterosexual youth had different numbers of friends, friendships were more predictive of decreased risk for psychological distress among the sexual minority youth (Ueno, 2005). On the other hand, social support from gay friends has also been linked to negative outcomes in certain health domains among gay men. In some cases, higher reported contact with a gay ► **social network** has been associated with increased risk for HIV and

substance use (Fergus, Lewis, Darbes, & Kral, 2009); these differences must be considered and parsed. Research that furthers understanding of the causes and implications of social support perceptions among gay men may enable development of culturally tailored interventions that reduce health disparities by targeting specific facets of social support.

Such interventions may be beneficial, not only in reducing health disparities but in improving gay men's ► **quality of life**. Studies have shown that increased levels of social support improved both ► **subjective well-being** and ► **health-related quality of life** among gay men living with HIV/AIDS (Kertzner, 2001). There is some preliminary evidence that feeling connected to the gay community may generally increase social and psychological well-being (Kertzner, Meyer, Frost, & Stirratt, 2009). In general, the bulk of research to date has focused on negative outcomes and lack of social support; additional exploration of the positive effects of social support is warranted.

Factors Related to Risk and Resilience

Despite literature highlighting the negative impact of societal discrimination on the mental health of gay men, most sexual minority adults display some level of ► **resilience**. The majority of gay men, for example, do not experience mental health difficulties (Institute of Medicine, 2011). Given that discrimination alone is not sufficient to explain differences in satisfaction with social support among gay men, it is critical to also examine factors that may moderate this relationship.

In terms of resilience factors, coping and sexual identity development may ameliorate the impact of discrimination on satisfaction with social support among gay men (Meyer, 2003). Coping involves adaptation to stressful environmental factors, including discrimination, and may prevent minority stress from affecting gay men's mental health and subjective well-being. Similarly, developing a strong sense of self-identity as a gay man may counteract the negative impact of discrimination, leading to additional engagement with the gay community

and hence the acquisition of additional social support (Kertzner, 2001).

In terms of risk factors, internalized homonegativity may predispose gay men to avoid contact with the gay community and devalue relationships with gay men, thereby limiting availability and impairing appraisal of social support from gay peers (Meyer & Dean, 1998). Expectations may also serve as a risk factor. Expectations of discrimination appear to constitute a separate construct from actual experiences of discrimination, and such expectations have been linked to subjective well-being in gay men (e.g., Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008).

In the same vein, a cross-sectional study indicated that self-blaming and perpetrator-blaming cognitive attributions for discrimination are associated with decreased satisfaction with social support, possibly due to processes of self-stigmatization and spillover of blame. We will now describe the details of this study (Burns, Kamen, Lehman, & Beach, 2012), in which data was collected online from gay men recruited through LGB listservs, snowball recruitment, and online venues serving gay men. The sample was predominantly Caucasian (75.6 %) and well educated (91 % had some college education); 307 of the 463 men who started the survey completed all measures and were thus included in analyses. Gay men's attributions (i.e., self-blame, perpetrator-blame, global, and importance dimensions) for hypothetical discriminatory events were examined in relation to satisfaction with social support, including (1) direct relationships between attributions and satisfaction with social support; (2) attributions as moderators of the relationship between frequency of perceived discrimination and satisfaction with social support; and (3) indirect relationships between attributions and satisfaction with social support via depression and anxiety, which were examined due to the established relationship between attributions and psychological distress.

Hierarchical regressions within a general linear model framework were used to examine

direct associations and moderation effects of attributions for discrimination on satisfaction with social support. Frequencies of perceived discrimination, self-blaming attributions, and perpetrator-blaming attributions were each negatively associated with satisfaction with social support, controlling for age, education, and internalized homonegativity. In contrast, global and importance attributions were not significantly associated with social support satisfaction. Next, interactions of each of the attribution dimensions with frequency of perceived discrimination were added, one at a time, to the model. Self-blaming, importance, and global attributions did not emerge as moderators of the relationship between frequency of perceived discrimination and satisfaction with social support. Perpetrator blaming did, however, moderate this relationship. Examination of simple slopes suggested that frequency of perceived discrimination was associated with reduced satisfaction with social support at the mean ($\beta = -.20$; $p < .01$) and high level (one standard deviation above the mean; $\beta = -.33$; $p < .01$) of perpetrator-blaming attributions, but not at the low level (one standard deviation below the mean) of perpetrator blame (Burns et al., 2012).

► **Mediation analysis** within a structural equation modeling framework was then used to examine potential indirect relationships between attributions and satisfaction with social support via psychological distress. Three latent variable mediators were constructed: (1) ► **positive affect**; (2) psychological distress, composed of trait ► **anxiety**, social anxiety, and depression indicators, orthogonalized against the positive affect variable; and (3) general affect, comprised the shared variance of all these indicators, orthogonalized against the positive affect and psychological distress variables. Thus, indirect effects could be specified as due to "purely" positive affect, psychological distress, or the overlap between positive affect and psychological distress. General affect was keyed such that higher values indicated greater distress and less positive affect (Burns et al., 2012).

These three latent variables were added to the model of satisfaction with social support described above, which included direct associations of the four attribution dimensions, frequency of perceived discrimination, internalized homonegativity, age, and education, as well as the moderation effect of perpetrator blame on the relationship between frequency of perceived discrimination and satisfaction with social support. Positive affect ($\beta = .16, p < .01$) and general affect ($\beta = -.35, p < .01$), but not psychological distress, were associated with satisfaction with social support. The moderating effect of perpetrator blame remained significant and of very similar effect size, as did the direct relationship between perpetrator blame and social support satisfaction. The association between self-blame and satisfaction with social support, however, appeared attenuated and became a nonsignificant trend, $\beta = -.13, p < .06$. Thus, bootstrapping was used to determine whether the affective variables mediated the relationship between self-blaming attributions and satisfaction with social support. There was a significant indirect relationship between self-blame for discriminatory events and satisfaction with social support via general affect ($\beta = -.16$, bootstrap bias corrected and accelerated 95 % CI = $-.23$ to $-.07$), but not positive affect or psychological distress (Burns et al., 2012).

Although this study was cross-sectional and cannot be used to make temporal inferences or conclusions regarding causality, the authors discuss several possible explanations for these results (Burns et al., 2012). Applying negative beliefs regarding gay men to oneself, specifically, may lead to gay men “join[ing] their aggressors” and blaming themselves for discriminatory events (Meyer, 1995, p. 50). The general affect construct that mediated the relationship between self-blame and satisfaction with social support may have reflected shame resulting from these cognitive processes. The social withdrawal or cognitions associated with the experience of shame may, in turn, lead to deterioration in satisfaction with social support.

Perpetrator blame may have amplified the relationship between discrimination and satisfaction with social support in at least two ways that are not mutually exclusive: (1) If discriminatory events were perpetrated by individuals outside the participant’s social network, perpetrator blame may have generated anger that spilled over into personal relationships, and (2) if discriminatory events were perpetrated by individuals on whom the participant depended for social support, perpetrator blame may have more directly decreased satisfaction with those social supports. Although it is certainly not unreasonable to blame perpetrators of discrimination, the findings indicate that in the interest of their clients’ well-being, clinicians working with gay men should consider working to reduce self-blame for discrimination while also reducing or being cautious not to increase perpetrator blame (Burns et al., 2012). The study provided some evidence that this may be possible, as self- and perpetrator blame were far from perfectly correlated ($r = -.51, p < .01$) and evidenced differential relationships with other variables, suggesting self- and perpetrator-blaming attributions are separable and do not constitute a single bipolar construct.

Conclusion

Relative to heterosexual individuals, gay men may experience differences in the structure, availability, and appraisal of social support, all of which may impact their satisfaction with social support. Many of these differences may be due to minority stress processes (Meyer, 2003). Attending to differences in satisfaction with social support among gay men is of theoretical and clinical importance, as social support may be particularly predictive of mental health outcomes among gay men. Many of the mechanistic relationships underlying satisfaction with social support among gay men have yet to be parsed. Risk and ► **resilience** factors provide one vector for examining and intervening on satisfaction with social support; among risk factors, cognitive attributions for perceived discriminatory events may be a fertile ground for investigation.

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Social Sustainability

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Synonyms

[Sustainability](#)

Definition

Social sustainability is a variously defined term that generally refers to the social dimensions of sustainability. In a normative sense it refers to the social goals of sustainability strategies.

Description

Until recently, social sustainability was a relatively neglected dimension of debate, discussion, and theory relating to sustainability or sustainable development. While sustainability as a concept has achieved prominence in many fields, social sustainability is the least developed of the oft-cited “three dimensions” or three “pillars” of sustainability (environmental, economic, and social). Many authors note that both in sustainability theory and practice “the social” has been either neglected (Cuthill, 2010, p. 363), given a lower priority to other dimensions of sustainability, or undertheorized and oversimplified (Colantonio, 2008, pp. 3–4). The conceptual framework for social sustainability is widely acknowledged as under developed, and writers have noted the “paucity of genuine research within the framework of ‘sustainability’ into what sustains and promotes an equitable and just society” (McKenzie, 2004, p. 11) and the lack of a suitable framework to operationalize the concept of social sustainability (Koning, 2001, p. 2). Corporate interpretations of social sustainability have been assessed as particularly weak (Dillard, Dujon, & King, 2009b, p. 3).

Many have suggested that from its beginning, the sustainable development debate was dominated by environmental and economic issues (Cuthill, 2010, p. 365; Colantonio, 2008, p. 3; Partridge, 2005), with the result being that concern for these dimensions “eclipsed” efforts to understand and develop conceptual thinking about social dimensions (Dillard et al., 2009a, p. 2). However, Holden (2012) argues that in introducing the concept of sustainable development, the World Commission on Environment and Development (1987) did conceptualize environmental problems and the socioeconomic challenges of poverty as interlinked, but that as the concept of sustainability developed over time, the prominence of environmental concerns came to overshadow social concerns.

Whether insufficient attention to the social dimensions was inherent from the beginning

of this debate, or has developed over time, there is wide agreement that the result has been an “unsophisticated understanding of the social dimensions of sustainable development” (Cuthill, 2010, p. 370). While this neglect is widely acknowledged, the relationship between sustainability and social questions remains underexplored, and in particular there is little attention given to “the social” as a dimension of sustainability in its own right (Colantonio, 2008, p. 4). Ecological renditions of social sustainability typically see social issues only in relation to the environment, while economic conceptions embed society within an economic construct – both conceptualizations miss “the factors that sustain community of people” and fail to acknowledge that social sustainability has “intrinsic value” (Magis & Shinn, 2009, p.15, 16) or that sustainability *is* itself a social question (Partridge, 2005). At the practical level there are a growing number of examples of promising attempts to operationalize the concept of social sustainability, but this has been referred to as “bits and pieces approach” that sees a tendency for promising local strategies to respond to social issues to be isolated, uncoordinated, and not well supported by decision makers (Cuthill, 2010, p. 364).

Just as writers and researchers within the framework of sustainability were slow to focus on the social dimensions of the concept, so too were many in the social sciences slow to engage with sustainability debates (Becker, Jahn, & Stiess, 1999). While a lack of compatibility between perspectives derived from the natural and social sciences is not uncommon, from the current vantage point, it is perhaps surprising that it has taken so long for the sustainability debate to acknowledge “the social,” or conversely, for those working across the social sciences and humanities to acknowledge the relevance of this debate to their various disciplines. For as Becker et al. (1999, p. 4) point out, while sustainability is usually associated with an environmental focus, “it nevertheless describes a field of investigation that is based on a society-oriented definition of problems.” Rather than being “about” the

environment then, sustainability can be conceived of as a fundamentally sociological question:

Sustainability addresses the question of how societies can shape their modes of change in such a way so as to ensure the preconditions of development for future generations . . . it refers to the viability of socially shaped relationships between society and nature over long periods of time. (Becker et al., 1999, p. 4)

Robinson's definition of sustainability is similar: "Sustainability is ultimately an issue of human behavior, and negotiation over preferred futures, under conditions of deep contingency and uncertainty" (Robinson, 2004, pp. 379–80).

Sustainability then turns out to be "a topic of research that is *basically social*" (Becker et al., 1999, p. 4, emphasis added). As such, it is one within which environmental questions are just one aspect – the concept also requires consideration of social questions. Or more accurately, it demands an analysis of the complex relationship between the two. Neither social nor environmental sustainability can be considered in isolation – "sustainability has to be conceptualized in strictly relational terms" (Becker et al., 1999, p. 6). Further, as Robinson (2004, p. 379) writes, sustainability "is an inherently problem-driven rather than scientific, concept." While scientific analysis is crucial, it is only part of the picture – what is also needed is an understanding of how complex ecological, social, and economic systems interact.

The lack of attention to the social dimensions of sustainability strikes Koning as intriguing, because sustainability "is so closely linked with well-being, future generations, quality of life" (Koning, 2001, p. 5). As Adebowale (2002) writes, sustainability has always been related to a core concept of human *need*, so it is "a fundamental contradiction to the principles of sustainable development to believe that it can be achieved without improved social equity and social progress" (2001, p. 5). Stren and Polèse put this in policy terms: "Without social policy there can be no effective environmental policy" (2000, p. 15). Holden (2012) suggests that from its origins in *Our Common Future*

(WCED, 1987), the idea of sustainability can be read as one that required a radical new politics of development that coupled social, economic, and environmental goals, and it is therefore somewhat ironic that the approach developed as one that neglected of the social dimension.

Despite the previous lack of attention, there is now an increasing focus on social sustainability, with a growing number of authors exploring ways to both improve the conceptual definition of the concept in its own right and integrate the social dimensions of sustainability into broader sustainability theory and practice. Many have called for greater attention to be paid to the further development of the concept, arguing that it is currently somewhat "elastic" (Manzi et al., 2010b, p. 24) and "fuzzy" (Colantonio, 2008, p. 3) and needs to be further refined and developed if it is "to provide a strong 'third pillar' for 'development' that is both just and sustainable" (Cuthill, 2010, p. 363). Others argue that this can be progressed through greater engagement in this work by those outside what have largely been environmentally focused "sustainability" circles, such as social and political theorists (Partridge, 2005, Becker et al., 1999).

Social scientists and social and political theorists are now beginning to explore the relevance and potential for "sustainability" and to recognize the significant opportunity that exists to contribute to defining and refining sustainability, particularly its social dimensions. Cheney, Nheu, and Vecellio (2004, p. 244) argue that one of the most useful contributions social science can make to sustainability is to make values and power relationships explicit. They suggest it is the theoretical traditions concerned with justice and dialogue in particular that have the potential to contribute to the social change potential of sustainability discourse. Becker et al. (1999, p. 7) suggest an analytical framework for considering environmental sustainability that focuses on economic processes, social processes, patterns and factors, and decision-making processes and institutional arrangements.

The literature on social sustainability is still emerging, and there is as yet no consensus on

a definition of the term (Dempsey, Bramley, Power, & Brown, 2009, Dillard et al., 2009b, p. 2, Colantonio, 2008), partly because the concept is currently being approached from diverging perspectives and disciplines, making a generalized definition difficult to achieve (Colantonio, 2008). Indeed, some have problematized the idea that a singular definition can be reached (McKenzie, 2004). However, a number of working definitions have been offered (for overviews, see Partridge (2005) and Colantonio (2008)).

The Western Australian Council of Social Service defines social sustainability as occurring “when the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and liveable communities,” adding that “socially sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life” (Western Australian Council of Social Service [WACOSS], 2002). Similarly, McKenzie suggests social sustainability is “a life-enhancing condition within communities” that has the following features:

- “Equity of access to key services (including health, education, transport, housing, and recreation)
- Equity between generations, meaning that future generations will not be disadvantaged by the activities of the current generation
- A system of cultural relations in which the positive aspects of disparate cultures are valued and promoted when desired by individuals and groups
- Widespread political participation of citizens not only in electoral procedures but also in other areas of political activity, particularly at a local level
- A system for transmitting awareness of social sustainability from one generation to the next
- A sense of community responsibility for maintaining that system of transmission
- Mechanisms for a community to collectively identify its strengths and needs.” (McKenzie, 2004, p. 12)

Taking a slightly different approach, Becker et al. redefine sustainability from a sociological perspective, stressing its *analytical*, *normative*, and *political* elements. In an analytical sense, sustainability means that “social development can no longer be viewed without considering its natural prerequisites” and that there should be no assumption of an “ideal” way for human societies to develop, but rather an emphasis on the “diversity of paths for societal transformation, depending on the particular cultural or political as well as ecological starting points.” The normative features of sustainability are justice for future generations, the subordination of economic goals to social and ecological constraints, gender equity, and democratic participation in decision-making processes. The political dimension is inherent in the focus on relationships between people and the environment, and the systems of governance, policy development, and institutional arrangements that determine those relationships (Becker et al., 1999, p. 5). Holden also sees political value in a focus on the social dimensions; pointing to work by local governments in Vancouver, Canada, as an example, she suggests that attempts to put social sustainability principles into practice at a local policy level can result in a “concerted repoliticisation of the local work of sustainable development,” by enabling a range of social issues previously considered marginal to be placed on the urban governance agenda (2012, p. 540).

While there may be no agreement on a concise “definition” of social sustainability, a review of the literature suggests a fair degree of consensus about the main themes or components of social sustainability. For summaries of the key themes that are emerging as important constituents of social sustainability, see Partridge (2005) and Colantonio (2008). For an overview that differentiates between nonphysical and physical factors identified in a review of the literature as contributing to social sustainability, see Dempsey (2009). The main principles or components of social sustainability that emerge are as follows: quality of life (or well-being),

equity or social justice (which in turn encompasses the goals of inclusion and access), a “futures focus,” and democratic and participatory governance, each of which is briefly explained below:

Quality of Life

While “quality of life” may be hard to define and is necessarily subjective, the concept provides a useful means of focusing on the qualitative “human” dimension of social sustainability – where the aim is improving the quality of people’s lives. Some use a concept of “basic needs” to stress that at a fundamental level, social sustainability must imply the provision of such basic human needs as shelter, food, clean water, and employment (Colantonio, 2008, WACOSS, 2002). Others stress that sustainability requires that “quality of life for people today must not be achieved at the expense of people in the future” (Department of Environment and Transport and the Regions [DETR], 2000, p. 3) or that it demands a priority focus on improvements that can be made to the lives of the most disadvantaged rather than being a means to justify the unsustainable levels of consumption and waste that tend to accompany the pursuit of increased “quality of life” by already wealthy or privileged groups (Partridge, 2005).

Equity (or Social Justice)

Equity is the most commonly mentioned requirement for social sustainability, with many authors stressing notions of social justice and equity both essential and central in any definition of social sustainability (Cuthill, 2010, Colantonio, 2008, Dempsey et al., 2009, Koning, 2001, Partridge, 2005, WACOSS, 2002). The principles of social justice and equity provide “an ethical foundation” for social sustainability policies, directing a focus on those who are worst off in any given community (Cuthill, 2010, p. 368). Equity has also been described as such a fundamental component that it should be a “filter” through which all other principles are viewed (WACOSS, 2002). Numerous authors argue that social sustainability must have a redistributive element

and that a sustainable community must be a just and equitable one (McManus, 1999, Dempsey et al., 2009) that “provides equitable opportunities and outcomes for all its members, particularly the poorest and most vulnerable members of the community” (WACOSS, 2002). Evidence that societies with lower levels of disparity have longer life expectancies, less crime, stronger civic engagement, and more robust economies suggests that equity is “a crucial component” of social sustainability (Colantonio, 2008, p. 6). Stren and Polèse argue that “social sustainability is strongly reflected in the degree to which inequalities and social discontinuity are reduced” (2000, p. 16). Importantly, the focus on social justice should make it clear that sustainability does not imply an endorsement of current social conditions. On the contrary, it recognizes that, for example, natural capital stocks have previously been lost to certain groups – particularly indigenous people – and this must be addressed through “a retrospective social justice component” (McManus, 1999, p. 67).

Inclusion (or Interconnectedness)

One means of improving equity is to increase levels of inclusion or interconnectedness. Many authors stress current levels of social exclusion as one of the impediments to achieving social sustainability, which should be understood as “the polar opposite of exclusion, both in territorial and social terms” (Stren & Polèse, 2000, p. 16). Social exclusion refers to the way poverty, deprivation, and related social problems work to exclude people both physically (e.g., through inequitable access to transport, jobs, or public services) and socially from the benefits and opportunities afforded by full social and economic participation. Social sustainability implies an equitable society in which there are no “exclusionary or discriminatory practices that hinder individuals or particular groups from participating fully in society” (Dempsey et al., 2009). Rather a socially sustainable community is one that “provides processes, systems and structures that promote

connectedness within and outside the community at the formal, informal and institutional level” (WACOSS, 2002). Social exclusion has been described as a “new, more brutal form of spatial polarization” than the residential segregation and social segmentation found in cities throughout history (Polèse, 2000, p. 308). Social sustainability therefore requires “territorial justice,” that is, geographically equal access to services, as opposed to the social exclusion and inequity manifested by areas of deprivation and poorer living environments found in many contexts (Dempsey et al., 2009). Working towards social sustainability, then, means better integrating or including marginalized or excluded individuals and groups in economic, social, cultural, and political life. Such strategies can help achieve what Dempsey et al. (2009) call “sustainability of community” – a key component of social sustainability that refers to “the collective aspects of life,” measurable aspects of which might include social interaction and networks, participation in collective groups and networks, community stability (or low residential turnover), pride or sense of place, and safety and security. This concept makes the “continued viability, health and functioning of ‘society’ itself as a collective entity” fundamental to the concept of social sustainability (Dempsey et al., 2009).

Access

Accessibility is a commonly cited measure of social equity (Dempsey et al., 2009). Working towards social sustainability requires increasing the level of access (to resources, services, and opportunities) for those currently experiencing social exclusion. Social sustainability requires the addressing of inequitable levels of access to all aspects of life, from employment, housing and living conditions, services, and facilities to opportunities for participation in social, cultural, and political structures and processes. As noted above, this requires particular attention to be paid to those groups of people whose access to resources and opportunities has historically been compromised.

A “Futures Focus”

Adopting a sustainability perspective implies a concern with the future as well as the present. Social sustainability requires the creation of a just society in the present *and* the establishment of structures and processes that will guarantee lasting and continuing justice. Thus, social sustainability requires the conditions to be created for the maintenance and improvement of just social conditions for current and future generations (Partridge, 2005). A futures focus is also inevitable because as Dempsey et al. argue “social sustainability is neither an absolute nor a constant” but a “dynamic concept,” which will change over time as external influences change (2009). Similarly, Robinson argues that sustainability is a process, not an end-state to be reached, and that it might be thought of as “the emergent property of a conversation about desired futures that is informed by some understanding of the ecological, social and economic consequences of different courses of action” (Robinson, 2004, p. 381).

Participatory Processes

Democratic and participatory processes of governance are commonly cited as critical components of social sustainability. As an ongoing social process, sustainability requires the development of “methods of deliberation and decision-making that actively engage the relevant interests and communities in thinking through and deciding upon the kind of future they want to try to create” (Robinson, 2004, p. 380). More formally, a socially sustainable community is one that provides democratic processes and open and accountable governance structures (WACOSS, 2002). The goal should be “a more engaged form of governance that provides a foundation for stakeholders to be more closely involved in decision-making and informed action relating to social sustainability” (Cuthill, 2010, p. 369).

Emerging Models

While disagreement continues about a precise definition of sustainability, the most common

approach and widely accepted approach is to conceptualize it as having three interlinked aspects or dimensions – namely, environmental, economic, and social. The “three-dimensional” model marks a clear shift from the original two-way focus on the “economy-environment” relationship. What began as a means of highlighting the environmental damage wrought by certain economic activity has, with the addition of the third, social element, become a more complex and multidimensional field. Sustainability is now commonly understood as requiring a balance between the three dimensions – environment, economy, and society.

Some see the three-dimensional model of sustainability itself, and the (belated) placement of “the social” within it, as perhaps indicative of the relative neglect of insights from social science and humanities disciplines in the sustainability debate. As Cheney et al. (2004, p. 228) assert, many in such disciplines would question the separation of the “social” from economic and environmental dimensions – and in particular would object to the apparent reification of the economy as a separate sphere *outside* or separate from the social. Partridge (2005) suggests it is an indication of the pervasive nature of an economic-centered paradigm that sustainability was ever able to be conceived as a relationship between “environment and economy” in the first place, as if “economy” is not absolutely a social creation. However, while the three-part model, with its implication that “social” and “economic” constitute discrete and equal spheres, may be analytically dubious, it can be useful in practice. Insisting on a separate sphere for “the social” does ensure that there is a clear place for a focus on noneconomic values. It also highlights how conceptually underdeveloped the social determinants of sustainability are.

A range of models for conceptualizing the relationship between the different dimensions of sustainability have been offered (see Manzi et al., 2010b for a discussion of different approaches). Becker argues that in many conventional approaches, the social perspective is very much

an afterthought with social processes considered only as they relate to other targets or goals and social science knowledge playing only an instrumental role – useful only in making technological solutions more effective (Becker, 1999, p. 9). Clearly, this approach does not come close to realizing the full potential of a social approach to sustainability. Dillard et al. suggest that a more cross-disciplinary approach is now developing, with the social and natural science disciplines now beginning to recognize the importance of the other and the interrelatedness of the social with the environmental (Dillard et al., 2009b, p. 1).

Perhaps the most detailed attempt to develop and integrate the social dimension is that suggested by Cuthill. This model is based on two premises, firstly that “environmental problems are first and foremost social problems,” because they require the management of human impact on the natural environment, not the management of nature per se and secondly that “economics is meant to serve people” and in particular to enable equitable distribution of resources (as opposed to the view that people serve economic interests). Cuthill’s conceptual framework proposes an interdependent and self-reinforcing relationship between four key components of social sustainability, each of which has a specific role in contributing to the overall concept, namely:

- Social capital provides a theoretical starting point for social sustainability
- Social infrastructure provides an operational perspective
- Social justice and equity provide an ethical imperative
- Engaged governance provides a methodology for “working together” (Cuthill, 2010, p. 366)

Cuthill’s model provides a useful development of the notion of social sustainability, both as a concept in its own right, and as one that stands in a relationship with broader concepts of sustainability. Both of these aspects will require further development in the literature; however, recent work such as this

continues to demonstrate the ongoing relevance and potential of the concept.

Criticisms of the Concept

Manzi et al. (2010b) summarize four criticisms that have been made of the concept of social sustainability (particularly in an urban policy context). Firstly, some argue that it is too abstract for practical implementation and further that this allows policy makers to deliberately avoid clear definitions, preferring the vagueness of “warm words” that do not commit them to specific actions. Secondly, it is suggested that many conceptions of social sustainability fail to appreciate the complexity of local political contexts, instead assuming idealized “win-win scenarios” and conflict-free consensus decision-making. Manzi et al. argue that this tendency neglects the inherent political dimension of the concept and obscures power relationships. Inevitably, however, social sustainability debates will need to engage with political questions of inequality, redistribution, citizenship, and social justice. A third and related criticism is that social sustainability does not sufficiently acknowledge the constraints of an empowerment and participation agenda. Overly simplistic conceptualizations of “participation” and “deliberation” risk ignoring the question of whether people have the capacity to “participate” and underestimating the significance of existing social conventions, power relations, and interests. Lastly, it is suggested that social sustainability debates pay insufficient attention to the international and global dimension. While many discussions of social sustainability are concerned with the local or “neighborhood” level and issues may be more easily understood at this level, there is a need for more sustained attention to global implications of “local” issues and for a wider global perspective more generally.

Cross-References

- ▶ Sustainability
- ▶ Sustainable Development

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Social Tendency

► Social Trends

Social Trends

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Synonyms

Social tendency

Definition

Significant elements in the general course of social change.

Description

Social trends are long-term changes in one or more fundamental aspects of societies. Additionally, social trends are seen to have momentum in that they cannot easily be reversed or forestalled.

One good example of a social trend is the societal aging of societies all over the world beginning in the last few decades and often referred to as the demographic transition. In this process, greatly increased life expectancies result in the progressive rise of the mean and median ages of individuals in a given population. This transition in turn forces an adjustment in the mix of goods and services available in rapidly aging societies and most particularly in the mix of medical services and income supports for senior citizens which are provided.

Another example is the long-term increase in educational attainment in almost all societies in the world. In the post-World War II world, much public and private investment has been made in providing more educational experience to greater and greater proportions of populations. This results in the accumulation of ► **human capital** of a sort and also changes the characteristics of the population in a large number of ways, some being found in individual citizens' attitudes and behavior and some being found in collective factors such as the characteristics of a labor force.

A social trend could be generally described as a long-term gradual change in a fundamental characteristic and/or social arrangement in a given society. It is sometimes described as the general course or prevailing tendency.

Cross-References

► [Human Capital](#)

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Social Trust

► [Trust](#)

Social Values and Good Living

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Definition

Social values are defined as standards, which individuals and social groups employ to define personal goals and essentially shape the nature and form of social order in a collective i.e., what is acceptable and not acceptable, what ought or not to be, what is desirable or non-desirable (Kluckhohn, 1951; Tsirogianni & Gaskell, 2011).

Description

The pursuit of well-being and good living is an integral part of human existence. Efforts to articulate how this is achievable can be traced back to the 6th–7th B.C.E., when Homer, Aristotle, Cicero, and Virgil inquired about the means and goals of human nature that would bring people closer to ► **happiness**. Informed by the social, political, and economic transformations of their time, they proposed that bravery, conformity to the laws of the city, hard work, honesty, nobility, reason, and participation in the public affairs were values that encapsulated the good life. Although the relative importance of these values and their meanings has changed since then, their function to date remains tied to the processes of attainment, preservation, or enhancement of living.

Social values are the result of explicit or implicit societal and group decisions that can be individually expressed. We think of ourselves in

terms of our values (Gecas, 2000; Hitlin, 2003; Joas, 2001; Rokeach, 1973; Smith, 1991), using them as standards to guide impressions of ourselves, others, and the world (Park, 2012). The need for ► [self-efficacy](#) and self-worth, in terms of having control over our lives, is underpinned by values and essentially defines our ► [self-concept](#) and our idea of good life (Bandura, 2001; Baumeister, 1991; Gecas, 1986). Values, through their ego-defensive functions, become protectors of our sense of efficacy.

While values capture different views about what constitutes good living, they are not always put into practice to guide it. Morris (1956) differentiates between *conceived* and *operative* values. The former represent conceptions of the desirable, while the latter become guiding principles that actually influence behaviors. Values “in principle” thus can differ from those “in practice.” While individuals may subscribe to certain values, it may be not always be possible to enact them. Such discrepancy can constitute a source of disempowerment and inauthenticity.

Debates

Numerous studies and instruments have been proposed for the measurement and study of social values. Rokeach (1973) provided us with the first simple instrument, which aimed to capture universal values as guiding principles in people’s lives. These are assumed to be ranked hierarchically by individuals and cultures. He distinguished between instrumental (values as means) and terminal (values as ends) values and focused his attention on value relationships. He envisaged them as abstract ideals that are traded off in particular ways (moral versus competence values, social versus personal values). However, the use of rankings did not allow a good understanding of the interrelationships between values, and the concept of prescribed value dilemmas failed to capture how value structures can vary across different situations and cultures.

Similar to Rokeach, Schwartz (1992, 2002) aims at studying value systems but through a rating system. He develops a list of ten universal values, which are placed in a circumplex depending on how they relate to each other.

The closer two values are to each other on the circle, the more similar their motivational goals are (self-transcendence versus ► [self-enhancement](#) and openness to change versus conservation). The circumplex has been validated in numerous cultures. However, drawing universal boundaries between the different values does not seem to reflect the variation that exists across individuals, groups, and cultures.

Scholarly efforts on values have been concerned with questions of taxonomy, comparability, and universal validation on an individual and aggregate level. Values are understood as abstract concepts isolated from their contexts, parsed into universal typologies, and organized around fixed dichotomies. Values, however, are more than psychological properties that individuals possess and use as explicit guiding principles in their lives. Social values are key components of cultural frameworks that define ways of living and order states that provide the basis on which individuals and groups structure their identities.

Given their existential ontology, values can be paralleled to life trajectories as continuous *processes* of making sense of one’s existence, creating meanings that guide living; in effect, values are tied to processes of being and navigating oneself in life and society. Values are held to exist between at least two individuals in relation to a common project that is not static but extends over time and space. The interdependence between conceived and operative values together with the intersubjective, temporal, and spatial components is crucial for the concept of value processes as they imply how values and their meanings are generated, sustained, and elaborated and survive after their emergence. The concept of value processes is useful to uncover the psychological, historical, political, social, and cultural bases of values and how they tie to people’s livelihoods and identities.

Value Processes and Good Living

Psychological debates on the topic of good life or well-being and the role of values are mainly rooted in positive psychology (Csikszentmihalyi, 1996; Diener, 1995; Seligman, 2002). Taking an Aristotelian view of *eudaimonia*,

Seligman (2002) refers to values as virtues such as ► **wisdom**, courage, ► **love**, ► **justice**, temperance, and transcendence as bringing people closer to happiness. Csikszentmihalyi (1996) describes the role of “flow” – the experience of enjoying fulfillment when concerns such as food, ego-self, and time are ignored – in creating a sense of optimal experience. These theories present a view of good life as the Holy Grail built according to virtues and moral principles. However, almost none of us are capable of putting these principles in practice. Situated livelihood is marked by constant difficulties, tensions, obstacles, and discontents (Van Deurzen, 2009). The way in which people experience, make sense of, and deal with dilemmas and difficult situations is not accounted for in the ► **subjective well-being** literature.

Doing good living is a painful and creative process that emphasizes engagement in activities as part of everyday experience, mediated by different contexts and histories (Dewey, 1958). Bateson speaks of people’s creativity in “composing life” and conceives of life “as an improvisatory art . . . in which commitments are continually refocused and redefined” (Bateson, 1989, p. 39). Insofar as individuals emerge as contingent agents (Giddens, 1994), creativity is captured as the process of arranging and rearranging surrounding structures that lead people to visualize and generate new possibilities, confront obstacles, deal with tensions, see different realities, and manage different roles across different life domains (Mead, 1934).

Doing good living as a creative process involves effects arising from the manipulation of components (i.e., operative/conceived values, time, space, intersubjective) embedded in the valuing process on the (re)organization of the self-concept (Tsirogianni, 2011). Such effects include solutions to tensions stemming from the dynamics between our understanding of social values and our enacting them in the world in which we exist. Through becoming attentive to the different perspectives and contexts of our experiences – beyond those experiences that seem to us immediate, necessary, and useful – we can gain a new dimension in our valuing

encounters with others and the world. Understanding how the different components intertwine to carve our sense of self can thus lead from conscious values, as anchored in an automatic and preestablished understanding of ourselves in relation to the world, to self-conscious values that capture our ability to direct ourselves in the world. These capture the ability to direct ourselves through the various value elements to establish and reestablish connections between them that help us achieve a holistic understanding of the complexity of our existence as contingent agents in the world. This distinction is reminiscent of Sartre’s (1939) distinction between reflective and self-reflective consciousness.

The concept of value processes is useful at illuminating how learning to orient oneself through the elements that compose one’s value system can help the individual engage in dialogue with his/her existence, others, and the world and integrate these experiences into an image of empowered and authentic self. In this context, good life is not just a goal to be fulfilled where stillness of the psyche and the absence of pain form its basis. Envisaging change, potentials, and solutions to tensions is a challenging yet integral part of doing good living, a process that is of course more than just a personal matter.

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Social Vulnerability

► Disadvantaged Populations

Social Welfare

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Definition

Social welfare is the satisfaction of fundamental human needs (Max-Neef, Elizalde & Hopenhayn, 1986) of all members of society, which depend on the quality of the satisfiers that update these needs and the amount of goods required and available for the update (Max-Neef, Elizalde & Hopenhayn, 1986). It is not directly measurable because it involves objective and subjective dimensions and also values judgments. It is a polysemic concept since assigned different meanings, depending on the current of thought in which he who makes use of the concept is located. However, it is possible to identify certain elements or factors of the phenomenon that this concept seeks to explain, on which there is greater consensus which allows its use (Alguacil, 2000). It is first referred to people's ► **quality of life** and the conditions that enable them to achieve well-being, a pleasant and enjoyable life, and the minimum level of satisfaction acceptable at a particular time in history. Second, it is a phenomenon that is experienced individually and, therefore, only possible to express by the subjectivity of each individual; because of that, it is therefore necessary to associate and correlate it with objective factors. Third, it is a situation that changes over time in two ways: first, as the individual's life cycle develops (childhood, youth, adulthood, and old age) and, second, with the changes in material conditions of existence due to the transformations that all societies experience.

Description

Usually in the literature about this subject, two constitutive elements are identified: one being the economic welfare, as determinant of the material

living standard of the population, and the other, the ► [subjective well-being](#).

On the first dimension, economic welfare, there is a broad agreement on the need to measure it, despite the critics that have been made as regards the ways of measurement used. Conventionally, since introduced during the thirties in the last century of an instrument that made measurement possible, it has been chosen to measure welfare, the amount of useful material goods and services produced by a country, divided by the number of its inhabitants – what is known as gross domestic product (GDP) per capita – or some other measurement directly related to it. Still, there are other alternatives that are discussed below.

The GDP per capita has historically been the most commonly used indicator, and numerous evidences show that per capita income is positively correlated with quality of life of the inhabitants of a country (Kuznets, 1962). This is true when the income does not exceed a certain threshold; however, for higher-income countries, the correlation between quality of life and per capita income loosens, as shown by various studies.

One problem GDP has is that it only measures the value of the total sum of economic goods and services produced during a period of 12 months, but does not distinguish between those economic activities that actually improve the quality of life of society and those that worsen it. On the other hand, it does not consider the providing of goods and services in the nonformal economy (domestic economy, informal economy, community work, etc.) which also affect social welfare.

Other factors that also affect the level of material life of the population are unemployment, particularly chronic unemployment or underemployment, and income distribution since it is more beneficial to a society that the income is distributed more evenly among the inhabitants, than when there is a strong contrast between rich and poor.

Over the years, due to the strong criticism suffered by the GDP per capita as an indicator of social welfare, several attempts have been

undertaken to establish a viable alternative. The Index of Sustainable Economic Welfare (ISEW), the Genuine Progress Indicator (IPR), the Fordham Index of Social Health, the United Nations ► [Human Development Index](#) (HDI), and the Human Poverty Index (HPI) are some of the most widely recognized (Daly & Cobb, 1993). Each of them tries to determine the “real” economic improvement on human welfare (Rifkin, 2010).

It is important to mention the Bhutanese concept of gross national happiness (GNH), which is supported by four pillars, which should inspire every government’s policy (Bakshi, 2005). They are the following: (1) a sustainable and equitable socioeconomic development, (2) the preservation and promotion of culture, (3) the conservation of the environment, and (4) good governance. In Bhutan, they are inspired by the idea that what is measured affects what is done. If the indicators only measure how much is produced, the actions tend only to produce more. For this reason the FIB had to be transformed from a philosophy to a system of measurement. And the Centre for Bhutan Studies has developed an index to measure happiness.

Another concept recently introduced is that of the “good living,” as an alternative to the classical perspectives on development and quality of life (Acosta & Martínez, 2009). Moreover, that spirit has been formalized in two countries, Bolivia and Ecuador, when recognized in their new constitutions. The good life seeks to break with traditional views of development engrossed with the perpetual economic growth, linear progress, and anthropocentrism. In this way, it also puts in jeopardy the anthropocentrism characteristic of European cultural heritage, which makes everything valued and appreciated according to its usefulness to humans. The arena of tensions in this area is clearly expressed in the recognition of the values of nature, which implies a radical departure from the ideas of European modernity core. It is an expression that owes much to traditional knowledge, especially from the Andes. Indeed, the good life comes hand in hand with the ideas of *sumak kawsay* from the Quechua of

Ecuador or the *suma qamaña* from the Aymara of Bolivia (Acosta & Martínez, 2009). While the former refers to the idea of a good life in the broadest sense, the second can also be interpreted as a good life in community, or “good living.” This good life departs from the Western ethos in many ways. Its meaning is to ensure the best life, but in a good life. It has a touch of austerity, and not to live better than others or at the expense of others. While the conventional postures are interested in material consumption and perceive environment as a basket of resources to be exploited, the good life is more interested in the quality of life of people and in respecting nature.

The second dimension, ► **subjective well-being** emerges from the amount of well-being the people declare themselves to have (Rojas, 2009). The most used way to measure this is by the subjective well-being index, which is drawn from surveys conducted by companies such as Gallup, Latinobarometer, and World Values Surveys with representative groups of people from all over the world, and is calculated out of the percentage of people who consider themselves “happy” or “very happy” minus the percentage of people who consider themselves “not very happy” or “unhappy.” The World Values Survey allows comparisons between countries. It has been observed, as is the case with life expectancy, that for low-income levels there is a higher correlation between subjective well-being and GDP per capita. For higher income exists a more moderate correlation. Studies in various parts of the world have made possible a series of findings regarding the welfare, arising from econometric research based on the report that people themselves make about their life satisfaction (Inglehart, 2001; Osberg & Sharpe, 2003). The literature on subjective well-being has studied the importance of these factors, both with personal and intercountries research studies. The relevance of the explanatory factors of life satisfaction between people – and, above all, between cultures – can change. Therefore, cultural differences and values must be taken into consideration (Osberg & Sharpe, 2003). Furthermore, it is impossible to infer with reasonable

accuracy life satisfaction out of a group of explanatory variables, and, therefore, it is imperative to have direct information of the well-being as directly experienced by people.

Traditionally, studies on welfare leave the measuring of welfare of specific human beings in the hands of specialists, which determine the welfare of a person in accordance with a list of what they consider of value and justify it with an elegant and well-structured conceptual construct. The personal experience of welfare is not considered necessary, and in most cases, there is no direct contact with the person, being their welfare evaluated with “a priori” established criteria. In other cases, it makes a presumption about the welfare of the person, based on a series of indicators that have been selected based on unsubstantiated theories of welfare. As result of these indicators, the expert assumes that the person has high or low welfare and classifies it as such, without even bothering to verify his assumptions. These approaches end, many times, defining well-being based on a list of indicators, such as access to potable water and/or sewer, an income above a certain threshold, and not to be excluded from the mechanisms of social decision. These indicators may be related to welfare, but are not welfare. So that in many cases the concept ends up being defined by the indicators used for measurement.

Moreover, what is not measured tends to disappear from the public agenda or to be dominated by presumption approaches and imputations. That is why subjective indicators of well-being must be incorporated. Life satisfaction indicators are important and should systematically incorporate those of satisfaction in life domains such as family, job, and the use and availability of free time, among others. There can also be incorporated variables related to the emotional states of the person as well as its assessment of achievement and success in life.

It is also crucial to measure the production and availability of ► **relational goods** and satisfiers (Max-Neef, Elizalde & Hopenhayn, 1986; Alguacil, 2000; Osberg & Sharpe, 2003). The literature has shown that they are an important source of real welfare, and there is little

information on them. There has been a strong emphasis on measuring the production of economic goods, and there has been done much research on productivity and competitiveness of nations in these goods. However, economic goods are not the only goods that exist and not necessarily the most important in the creation of wealth. It would be interesting to construct indicators of relational goods production, as there are indicators of production of economic goods. This would allow to see the efficiency of countries in the production of relational goods and to study the institutional conditions that promote such efficiency. Of course it is important to also consider the availability and use of leisure time and the existence of conditions that favor a rewarding use of it. Finally, it is necessary to incorporate the living conditions of the environment and skills for a successful living. The literature is on this kind of variables wide, and there are many indicators in regard to respect for the rights and freedoms, public participation guarantees, education, life expectancy, and access to health services, among many others.

Cross-References

- ▶ [Gross Domestic Product \(GDP\) and Happiness](#)
- ▶ [Human Development Index \(HDI\)](#)
- ▶ [Index of Sustainable Economic Well-Being](#)
- ▶ [Indicators, Quality of Life](#)
- ▶ [Net Economic Welfare](#)
- ▶ [Quality of Life](#)
- ▶ [Relational Goods](#)
- ▶ [Subjective Well-being](#)

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Social Welfare Indifference Curves

- ▶ [Social Indifference Curves](#)

Social Well-Being

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Description

Social well-being has been identified by the World Health Organization [WHO] (1948) as a central component of individuals' overall health. The concept has been conceptualized and operationalized in many different ways.

Within economic disciplines, studies have initially operationalized social well-being using objective criteria such as gross domestic product (GDP) that reflects the relative prosperity of communities and societies; more recently, Organisation for Economic Co-operation and

Development [OECD] (2011) proposed additional criteria, besides macroeconomic statistics, to better measure individuals' perceptions of well-being and progress. Research within social sciences has operationalized social well-being in terms of behaviors that reflect community and organizational participation, community or group membership, or social capital and social cohesion (Andrews & Withey, 1976; Coleman, 1988; Putnam, 2000). Within psychology, the focus has been on individual-level measures, such as perceptions of social well-being and of the quality of the relationship with other people and society, for example, perceived social support from the social network of family and friends (Canty-Mitchell & Zimet, 2000) or social adjustment and social functioning (McDowell & Newell, 1987). Other individual-level measures of social well-being include anomie and alienation (Mirowsky & Ross, 1989; Seeman, 1959).

A central issue in the field of social well-being conceptualization and measurement has been the lack of agreement on whether social well-being should be considered as a component or dimension of health status (physical, mental) or as an external influence on it (Larson, 1993, 1996; McDowell & Newell, 1987); inconsistencies and lack of clarity on this issue have hindered empirical research and theoretical advances. Additionally, social well-being is treated sometimes as a dimension or component of overall well-being and, in other cases, as a concept worth of investigation on its own.

A relevant tradition of research including individual measures of social well-being is health-related quality of life (HRQoL). In this context, individual-level social well-being has been conceptualized generally as having two facets: social adjustment/functioning and social support (McDowell & Newell, 1987). Social adjustment refers to the subjective satisfaction with relationships or the performance of social roles. Social support refers to the quality and number of persons whom an individual can trust and can rely on as well as the degree to which one is needed and matters to others and society (Larson, 1993, 1996). Thus, social well-being can be defined as an individual's appraisal of their social

relationships, how others react to them, and how they interact with social institutions and community. Measurement of social well-being in this tradition has adopted scales assessing social support, social functioning, and social adjustment (McDowell & Newell, 1987).

A second tradition, where the concept of social well-being has been used, is positive psychology perspectives on mental health. The World Health Organization (WHO) defines mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (WHO, 2004, p. 12). This definition builds on two traditions in well-being studies on a life well lived (Deci & Ryan, 2008; Ryff, 1989): the hedonic tradition, focusing on the experiential dimensions of well-being (feelings of happiness), and the eudaimonic tradition, focusing on optimal functioning in individual and social and community life (Keyes, 1998; Waterman, 1993). The eudaimonic tradition has been measured using two multidimensional models, psychological well-being and social well-being, that reflect the extent to which individuals view themselves as functioning well in life and in society. Of particular interest is the social well-being model proposed by Keyes (1998) that extends the eudaimonic tradition of well-being from the intrapersonal focus of Ryff's model (1989) to the interpersonal realm. From this perspective, social well-being represents primarily public phenomena, focused on the social tasks encountered by adults in their social lives. The model draws on classical sociological work of Durkheim and Marx, emphasizing the fit between individuals and their social worlds. Keyes (1998) conceived of a five-component model of social well-being: social integration (the evaluation of the quality of one's relationship to society and community), social contribution (the evaluation of one's social value; it includes the belief that one is a vital member of society, with something of value to give to the world), social coherence (the perception of the quality, organization, and operation of the social world, and it includes a concern for knowing

about the world), social actualization (the evaluation of the potential and the trajectory of society; it is the belief in the evolution of society and the sense that society has potential which is being realized through its institutions and citizens), and social acceptance (trusting others, holding positive opinions about other people). From this perspective, social well-being encompasses the extent to which individuals feel they make valued social contributions, view society as meaningful and intelligible, experience a sense of social belonging, maintain positive attitudes toward others, and believe in the potential for society to evolve positively. These five elements, taken together, indicate whether and to what degree individuals are overcoming social challenges and are functioning well in their social world (alongside neighbors, coworkers, and fellow citizens). Theoretical reviews of the well-being literature based on this model have suggested that social well-being is distinct from other components of well-being, and the factors of hedonic, eudaimonic, and social well-being have been proposed to represent flourishing mental health (Keyes, 2005, 2007). Empirical examinations of this integrated model of well-being (Keyes, 2005; Keyes et al., 2008) have provided support for this multidimensional conceptualization.

To measure social well-being, Keyes (1998) proposed a 33-item scale tapping the 5 theoretical dimensions of social well-being. The instrument has been translated and validated into different languages, including Spanish (Blanco & Diaz, 2005), Iranian (Joshanloo, Rostami, & Nosratabadi, 2006), and Italian (Cicognani et al., 2008). A second instrument is a brief questionnaire that covers all three dimensions of mental health, the Mental Health Continuum-Short Form (MHC-SF). The MHC-SF measures emotional, psychological, and social well-being, includes only 14 items, and focuses only on aspects of well-being. It was derived from a number of instruments that assess emotional, psychological, and social well-being in the National Survey on Midlife Development in the United States (MIDUS; Keyes, 2002). In the MHC-SF, just one item is used for each dimension of social well-being. A first evaluation of the

MHC-SF showed that the instrument is reliable and valid as well as confirming the two-continuum model of mental health and illness (Keyes et al., 2008).

Some studies, especially within social psychology, have adopted Keyes's (1998) social well-being conceptualization and instrument in order to investigate the relationship with other phenomena. In particular, social well-being has been investigated in its relationships with social, civic, and political participation, among adolescents, young adults, and adult population, using both the short version (Albanesi, Cicognani, & Zani, 2007) and the long version (Cicognani et al., 2008). Results indicate that scores in social well-being are not generally high and that higher scores are positively correlated with social participation. Another construct that has proved to be significantly correlated with social well-being is sense of community (McMillan & Chavis, 1986). Indeed, the subscales of social integration and social contribution are the most strongly correlated with sense of community. Other studies have investigated the role of place attachment in social well-being (Rollero & De Piccoli, 2010). Sani, Bowe, and Herrera (2008) found that a higher perceived collective continuity (besides personal continuity) is positively correlated with social well-being.

The importance of including an assessment of social and interpersonal well-being, besides more individualistic aspects, has been emphasized also in the European Social Survey Well-being Module approach (Huppert et al., 2009). The conceptual model draws from different theoretical perspectives. It is based on the premise that the way in which an individual relates to others and to their society is a crucial aspect of their subjective well-being. Support for this assumption comes from the extensive work on social capital, which links the level of a group's social connectedness to average levels of happiness and satisfaction, health, and productivity (Helliwell & Putnam, 2005). Further support comes from the overwhelming evidence that our perceptions of interpersonal and social interactions play a crucial role in our well-being (House, Landis, & Umberson, 1988). Moreover,

it includes the notion that social contribution (e.g., giving to others, doing things for others, or volunteering) may contribute to well-being and physical health (Brown, 2003; Post, 2005). It also includes the notion of reciprocity in social exchange, as central ingredient of interpersonal feeling and functioning (Siegrist, 2005).

The conceptual model includes as components personal and interpersonal experience and functioning. As regards the interpersonal and social domain, well-being experience (feeling) is covered by constructs as belonging, social support, social recognition, and social progress; well-being functioning (doing) is measured by constructs as social engagement, caring, and altruism. To measure these components of well-being, a new instrument has been developed (Huppert et al., 2009).

Cross-References

- ▶ Flourishing
- ▶ Psychological Well-being
- ▶ Social Support
- ▶ Subjective Well-being
- ▶ Systemic Quality of Life Model (SQOL)
- ▶ Well-being
- ▶ Well-Being of Nations

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Social-Ecological System(s)

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Synonyms

[Eco-health](#); [Social ecology](#)

Description

The social-ecological systems approach is one that recognizes the interactive nature of human-natural world activities, and thus recognizes in interdependence of people and nature.

Its roots are said to be in the 1920s Chicago school of social or human ecology (cf. Berkes, 2011), but that thinking focused on people and society, and incorporated the natural world only as a set of independent variables that influenced social structure (Steward, 1955). More useful, in today's threatened environments, is the way in which the construct has been developed by Fikret Berkes and others (Berkes & Folke, 1998; Berkes, Colding, & Folke, 2003) and tied to issues of complexity, panarchy (Gunderson & Holling, 2002), and natural resource governance (Ommer & team, 2008; Ommer, 2010; Ommer, Ian Perry, Cochrane, & Cury, 2011).

Social-ecological systems thinking, then, treats people and nature as one integrated biogeophysical unit. Such systems are complex and adaptive and delimited by the spatial or functional boundaries surrounding particular ecosystems. They are therefore characterized by resilience, flexibility, diversity, and adaptive capacity. The resilience of such systems is their capacity to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks (Walker, Holling, Carpenter, & Kinzig, 2004). This requires adaptive capacity – the capacity of the social-ecological community to manage resilience by (in the human part of the system) learning to live with change and uncertainty, supporting diversity for reorganization and renewal, combining different types of knowledge for learning, and creating opportunity for self-organization towards social-ecological sustainability (Folke et al., 2002). Loss of resilience leads to reduced capacity to deal with change. Should these fail, the system experiences regime change.

The concept has become important again in the light of increased pressure on natural resources that is being experienced globally, and the failure of small-scale fisheries in many places, with all the loss of quality of life that such societal and environmental stress implies (Ommer & Team, 2008). Glaser (2006) has put together several such studies, and Berkes (2008) comments that “natural and social scientists have been

rediscovering the unity of people and nature well known to traditional and indigenous societies through such concepts as *vanua* in Fiji (a named area of land and sea, considered an integrated whole with its human occupants) and *aschii/aski* of the Cree people in northeast Canada (integrated concept of 'land', consisting of living landscape, humans, and spiritual beings)." Marine social-ecological systems, for example, consist of interactive ecological and human social elements: changes in ecological systems affect the economy and quality of life of fishing-dependent societies and vice versa (Perry et al., 2011).

The Perry et al. study examined the responses of four marine social-ecological systems to environmental changes and the concurrent impacts of globalization. The case studies were of the NE Atlantic (Barents Sea), the NW Atlantic (Newfoundland), the SE Atlantic (Namibia), and the equatorial Atlantic (Ghana). The study identified coping responses at short-time scales and adaptive responses at longer-time scales, not surprising, given that climate change requires a response by the other parts of the system, both social and ecological. The study discussed the significant variations in scale at the levels of both stressor and responder, which are also interactive, complex, and ongoing. The authors found that coping responses had broadly similar characteristics in both ecological systems and fishing societies, whereas adaptive responses were different, with a broader range of behaviors in fishing societies. It appears that persistent stresses (such as climate change, pollution, inequality poverty) may result in more rapid capacities to respond by the ecological system but reduced response capabilities in human fishing societies. As a result, management policies are needed, which will maintain the diversities of responses, at short- and longer-time scales, in both marine ecological and human fishing societies.

Management of such complex iterative interdependent systems is clearly challenging. Ecosystem-based management is likely to be an important tool in the management of social-ecological systems, but it will need

expansion beyond current practice to consider the social component of social-ecological systems (including quality of life) and the iterative interaction of all components. Assessments of the vulnerabilities of these systems will also have to adopt a multi-scale approach, ranging from countries to communities within countries. Globally, all countries will have to understand the importance of diversity, motivations, and the interacting dynamics of coping and adapting to environmental and human social system stresses. Ultimately, this calls for interdisciplinarity, involving the natural and social sciences, and in consultation with local people who work within the social-ecological systems to be managed and are familiar with it at the grass roots level, where so many of the interactions between people and their environment take place.

Cross-References

- ▶ [Community Resilience](#)
- ▶ [Eco-health](#)
- ▶ [Ecological Well-Being](#)
- ▶ [Environmental Management](#)
- ▶ [Natural Resource Management \(NRM\)](#)
- ▶ [Nature and Well-Being](#)
- ▶ [Resource-Based Communities](#)
- ▶ [Social Ecology](#)

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Socialization

- ▶ [Goal Achievement](#)

Socially Induced Affect

- ▶ [Affective Contagion](#)

Societal Development

- ▶ [Progress Index](#)

Societal Limitations

- ▶ [Work Limitations](#)

Societal Progress

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Synonyms

[Progress, societal](#)

Definition

Societal progress is a normative concept and can be defined as the change or advancement of major conditions of societies and people's lives in a direction considered to be desirable based on prevailing values and goals of development. Thus, in the retrospect, progress means that present conditions of life and society are considered as an improvement compared to the past, while in the prospect, it means that future conditions are envisaged to be better than those of present times.

Description

While the “demise of the idea of progress” had been noticed several years ago (Sztompka, 1994, p. 33), the concept has seen a surprising and remarkable revival more recently. The renewed interest in the concept of progress is closely related to the currently flourishing debate on measuring well-being “beyond Gross Domestic Product (GDP)” and thus to alternative approaches of defining and measuring betterments of people's living conditions, societal characteristics, and life quality in ways, which are at least not restricted to economic terms. Particularly, the “Organisation for Economic Co-operation and Development (OECD) – Global Project on Measuring the *Progress of Societies*” and recommendations of the so-called Stiglitz Commission on the “Measurement of Economic Performance and *Social Progress*”

(Stiglitz, Sen, & Fitoussi, 2010) have stimulated a new debate on societal progress and its meaning in our present times.

History

Although it has been shown that the idea of directed change toward better human conditions is ancient and can be traced back to Greek and Roman philosophers (Nisbet, 1980), the concept of progress is usually considered to be a child of the age of enlightenment and modern times. Characterized by a strong belief in the power of human reason, the gradual replacement of religious and traditional beliefs by scientific thinking, as well as the fights for civil rights and liberties, the age of enlightenment gave birth to optimistic views of being capable to shape and improve human conditions and thus promoted the idea of and hope for progress. As a representative of this age, the French philosopher and politician Marquis de Condorcet saw “the human race, freed from its chains and marching with a firm tread on the road of truth and virtue and happiness” (see Bossard, 1931/1932, p. 8). The notion of progress thus became a characteristic if not “trademark” of modernity, flourishing particularly during the industrial age, and it was not least closely related to working-class movements, unions, and political parties aiming to improve working and living conditions of employees and their families successfully.

In social theory, the notions and ideas of progress have always played a crucial role, beginning with the works of Comte and Spencer until our present times, although in varying intensity. For example, the concept of progress was explicitly addressed in a series of articles published in the Journal “Social Forces” during the 1930s. In one of those articles, Bossard (1931/1932, p. 14) interestingly characterizes progress as a “term, which is used to indicate a consciousness of movement in a given direction, considered at the time to be desirable. There are involved. . .not one, but three ideas in the modern concept of progress: the idea of change, . . .the idea of valuation, and . . .the idea of control”. More recently scholars as prominent as Jeffrey Alexander and Sztompka (1990), Claus Offe (2011), and many

others have taken up the issue again with major contributions to clarify the concept and to discuss its present-day meanings.

Conceptual Issues

The concept of progress has been used in different notions, changing over time. There is a common understanding, however, that progress indicates a directional valued social or societal change, which is to be distinguished clearly from other sorts of societal developments like neutral change, stagnation, cyclical change, or regress. Beyond this basis notion, the literature exhibits numerous differences in ways of understanding and attributing basic characteristics to the concept of progress. According to Sztompka (1994, p. 27ff.), important variations in the understanding and usage of the concept of progress are related to basic components, such as the “shape of the process”, the “necessity” of progress, the “manner of operation”, and the “moving forces”: Regarding the shape of the process, approaches understanding progress as continuous, gradual, cumulative, or even linear changes toward better states of society may be distinguished from understanding of progress as a stepwise, incremental, uneven, or eventually even revolutionary process. While progress may be considered a necessity in the course of history, at least in the long run, as, for example, suggested by Marxist approaches, but eventually also by modernization theory, it may also be regarded as a possibility or chance only, which must not necessarily occur. A third variation in the understanding of progress concerns the “manner of operation”: While progress can be understood as an outcome of an harmonious unfolding of inherent potentials and thus a peaceful process, it may also be considered a result of tensions, contradictions, conflict, and fights, as, for example, proposed in Marxist theory. Another important distinction concerns the forces bringing progress about: Is progress considered as a result of unintended processes, as, for example, evolution and market activities or even side effects of certain forces, or is progress deemed to be the result of human agency, which has to be aimed at and to be achieved. Offe (2011, p. 79), for example,

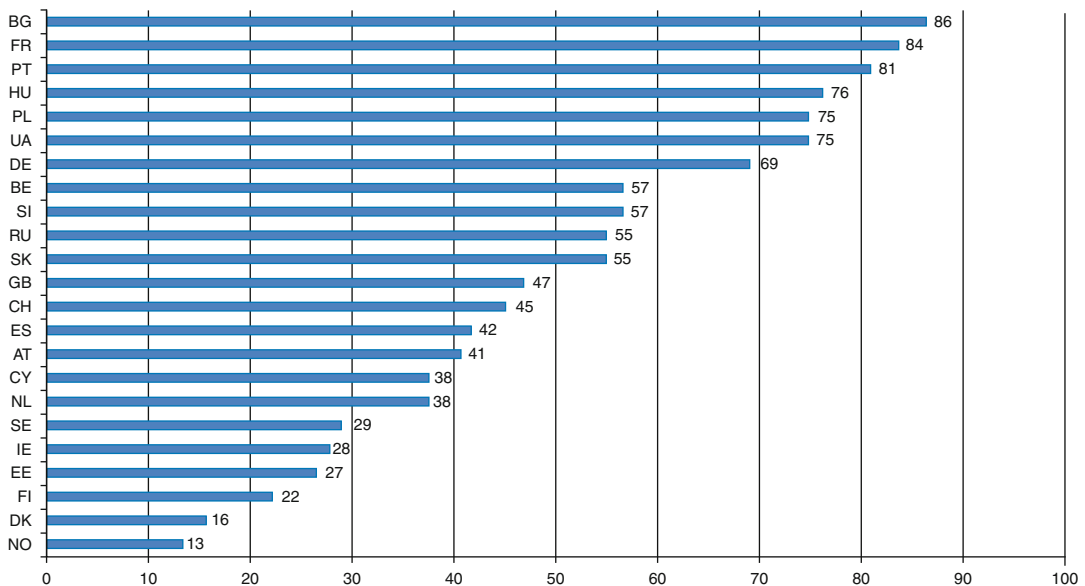
represents the latter view, proposing an understanding of progress as “the outcome of collective intentional efforts driven by reason” and “not the evolutionary outcome of the blind forces of change”. Sztompka arrives at the conclusion of a new conceptualization of progress “(1) as a potential capacity, rather than ultimate achievement, (2) as a dynamic, evolving, relative quality of a concrete process, rather than absolute, universal, external standard, (3) as a historical possibility, opportunity, open option rather than necessary, inevitable, inexorable tendency, (4) as a product – often unintended, and even unrecognized – of human pluralistic and collective actions, rather than a result of divine will, good intensions of exceptional individuals, or operation of automatic social mechanisms” (Sztompka, 1990, p. 251).

Current Views and Discourses

The period of “triumphant modernity” has been considered by many observers as the “true” era of societal and social progress. Particularly, in the second half of the twentieth century, citizens of many nations – primarily in the so-called Western World – enjoyed unprecedented betterments of living conditions and quality of life: substantial reductions of working hours and increase in leisure time, improved working conditions, expanded welfare state regulations and benefits, better education for large parts of the population, rising incomes and living standards, advanced health, and extended longevity, to name just a few. All these developments were unequivocally welcomed as improvements and considered as progress by the large majority of the populations almost everywhere. More recent societal developments in European and other well-off Western nations, however, seem to undermine the notion of progress: stagnating or even decreasing real incomes, increasing inequalities, growth of poverty and “the working poor”, expansion of precarious jobs and working conditions, and the dismantling of welfare state institutions and cutbacks in welfare state benefits are some of the changes observed in various nations raising doubts about the progressive character of current societal developments. These

doubts have also been fueled by numerous negative side effects of the raising material level of living in many societies, such as environmental impairments, but also strain and stress or even mental illness (Eckersley, 2008). Even if changes seem to be positive and progressive at first glance, it is not always clear whether or not they are making life ultimately really better, as, for example, the debate about the quality of the additional life years resulting from extended longevity has demonstrated impressively. Moreover, there are good reasons to assume that the social consensus about the elements of a “good life” and the desirable directions of social change have weakened due to a differentiation of needs and a pluralization of value orientations and lifestyles. Given this background, it is perhaps not too surprising that considerable parts or even majorities of the populations in many European societies recently assessed the changes of the social situation in their countries in a way that “life is getting worse”, perceiving a decline of their quality of life rather than improvements and progress. Results from the European Social Survey 2006 suggest that more than 50 % of the respondents in 11 of the 23 nations covered “agree” or “strongly agree” that “for most people in their country life is getting worse” (Fig. 1). In some countries, this percentage even extends 80 %.

The prevailing skepticism and pessimism in contemporary theoretical discourses on progress are to a considerable degree due to postmodernism and related views of history and social change. As Giddens (1993, p. 665) put it, “modern societies...took their inspiration from the idea that history has a ‘shape’ – it ‘goes somewhere’, and leads to ‘progress’...The advocates of the idea of postmodernity suggest today that this notion has collapsed”. Also Marshall notices a significant change in the attitude toward progress in the postmodern age: “For most of the twentieth century, theories of progress followed the pattern of the nineteenth – optimistic, rationalistic, materialistic...At the century’s end, however, the idea of progress seems to be in eclipse” (Marshall, 1994, p. 420). The skeptical and pessimistic views grounded in postmodern



Societal Progress, Fig. 1 “For most people in country life is getting worse” – % agree/strongly agree (2006) (Source: Noll & Weick, 2011. Database: European Social Survey, 2006)

thinking even seem to have been reinforced by the recent economic crisis and the negative consequences on people’s living conditions it had or still has in many societies around the globe.

Even though it was apparently premature to proclaim the “demise of the idea of progress” (Sztompka, 1994, p. 33), it seems to be obvious that there is a need to rethink or eventually even redefine the meaning and notion of progress in the twenty-first century. An important line of skepticism is rooted in doubts and concerns about the sustainability of progress in its traditional notion, particularly in its understanding as a further advancement of the material level of living in rich as well as developing societies. According to Offe, these sorts of concerns have turned the notion of progress into a “logic of preventing regression”, shifting the emphasis from “moving ahead” to sustaining the achieved level of well-being and to prevent decline and regress, or in other words, the metaphor of “marching forward” is going to be replaced by “establishing effective stop signs” (Offe, 2011, p. 86). As an alternative to such a de facto abandoning of the goal of achieving progress, which seems to be rather unlikely to be accepted by human

mankind, it has been proposed to eventually reconceptualize the idea of progress “in such a way that it captures all those elements which may have been neglected in the past: solidarity, sustainability, etc.” (Kohl, 2011, p. 4). Suggestions of this sort come close to proposing a concept of “net progress” (Offe, 2011, p. 88f), which means gross-progress, net of negative side effects and externalities, and may thus also be understood as a tentative answer to the question of how to calculate “a balance of benefits and harms, functions and disfunctions” (Sztompka, 1994, p. 29). However, as yet, the distinction between gross and net progress seems to be an option solely at the conceptual level and for heuristic purposes, rather than a feasible methodological approach, ready to be used for practical monitoring purposes and empirical research.

Measurement

Countless statistical measures of societal progress have been proposed over many years and decades. First suggestions of how to monitor progress empirically have been presented as early as at the beginning of the twentieth century (see Bossard, 1931/1932, p. 13). With his book

“*Les indices numérique de la civilisation et du progrès*” (1921), the Italian statistician and criminologist Alfredo Niceforo made an important early effort to systematically “identify quantifiable symptoms of living conditions in a broad sense – indicators in our modern terminology – in order to measure and monitor levels and degrees of civilisation and social progress across time and space” (Noll, 2004, p. 152). In the retrospect, Niceforo thus may be considered as an important predecessor of the social indicators movement, which emerged in the 1960s and put the measurement of progress – in terms of living conditions and quality of life and societies – explicitly at the agenda at national and supranational levels. The character of social indicators as measures of progress is pretty well reflected in some of the early definitions. Raymond Bauer (1966, p. 1) defined social indicators as “statistics . . . and other forms of evidence that enable us to assess where we stand and are going with respect to our values and goals.” Mancur Olson (Department of Health, Education, and Welfare, 1969, p. 97) considered a social indicator as “a statistic of direct normative interest which facilitates concise, comprehensive and balanced judgements about the condition of major aspects of a society. . . . It is a direct measure of welfare and is subject to the interpretation that if it changes in the ‘right’ direction. . . things have gotten better, or people are ‘better off’”. Both definitions thus emphasize the function of social indicators to measure and monitor societal progress in the sense of improvements in well-being over time, or societal change relative to normative standards, such as values and goals. In subsequent years, research on social indicators has resulted in different sorts of measurement tools and instruments, indicators and indicator systems, composite indices, as well as population surveys, with a view to empirically monitor progress continuously.

The ongoing activities of monitoring societal progress as part of social indicators research and social reporting activities have received new stimuli and momentum by a recently renewed interest in the measurement of well-being and progress “beyond GDP” among economists,

official statistics, and policy makers. This renewed interest and debate have been triggered off by initiatives like the “OECD – Global Project on Measuring the *Progress of Societies*” (Hall, Giovannini, Morrone, & Ranuzzi, 2010), the report of the so-called Stiglitz Commission on the “Measurement of Economic Performance and *Social Progress*” (Stiglitz et al., 2010), and also the “beyond GDP” initiative of the European Commission (www.beyond-gdp.eu/) and diverse projects on measuring well-being and progress at the national level, for example, in Australia and Ireland. Apart from few exceptions, theoretical and conceptual issues are, however, rarely reflected thoroughly within this new debate on the measurement of progress.

Since the concept of progress is multidimensional by nature, as it is the case with underlying concepts like well-being and quality of life, it seems to be obvious first of all that measurement approaches, like, for example, indicator systems, suggest a multitude of measures to comprehensively cover the diverse dimensions and subdimensions deemed to be relevant. Actually, such an approach based on a multitude of single indicators seems to be the only way to arrive at a detailed diagnosis, whether or not the various elements have been changing in the desired direction and to which degree goals and objectives have been achieved. Since the different domains and dimensions considered to be relevant may change in an uneven or asynchronous way, a measurement approach based on a variety of single indicators may however not necessarily lead to a clear-cut and unequivocal overall assessment that things have gotten better or worse. Rather, it turns out to be quite likely that changes in different domains and dimensions will not only be taking place at different rates but also go in different – more or less desirable – directions, for example, increasing unemployment may go together with extended longevity and raising household incomes may be accompanied by increasing crime rates. In other words, because “unidimensional” change must not result in “syndromatic” change (Novak, 1990, p. 235f), there is a good chance that “progress in certain sectors of society does

not add up to a comprehensive progress throughout the whole that earns the name of progress in the singular” (Joas, 1990, p. 188).

Against this background, there is thus a demand for measures allowing to balance the various developments in different domains and dimensions of life and to allow unidimensional measurement of a multidimensional concept or phenomenon. This demand is being addressed by constructing so-called composite indices of progress. To our knowledge, Niceforo (1921) was also among the first scholars aiming to develop a composite index of progress, which he considered as an improvement of the total of living conditions across time. However, his efforts to develop such an index were not successful, and he dismissed this idea with some disillusionment.

In recent years, research aiming to develop composite indices of well-being and progress has been flourishing, and there are plenty of composite index measures available, which have been proposed as measures of progress. Among the most popular are the “Genuine Progress Index”, the “Human Development Index”, the “Happy Planet Index”, and the “OECD – Better Life Index”. Also at national level composite indices of progress have been proposed, such as the Canadian Index of Well-being or the Australian National Development Index (www.andi.org.au/), responding to the requirement to take national particularities into account. Although the composite index approaches mentioned differ in their conceptual foundations, aims, coverage in terms of domains and dimensions, and not least their underlying methodologies, they are all characterized by the ambitious objective of providing unidimensional quantitative measures for the multidimensional concept of societal progress. All of these measures have their particular strengths and weaknesses, also in methodological terms. However, as yet, there is no general agreement of how a composite index of societal progress should look like, neither methodologically nor in terms of which single domains and dimensions are to be included. Moreover, it thus seems to be rather unlikely that there will be an undisputable and broadly accepted single measure of progress available in the near

future. The current debate about the measurement of progress has nevertheless stimulated numerous promising research activities, which may hopefully lead to scholarly progress in the empirical monitoring of societal progress in the future.

Cross-References

- ▶ [Better Life Index](#)
- ▶ [Canadian Index of Well-being](#)
- ▶ [Composite Index Construction](#)
- ▶ [Genuine Progress Index](#)
- ▶ [Happy Planet Index](#)
- ▶ [Human Development Index](#)
- ▶ [Social Change](#)
- ▶ [Social Indicators](#)
- ▶ [Systems of Indicators](#)

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Societal Quality

- ▶ [Well-Being of Nations](#)

Societal Responsibility

- ▶ [Collective Responsibility](#)

Sociocentrism

- ▶ [Ethnocentrism](#)

Socioeconomic Determinants of Health

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Synonyms

[Social inequalities in health](#)

Definition

The social structure and socioeconomic variables influence health because the social position is associated with resources which determine exposure to physical and psychosocial factors recognized as plausible organic causes of illnesses.

The structuralist idea identifies visible factors of inequality as objective and systematic differences with regard to the ownership of social, economic, and cultural resources and the associated ability to utilize such resources in order to maximize the inclination toward a full psychophysical efficiency of the body.

Description

Individuals' state of health is the result of a complex combination of factors known as health determinants. These can be mainly ascribed to a genetic pool, socioeconomic conditions, lifestyle, resource systems and health-care services, and environmental factors. The link between health indicators and social status has been conceived in different ways.

A first approach considers social status as the outcome of one's health conditions (selection hypothesis). By interacting with socio-environmental variables, genetic traits are said to play a crucial role in promoting the onset of

an advantage or hindrance in any mobility, be it upward or downward (Plomin, DeFries, & Loehlin, 1977).

A second approach interprets the “social gradient” in health conditions as a reflection of more or less healthy lifestyles. This approach (victim blaming) envisages individuals as the makers of their own destiny, because adopting or refraining from any health-damaging behavior falls within the realm of their own responsibility.

From an empirical point of view, however, the explanations above cannot be exempt from some criticism, inasmuch as field research shows that lifestyles are mostly influenced by socioeconomic variables constraining individual free choice. Subjects in disadvantaged social positions actually present a higher probability of becoming prey to living and working conditions likely to have a negative effect on their health (Wilkinson & Marmot, 2003; Mackenbach et al., 2003; Bartley, 2003; Rodgers, 2002; Link & Phelan, 1995).

A strong belief in the importance of socioeconomic elements as conditioning factors of health is to be found in structuralist theory. More specifically, health determinants may be traced in variables expressing social position (socioeconomic status (SES), social class, material resources, among which the more prominent are income, qualifications and professional profile, and general working conditions).

The structuralist idea identifies visible factors of inequality as objective and systematic differences with regard to the ownership of social, economic, and cultural resources and the associated ability to utilize such resources in order to maximize the inclination toward a full psychophysical efficiency of the body. Summarizing very briefly indeed, this approach stems from the assumption that subjects occupying various “social positions” are variously exposed to specific physical disturbances (exposure to toxic agents, poor housing conditions, or dangerous jobs) as well as to psychological ones (stress due to financial concerns, excessive workload, low symbolic reward, lack of autonomous decision-taking). These are recognized as important etiological factors in a wide range of

illnesses (Cassel, 1976; Navarro, 1986; Siegrist & Marmot, 2006).

According to some scholars, social inequality begins to be outlined from the very conception of an embryo (theory of biological programming) and then accumulates throughout the life path of the subject (theory of cumulative advantage) (Willson, Shuey, & Elder, 2007; DiPrete & Eirich, 2006).

The heterogeneity of states of health therefore depends on a complex processuality which is structured on a number of levels, i.e., social, individual, and intraindividual (Wilkinson & Marmot, 2003). For these reasons, the study of socioeconomic determinants of health is increasingly based on reconstructing the trajectories belonging to the life itinerary of subjects in their entirety, relative to a multiplicity of aspects of substantive interest. On an empirical-analytical level, it is a case of planning expensive panel surveys through which to collect indicators pertaining to subjects’ state of health; their educational and training background; and their career, family and parental events, and lifestyles, where possible, along with biological and genetic markers (Lillard & Wagner, 2006).

Cross-References

- ▶ [Genetic Disposition of Quality of Life](#)
- ▶ [Social Inequalities](#)
- ▶ [Social Stratification](#)

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Socioeconomic Indicators

► Economic and Social Indicators

Socioeconomic Indicators and Convergence in Greece

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Definition

The empirical assessment of convergence is controversial. Most of the controversy has centered around the level of convergence, i.e., between regions or between countries. In both

cases, the more rigorous analyses of convergence have tended to focus on economic phenomena neglecting social and quality of life phenomena. However, comparisons of quality of life between nations have recently received special attention, because of their all-inclusive nature which focuses on region-specific amenities. The contention is that individual ► [well-being](#) depends upon quality of life factors such as infrastructure, environmental quality, ► [health care](#), crime rates, and public services, as well as the more traditional pecuniary factors such as money income and the prices of goods, which determine the cost of living. Liargovas and Fotopoulos (2009) used socioeconomic indicators to investigate convergence among Greek regions and prefectures during the period 1960–2004.

Description

The exact description of quality of life is very difficult due to the fact that it includes both objective and subjective elements. There have been, however, a number of research efforts for the determination of a widely accepted definition of quality of life. Allardt (1976, 1981) distinguishes between objective and subjective elements of well-being, based on four different dimensions: (a) material conditions (health, nutrition, employment, income, etc.); (b) nonmaterial conditions (quality of human relations, social and cultural integration, quality of the environment); (c) satisfaction, which refers to the level (measurement) of quality of life; and (d) ► [happiness](#) which concerns one's subjective opinion regarding life.

Andrews and Szalai (1980) consider quality of life as a combination of all the above material and nonmaterial, subjective and objective elements due to their close relationship between them.

Cantril (1965), Bradburn (1969), and Bradburn and Caploviz (1965) make a distinction between cognitive and sentimental factors of subjective quality of life. Cognitive factors are related to a comparative process which concerns targets in life, achievements, and the degree of satisfaction, while sentimental factors are related to the nonrational character of ► [happiness](#).

Hauser and Lorcher (1973) and Gerson (1976) distinguish between personal and nonpersonal conditions of life, while Galtung and Wirak (1976) and Inglehart (1977) make the distinction between primary and secondary needs and services and materialistic and nonmaterialistic ones. The personal-nonpersonal approach concerns mostly the analysis of quality of life from the perspective of personal conditions or needs and of the public interests, while approaches based on primary and secondary needs and materialistic and nonmaterialistic values could be compared with the scheme provided by Allardt (1976, 1981).

From a more practical point of view, all the above approaches converge towards a quite homogenous list of main factors of quality of life. This list includes factors such as population, income, ► [material well-being](#), health conditions, housing, availability of public services, ► [crime](#), employment conditions at work, urban and physical environment, personal relations, and participation.

However, the existence of recourses for the satisfaction of the above needs does not necessarily mean the use of these resources. Time constraints, availability and diffusion of information, skills needed to use new technologies, and freedom to choose are significant elements of quality of life. For example, the number of medical doctors in a region might not be of importance, if some social groups cannot reach them. In addition, social inequalities today are not based on income (as in the past) but on knowledge and information. Therefore, any effort to assess quality of life should also take into consideration all these processes needed to reach material and nonmaterial resources.

Based on the above, Liargovas and Fotopoulos (2009) distinguished the following analytical dimensions of quality of life: (1) general socioeconomic situation, (2) available services, (3) natural and urban environment, (4) attractiveness, (5) ► [equality](#) and ► [social cohesion](#), and (6) information. The first four dimensions are part of the available resources and services, i.e., inputs, while the next two are related to the ability to reach these resources and to constraints. There

might be a region with adequate resources, but people in the region might not be able to improve their quality of life because (a) various groups do not have the skills to reach these services, (b) there are tensions and conflicts between different groups in the region, (c) there is no free access to these resources, and (d) there is lack of information in the region.

The Specification of Socioeconomic Indicators of Quality of Life

Material and Nonmaterial Resources (Inputs)

General Socioeconomic Situation

Among the socioeconomic indices, the most important ones are income, housing, employment, and ► [consumption](#). From these, income is an important factor of quality of life because it affects the personal economic situation. Employment does not only offer the necessary income, but it also supports the social actions of individuals. In addition, employment supports public revenues from local fees and taxes, which are important for the development of a region. ► [Unemployment](#) represents a worsening of quality of life. High rates of ► [unemployment](#) show possible potential conflicts between different social groups in a region. Unemployed people face economic losses, which lead to the decrease in social contacts, family tensions, as well as health problems.

Available Services An individual's quality of life depends on the available services in his/her greater residence area. There are many differences as regards the provision of these services among different regions. Large cities usually concentrate most of these services in sectors such as health, ► [education](#), ► [transportation](#), communication, security, and culture. Health services and medicine represent very important inputs for individuals' health in a region or in a country. ► [Education](#) is also an important input for quality of life. This is because some regions offer more opportunities for ► [education](#) compared to others. ► [Transportation](#) represents also an important element of quality of life in a region.

Natural and Urban Environment

Natural and urban environment have many influences on the quality of life. Most studies construct environmental indices which determine the extent of environmental damages, such as the degree of pollution and the levels of CO₂. Among the ► [environmental indicators](#), the most frequently used are those related to the quality of open areas and waters, as well as indicators related to weather.

Attractiveness Attractiveness includes a number of elements, which induce people to move to an area. The term attractiveness should be taken in a broader sense which includes economic elements, i.e., the region as a place of employment and living.

Processes Needed to Reach Material and Nonmaterial Resources

Equality and Social Cohesion ► [Social cohesion](#) is an important condition to reach material and nonmaterial resources in a region. Lack of ► [social cohesion](#) would lead to marginalized groups, which would increase tensions and criminality in a region and worsen quality of life. ► [Social cohesion](#) gets special attention today as the introduction of information technology creates new (knowledge-based) facts. It is related to the distribution of income, to the level of ► [education](#), to the types of profession, to ethnicity, and to gender.

Education, Information ► [Education](#) and information are also important elements to reach material and nonmaterial resources. Well-educated and well-informed people can take advantage of a number of opportunities which appear in communication and information networks.

Estimations

Liargovas and Fotopoulos (2009) measured real convergence and the evolution of inequalities between Greek regions by using two approaches. First, they examined the series of 26 different

variables which correspond to the existence of material and nonmaterial resources (inputs) as well as to the processes needed to reach these resources. Then they investigated the evolution of the quality of life-based rankings through time.

Conclusions

Liargovas and Fotopoulos (2009) confirmed the decline of regional inequalities in Greece, with the exclusion of the 1980s. Then, they confirmed the relative improvement of development characteristics of Thessaly, Macedonia, and Western Macedonia whereas Peloponnese and Central Greece worsened their position. Regions with increased tourist and trade activity were regions with high quality of life. Border regions were usually the laggards of social and economic development.

Cross-References

- [Consumption](#)
- [Crime](#)
- [Happiness](#)
- [Health Care](#)
- [Material and Nonmaterial \(Family, Social, Leisure\) Values](#)
- [Social Cohesion](#)
- [Transportation](#)
- [Well-Being](#)

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Socioeconomic Status (SES)

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Synonyms

[Family background](#); [Home background](#)

Definition

Socioeconomic status (SES) can be defined firstly as a construct that represents social and economic background of an individual or group unit (e.g., household). Secondly, the sociological concept addresses relative position in a particular social structure as it is based on the assumption that an unequal status structure exists in all societies (Hollingshead, 1975). It normally includes acquired (e.g., wealth, status, and prestige, following Haug, 1977) versus biological characteristics of an individual such as age or ethnic origin. At household level, it can include demographic data such as place of residence. It is

a construct designed to group context-specific, meaningful, and statistically valid indicators, either as a composite indicator or by using single indicators/variables, or even a single proxy variable.

Description

Socioeconomic status (SES) or social background has become one of the most prominent explanatory factors in disciplines such as health, child development, and educational research due to its associations with ► [health outcomes](#) and cognitive and socio-emotional domains (Bradley & Corwyn, 2002; Schultz, 2005). This may in part be due to an increasing need for research on social inequality and its broad impact on society in general and well-being in particular (Adler et al., 1994; Breen & Jonsson, 2005; Bradley & Corwyn, 2002). More recently, SES is featured in research in linguistics and information and communication sciences (see “► [digital divide](#)” and Warschauer, 2013).

SES is a central construct in large-scale international studies on educational achievement, school performance, and a range of learning outcomes, though its impact on outcomes varies among and within countries (Schulz, Ainley, Fraillon, Kerr, & Losito, 2010). Erikson and Jonsson (1998) once claimed that the “long arm” of socioeconomic background plays a role not only in education but also in influencing occupational career and beyond.

Measurement of Socioeconomic Status

In respect to health-related outcomes, measuring SES is fraught with difficulties in terms of obtaining reliable data on household ► [wealth](#) and interpreting it so that inequalities among households are observable enough to be ranked according to their relative differences (Vyas & Kumaranayake, 2006). Similar obstacles are also reported in research on adolescent individuals (Currie, Elton, Todd, & Platt, 1997).

There is wide variation regarding how to measure SES and which indicators to select to represent it. Choice of indicators can reflect the context

(e.g., country, region, sample, research design) as well as a restricted or comprehensive definition of SES, which can depend on methodology, field, or conceptual frameworks. In practice, however, researchers across many fields select education (e.g., educational attainment, ► [literacy](#)), occupation, and income or wealth as the main indicators (or their equivalents) (Hauser, 1994, McMillan & Western, 2000), particularly in educational research.

In addition to parental educational attainment and occupation, number of books in the home are also used by the International Association for the Evaluation of Educational Achievement (IEA), as an indicator of socioeconomic status. Moreover, in developing countries, information on exact individual or household income may not be available or may need to be ascertained through collecting alternative data: income sources in-kind, ► [consumption](#), expenditure, and living standards are examples (Vyas & Kumaranayake, 2006). Currie et al. (1997), in the context of health-behavior research on adolescents in Scotland, provide an overview of the rationale for an SES measure derived from indicators on home ► [affluence](#) or expenditures (e.g., telephone and cars ownership or weekly pocket money) instead of father's occupational status.

Theories on “Capital” and SES

In the field of psychology, theories of “capital” are drawn upon following Coleman (1988) and Bourdieu and Passeron (1977), in order to interpret the impact of SES. Entwistle and Astone (1994) argue that this approach is reasonable as “access to financial capital (material resources), ► [human capital](#) (nonmaterial resources such as education), and social capital (resources achieved through social connections)” is easily associated with processes that directly affect well-being. According to the authors, capital is also linked to social and material “► [deprivation](#),” which has been the focus of research on social inequality.

Criticism and Limitations

Writing from the perspective of child development, Bradley and Corwyn (2002) provide

a thorough evidence-based critique of SES, concluding that “the interest in SES as a global construct persists despite evidence that there is wide variability in what children experience within every SES level, despite evidence that the link between SES and child well-being varies as a function of geography, culture, and recency of immigration, and despite evidence that the relation between SES and child well-being can be disrupted by catastrophes and internal strife” (p. 371).

The main challenges surrounding SES are in its measurement (e.g., methodological, statistical, data collection issues) and difficulties in the interpretation of SES data in order to correctly classify individuals and households in appropriate categories for comparison. Equally vital is the need to uncover mechanisms and mediating processes or variables that link SES with its aforementioned outcomes in order to clarify the precise role that socioeconomic levels, or its individual indicators, play. If these issues are addressed, the contribution of the socioeconomic status construct to research and policy related to enhancing ► [quality of life](#) cannot be underestimated.

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Socioemotional Selectivity Theory

- ▶ [Objective and Subjective Nearness to Death](#)

Sociology

- ▶ [Anthropology](#)

Sociosexuality

- ▶ [Family and Individual Factors Associated with Risky Sex](#)

Soil Fertility

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Definition

Soil fertility describes the capacity of soils to sustain plant growth, converting solar energy into biomass energy. Soils are the physical basis and provide nutrients, air, and water.

Description

Biomass energy is the basis of all human and animal life and was the only source of energy for technical, social, and economic development before fossil energy (coal and oil) became available.

Therefore, the term soil fertility (Blum, 2005; Frossard, Blum, & Warkentin, 2006) is as old as humankind. It was already broadly discussed in Greek and Roman literature and has inspired myths, world beliefs, and religions all over the world (Hillel, 1991; Warkentin, 2006; Winiwarter & Blum, 2006; Yaalon & Berkowicz, 1997).

This underlines that soil fertility is the basis for satisfying ▶ [human needs](#), e.g., in the form of diet, thus fulfilling ▶ [basic needs](#), delivering ecosystem services for humankind in the form of environmental resources. Also, ▶ [food security](#), ▶ [consumer well-being](#), and product quality are terms which are intimately related to soil fertility, as well as the definition of ▶ [life quality index](#), ▶ [ecosystem approach to human health](#), ▶ [malnutrition](#), and Global Hunger Index (GHI).

However, soil fertility not only determines ▶ [human needs](#) but also plant and animal needs, which means soil fertility determines to a large extent biodiversity at a global, regional, and local scale and is intimately connected to

► **biodiversity conservation**, which is the main target of the ► **Convention on Biological Diversity**. Also, indicators for ecosystem health are broadly based on soil fertility, due to the quantity and quality of plant and animal growth.

Moreover, in the sense of ► **environmental sustainability** and under the aspect of the ► **earth's carrying capacity**, soil fertility nowadays is also seen as the main basis for the generation of renewable energy, including biofuels (Blum & Nortcliff, 2011). Unfortunately, bioenergy production as a source of renewable energy is increasingly competing with the satisfaction of food security and may impact the Global Hunger Index (GHI) in the near-to-medium future.

Soil fertility is not only depending on soil parameters but also on climatic conditions, which determine the availability of water and temperature for plant growth. Without water and temperatures above the freezing point, no plant growth is possible. The influence of water availability on soil fertility and global plant production becomes evident through the fact that between 65 % and 70 % of all globally available freshwater is used for agricultural production through different ways of irrigation. In view of the shrinking freshwater reserves on our globe, soil fertility is endangered in the near-to-medium future, especially in those countries where agricultural production is nearly exclusively based on irrigation.

Soil fertility can be assessed through ► **land quality indicators**, which influence land use planning, ► **land use**, and the overall ► **natural resource management (NRM)** (Food and Agriculture Organization of the United Nations, 1976). In this context, it is important to understand that only 12 % of the global land area can be used for agricultural cropping, which means food and fiber production. On these 12 % of land surface, about 25 % of the world population is settled, producing all traded food worldwide. 26 % of the land surface can be used for pastures and agricultural animal production. 31 % of the land surface can produce forests, and 33 % of the land surface are infertile because of the lack of soils (e.g., on high mountains and in desert areas)

or because of lack of water and very low temperatures (Blum & Eswaran, 2004). This assessment is based on different forms of ► **land quality indicators** and soil fertility measurements and explains in part the very uneven distribution of the ► **earth's carrying capacity** or the delivery of ecosystem services in the form of human diet, to satisfy ► **human needs**. The worldwide distribution of food-insecure regions can be in part explained by the distribution of soil fertility, because two third of the 12 % of most fertile land occur on the northern hemisphere, and only one third in the southern hemisphere, and are lacking in large areas of Africa, Asia, and Latin America.

Natural soil fertility can be managed by rural development, using mechanical, chemical, and biological means, such as chemical fertilizer use (mineral and organic fertilizer), ► **waste recycling**, mechanical soil management (e.g., plowing), and soil conservation measures, avoiding soil erosion and other adverse effects on soil fertility, thus aiming at sustainable agriculture. In this context, water conservation and the protection of the water quality are most important for the maintenance of soil fertility. However, worldwide threats to soil fertility can be observed, in the first place cropland loss, through the conversion of cropland to other uses, such as ► **urban areas**, and peri-urban and industrial development, through sealing fertile soils by asphalt and concrete. The countries of the European Union are losing annually more than 1,000 km² of fertile land, thus endangering in the medium to long run the provision of ► **basic needs**, endangering ► **food security**, thus producing ► **changes in quality of life**. Moreover, large soil surfaces at a global scale are endangered by the loss of organic matter, contamination, compaction, erosion, loss of biodiversity, salinization, and floods and landslides (Blum et al., 2010).

Summarizing, it can be stated that soil fertility is an environmental resource and at the same time a predictor of quality of life, defining to a large extent the ► **quality of life (QOL)**, the ► **life quality index**, ► **population growth**, and ► **public health**.

Cross-References

- ▶ [Basic Needs](#)
- ▶ [Biodiversity Conservation](#)
- ▶ [Changes in Quality of Life](#)
- ▶ [Consumer Well-Being](#)
- ▶ [Earth's Carrying Capacity](#)
- ▶ [Ecosystem Approach to Human Health](#)
- ▶ [Environmental Sustainability](#)
- ▶ [Food Security](#)
- ▶ [History of the Convention on Biological Diversity](#)
- ▶ [Human Needs](#)
- ▶ [Land Quality Indicators](#)
- ▶ [Land Use](#)
- ▶ [Land-Use Planning](#)
- ▶ [Life Quality Index](#)
- ▶ [Malnutrition](#)
- ▶ [Natural Resource Management \(NRM\)](#)
- ▶ [Population Growth](#)
- ▶ [Public Health](#)
- ▶ [Quality of Life \(QOL\)](#)
- ▶ [Urban Areas](#)
- ▶ [Waste Recycling](#)

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Solar Energy

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Synonyms

[Insolation](#); [Solar radiation](#); [Sunlight](#)

Definition

Solar energy is the electromagnetic energy radiated from Earth's sun.

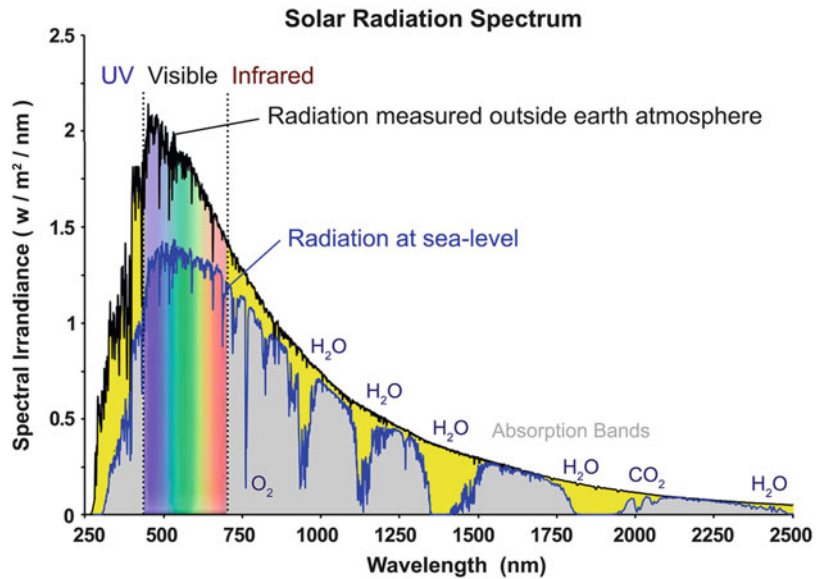
Description

The energy that reaches Earth from the star at the center of our Solar System is known as solar energy. The source of this energy is ultimately from the consumption of solar matter in a process of nuclear fusion. This consumes our sun while emitting a characteristic spectrum of radiation ([Fig. 1](#)). Electromagnetic radiation (EMR) has the characteristic of self-propagation as wavelike particles known as photons.

Solar energy is the primary energy source for Earth's biological systems. The sun directs an estimated 5.6×10^{24} J of energy towards the Earth each year (Jørgensen et al., [2007](#)). In comparison, human energy use in 2008 is estimated at

Solar Energy,

Fig. 1 Representation of 250 to 2,500 nm solar radiation spectrum reaching the Earth atmosphere and surface. Source data available from: ASTM G173 – 03 (2008)



505×10^{18} J, roughly 1/10,000th the solar energy input (Energy Information Administration [EIA], 2011).

On a per unit area basis, the energy from the sun measures approximately 1,366 watts per meter square (W/m^2) above the Earth's atmosphere (Vanek & Albright, 2008). The quantity of light reaching a surface is known as insolation and expressed as irradiance (W/m^2). Water, carbon dioxide, aerosols, and other atmospheric components reduce energy at the Earth's surface through absorption and scattering. In equatorial regions, where the sun's radiation arrives nearly perpendicular to the Earth's surface energy, insolation is strongest. The spherical shape of the planet means that polar regions have the least insolation. This effect is the primary factor in explaining climactic variations between latitudes.

The foundations of our living biosphere are based on solar energy captured by autotrophic organisms capable of accepting and storing solar energy as photosynthesis products (biomass). Most human energy supplies are directly attributable to solar energy. Hydro and wind energy are driven by solar thermal cycles. Fossil fuel reserves are stores of ancient biomass. Geothermal, tidal, and nuclear energy are the only major human energy supplies not reliant on solar energy.

Solar energy plays an important role in the societal shift towards greater use of renewable energy sources. The primary solar energy capture technologies employed for this purpose are solar thermal and solar photovoltaic collector systems. Solar thermal systems convert the sun's radiant energy into heated fluids such as water, air, or another heat-transfer agent. Solar photovoltaic systems capture radiation to produce electrical energy. One of the simplest forms of solar energy is passive collection using sun-facing glazed areas as part of built structures. This technique is widely used in agricultural greenhouses and energy-efficient buildings.

Solar energy technologies are typically evaluated for efficiency through the use of rating standards. A common standard for photovoltaic devices is termed Standard Test Conditions (STC). The STC assumptions are that there is $1,000 \text{ W}/\text{m}^2$ at an air mass of 1.5 and a module temperature of 25°C (Kalogirou, 2009). The ISO 9806-2 solar thermal water standard also uses $1,000 \text{ W}/\text{m}^2$. Collector efficiency is a function of power delivered for end use versus the insolation reaching to the equipment. Depending on global location, the amount of solar insolation will vary during the seasons and also during the day. Local meteorological conditions can create events where energy outputs far exceed expected ratings.

Solar thermal technology can use the full solar spectrum in the production of heat. This equipment uses solar-absorbing coatings. These coatings capture the full spectrum electromagnetic energy and convey them to the medium that will transfer this energy as heat.

Solar photovoltaic technology presently uses only part of the solar spectrum. This reduces its efficiency. Depending on the wavelength in the spectrum, photons can be too long (infrared), just right (visual), or too short (ultraviolet) for the most common materials used in photovoltaic panels. Ongoing advances in material technology are targeting specific wavelengths to capture more of the energy. The majority of solar radiation lies within the infrared spectrum; the key to improving the efficiencies of the photovoltaic module is to capture this energy.

Photovoltaic panels are made in two basic types: the crystalline and the thin film. The thin film type is less efficient than that of crystalline types. The benefit of the thin film is the ability to be both translucent and flexible. These properties have led to their use in places where traditional materials cannot be used. An example of flexibility is roofing membranes and shingles that capture solar electric energy. Being translucent allows for thin film to be used as glazing on windows to control glare and capture electrical energy.

Modern buildings are integrating these materials in a seamless and sometimes hidden ways while taking advantage of their solar properties.

We can expect to see major growth in the use of solar energy as energy costs continue to rise and the desire for clean and sustainable energy increases.

Cross-References

- ▶ [Energy Consumption per GDP](#)
- ▶ [Energy, Public Concern with](#)
- ▶ [Environmental Sustainability](#)
- ▶ [Sustainability](#)
- ▶ [Sustainable Development](#)
- ▶ [Sustainable Urban Design](#)

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Solar Radiation

- ▶ [Solar Energy](#)

Sole 24 Ore

- ▶ [Italy, Quality of Life](#)

Solicitude

- ▶ [Worries \(Global Measure\)](#)

Solidarity

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Definition

Solidarity is a sociological concept referring to a situation in which individuals contribute to the

common interest of the collectivity they are a member of, even if this runs against their direct self-interest.

Description

In social science, the concept of solidarity finds its roots in the work of nineteenth-century French sociologist Emile Durkheim. In his standard work on the division of labor in society (*De la Division du Travail Social*), he develops the argument that social order and development in a group or nation requires that individuals to some degree behave in accordance with the common good (Durkheim, 1997[1893]). The more they do, the higher the solidarity level of the group and the more efficient and effective the common interest can be taken care of. In this perspective, solidarity is a structural characteristic of social groups (the degree to which individuals actually contribute), rather than a specific orientation of individuals. However, to understand group solidarity, individual orientations are important, because they relate to the question of why people would be willing to contribute to the common good. The basis for such willingness is that people experience a common fate, because they share identity as members of a collectivity and feel a mutual sense of belonging and responsibility and/or because they share utility, in the sense that they need each other to realize their personal aims and ambitions (Durkheim, 1997[1893], but also Weber, 1968[1922]). The scope and strength of solidarity in a social system is thus a function of such shared identities and utilities, because they form the basis from which people are motivated to contribute.

Several types of motives exist. The role of people's feelings and sentiments is stressed by Mayhew (1971): the degree to which people feel emotionally attracted to one another and the degree to which they experience a we-feeling with others add to their willingness to contribute to the common good. Culturally based convictions are a second motivational source. They figure explicitly in the solidarity theories of Durkheim (1997[1893]) and Parsons (1951) and imply that individuals feel a moral obligation to

serve the collective interest. Enlightened self-interest is a third motive and central to Hechter's rational choice-based approach to solidarity (Hechter, 1987): individuals contribute to the common good, because they realize that in the end this also better their own life situation.

Wherein day-to-day parlance solidarity is often equated with warm feelings of individuals toward others, the sociological perspective implies that such feelings are one motivational source for supporting group interests, along with moral convictions and rational calculations of enlightened self-interest. It should also be noted that solidaristic behavior is not necessarily spontaneous or completely voluntary. For instance, in Hechter's theory enforcement figures explicitly where he argues that free riding of self-interested individuals necessitates control of and sometimes coercion to contributing to the common good.

The concept of solidarity is less indigenous to Anglo-Saxon as it is to European social debates and analysis. In Europe, it plays a central role in any debate on inter- and intragroup (re)distribution of life chances, where such (re)distribution is seen as vital for the coherence and development of social order and of individuals' lives. Especially in the field of welfare state analysis, solidarity is a pivotal concept applied to study and understands the social forces that impact upon the nature and change of collective social protection arrangements (Baldwin, 1990; Stjerno, 2005; Van Oorschot, 2009). For instance, intergenerational solidarity is a concept used in studying to what degree and under what conditions younger generations of Europeans are willing to contribute to collective pension schemes in the context of their aging societies. Or, solidarity between the sexes relates to the question what men and women each (should) contribute to the reconciliation of work and care in a social context where striking a balance between both is seen as essential for optimizing societies' human capital (Knijn and Komter, 2004). But the concept of solidarity is also applied in other areas, as in organizational studies (handling questions like what conditions stimulate employees to work together and achieve collective goals?) and family studies (e.g., to what degree do individuals value and invest in good family relations?).

Cross-References

There are several concepts more or less closely related to that of solidarity:

- ▶ [Altruism](#)
- ▶ [Collective Action](#)
- ▶ [Measures of Social Cohesion](#)
- ▶ [Prosocial Behavior](#)
- ▶ [Social Cohesion](#)

For conceptual discussions see, for instance, Doreian and Fararo (1998) and Bayertz (1999).

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Solitary

- ▶ [Introvert/Introversion](#)

Song

- ▶ [Music](#)

Sorrows

- ▶ [Worries \(Global Measure\)](#)

Sound

- ▶ [Music](#)

Sound Reduction

- ▶ [Traffic Noise Abatement](#)

South Africa, Quality of Life

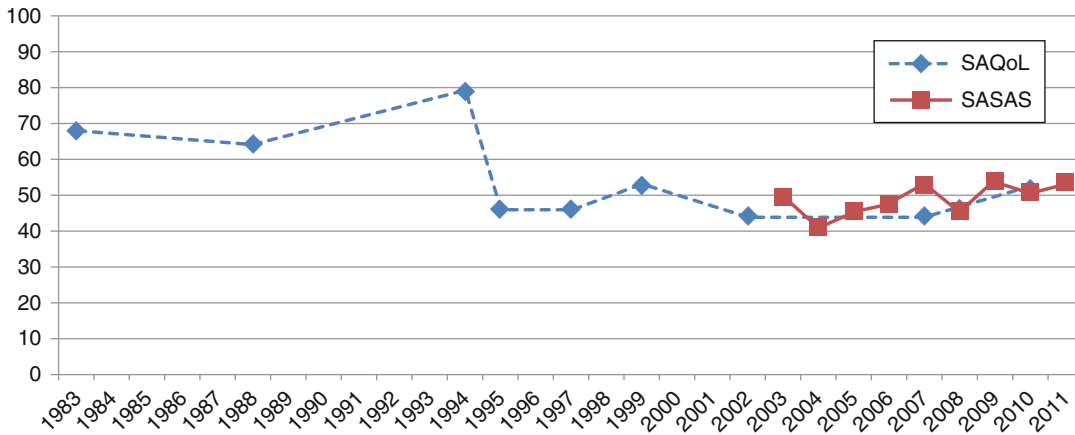
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Synonyms

[South African Social Attitudes Survey \(SASAS\)](#); [South African Quality of Life Trends Study \(SAQoL\)](#); [Southern African Labour and Development Research Unit \(SALDRU\)](#)

Description

▶ [Quality of life](#) research has a long history in South Africa. The earliest national empirical evaluation of happiness may date back to the mid-1970s when a sociopolitical study asked South Africans about their current and prospective happiness using a five-point scale showing smiling and angry faces (Hanf et al., 1981). The study documented the contrasting hopes and



South Africa, Quality of Life, Fig. 1 Trends in satisfaction with life as a whole in South Africa 1983–2011 (Sources: South African Quality of Life Trends Project

(SAQoL, 1983, 1988, 1994, 1995, 1997, 1999, 2002, 2007, 2010); HSRC South African Social Attitudes Survey (SASAS) 2003–2011)

► **fears** of black and white South Africans. More than half of white South Africans regarded themselves as “very happy” or “happy” but only one-third thought they would still be happy in 10 years’ time. Black African expectations were the other way round: One-fifth regarded themselves as happy but over 60 % thought they would be happy in 10 years’ time (*ibid.*, p. 420). Since the transition to ► **democracy** in 1994, objective and subjective indicators of quality of life continue to show the deep political, economic, and cultural divides that permeate through South African society. Advantaged sectors of society still score significantly higher than disadvantaged ones on almost all ► **social indicators**. A notable exception in the month following the country’s first open democratic elections was when all South Africans were equally happy and satisfied at an internationally acceptable level (see Fig. 1).

Cross-Sectional Quality of Life Studies

The cross-sectional South African Quality of Life Trends Study (SAQoL) (Møller, 2007c), initiated by sociologists Schlemmer and Møller in collaboration with the Human Sciences Research Council, has measured ► **happiness** and ► **life satisfaction** and expectations for the future in 10 waves between 1983 and 2010 using nationally representative samples (see SAQoL articles in

reference list; Møller, 2012). The study shows that better-off South Africans are happier but less optimistic while the worse off are dissatisfied with life but have a positive outlook on the future. Since the millennium, small pockets of an emergent black economic elite score above average on both current and prospective subjective well-being.

The tradition of collecting cross-sectional data on well-being has been revitalized in the new millennium by scholars based at the Human Sciences Research Council. The nationally representative South African Social Attitudes Survey (SASAS) that has been conducted annually since 2003 comprises a quality of life module with a wider range of subjective well-being measures including the Personal Well-being Index (Pillay, Roberts, & Rule, 2006; Roberts, Kivilu, & Davids, 2010).

Panel, Community, and Area Studies

The Southern African Labour and Development Research Unit’s Project for Statistics on Living Standards and Development – the so-called SALDRU “poverty” study – conducted on the eve of the transition to democracy with World Bank sponsorship in 1993 represented a major breakthrough for South African quality of life studies (Klasen, 1997). The economist-led project included a household-level indicator of

global satisfaction (“the way this household lives these days”) in a survey that covered some 9,000 households nationwide. Dissatisfaction was a perfect mirror image of household poverty. The SALDRU data was the first to be placed in the public domain. Statistics South Africa followed suit and included an item on household satisfaction in its annual household surveys in the mid- to late 1990s (1995 through 1998) and again in 2002 (Møller, 2007b). Following on the SALDRU study, economists have played an increasingly important role in spearheading regional and national panel studies that focus on income and well-being. The KwaZulu-Natal Income Dynamics Study (KwaZulu-Natal Income Dynamics Study [KIDS], three waves: 1993, 1998, 2004) and the National Income Dynamics Study (National Income Dynamics Study [NIDS], two waves: 2008, 2010) are the regional and national panel studies that build on the pioneering SALDRU study (Leibbrandt, Woolard, Finn, & Argent, 2010; May & Roberts, 2001).

Apart from these national and regional panel studies, the country has three long-established, area-level demographic surveillance systems (DSS), which aim to provide longitudinal health and demographic data while also monitoring changes in the social and economic conditions of local populations. The three DSS sites are Agincourt in Mpumalanga Province, Hlabisa in KwaZulu-Natal, and Dikgale in Limpopo. Research on quality of life in cities is also fairly well developed in South Africa. The SA Cities Network manages a social reporting system on metropolitan areas. A number of metropolitan areas and cities have commissioned larger-scale quality of life studies (e.g., Alexandra in Johannesburg (Richards, O’Leary, & Mutsonziwa, 2007), Buffalo City (Bank & Kamman, 2011), and ► [Durban](#) (O’Leary, 2007 and encyclopedia article)). Smaller-scale studies document quality of life issues in select urban suburbs, townships, and rural areas. Notable among these are Birth to Twenty (BTT), the largest and longest running cohort study in Africa that has been tracking child and adolescent health and well-being in Soweto, Johannesburg, since 1990, and the Cape Area Panel Study (CAPS), which consists of four

waves of data examining the schooling, health, and well-being of young South Africans in metropolitan Cape Town.

International Participation

At the international level, South African scholars have contributed data to assist with the cross-national testing of Alex Michalos’ ► [Multiple Discrepancy Theory](#), Ed Diener’s ► [Satisfaction with Life Scale \(SwLS\)](#), and Richard Easterlin’s paradox. From a cross-national perspective, the country has also been a member of the World Values Survey since round 1 in 1982 and the International Social Survey Programme (ISSP) since 2003. Although the biennial Afrobarometer series, established in 1999, does not include a measure of ► [subjective well-being](#) as such, it focuses on socioeconomic and political factors that have a strong impact on the quality of life of countries in sub-Saharan Africa including South Africa (Bratton, Mattes, & Gyimah-Boadi, 2005; Mattes, 2008). South Africa additionally hosted the 2006 ► [International Society for Quality of Life Studies \(ISQOLS\)](#) at Rhodes University, Grahamstown. South African scholars have prepared two special issues of ► [Social Indicators Research](#) (1997, 2007) to showcase their research.

Inclusive Research

Data collection and dissemination of quality of life indicators extends beyond academia. The research company Markinor has been responsible for collecting the South African data for every wave of the World Values Survey that is used extensively by international quality of life researchers (Du Toit & Kotzé, 2011; Harris, 1997), while MarkData has collected SAQoL data for nearly three decades. TNS developed a popular quality of life index for South Africa (Higgs, 2007). The semi-independent Bureau of Market Research at the University of South Africa regularly reports on income growth and inequality (Martins, 2007). The South African Institute of Race Relations reports annually on social indicators that reflect quality of life drawn from official and other sources (Kane-Berman, 2009).

Specific South African Concerns

More focused quality of life studies conducted at various levels of society have explored subjective well-being in relation to a wide range of domains that represent major problems and challenges for South African society. Topics include poverty and ► [inequality](#) and ► [unemployment](#) (e.g., Klasen, 1997; Leibbrandt et al., 2010; May & Roberts, 2001; Richards, 2011; Wright, Noble, & Magasela, 2010), relative standing (see encyclopedia article), governance and the backlog in housing and infrastructure, ► [food security](#), cultural identity and national pride (e.g., Dickow & Møller, 2002), HIV/AIDS and stigma related to the epidemic (e.g., Booyesen, van Rensburg, Bachmann, Louwagie, & Fairall, 2007), intergenerational relations and family cohesion (e.g., Botha & Booyesen, 2012), time use among youth and the unemployed (e.g., Møller, 1992), criminal victimization and ► [fear of crime](#) (e.g., Møller, 2005; Roberts, 2012), occupational ► [stress](#) and coping (e.g., Rothmann, 2008; Rothmann, Jorgensen, & Marais, 2011), and the vulnerability of marginal groups in the population.

Quality of Life Indices

Recent additions to the South African quality of life toolkit include multiple-item measures of well-being such as the Satisfaction with Life Scale (Westaway & Maluka, 2005), the Personal Well-being Index (Roberts et al., 2010), and the WHO-QOL (Gómez-Olivé, Thorogood, Clark, Kahn, & Tollman, 2010).

Outlook

As is the case elsewhere, the quality of South African data and sophistication of data analysis have improved over time. South African quality of life studies have attracted a larger following from scholars representing a wide range of disciplines. This profusion of data collection and experimentation over the last two decades bodes well for the development of a more textured understanding of societal dynamics and the further entrenchment of evidence-based policy making in the country as this young democracy continues to mature.

Websites for Research Organizations

Africa Centre Demographic Information System (ACDIS, Hlabisa)	www.africacentre.ac.za
Afrobarometer	www.afrobarometer.org/
Agincourt Health and Demographic Surveillance System	www.agincourt.co.za
Birth to Twenty	www.wits.ac.za/birthto20
Bureau of Market Research (BMR), University of South Africa	www.unisa.ac.za/bmr/
Cape Area Panel Study (CAPS)	www.caps.uct.ac.za/
Dikgale Demographic Surveillance System	www.dikgale.org
KwaZulu-Natal Income Dynamics Study (KIDS)	http://sds.ukzn.ac.za/default.php?7,12,9,4,0
MarkData	www.markdata.co.za/
Markinor	www.ipsos-markinor.co.za/
National Income Dynamics Study (NIDS)	www.nids.uct.ac.za/
Optentia Research Programme, North-West University	www.optentia.co.za/
South African Cities Network	www.sacities.net/
South African Institute of Race Relations	www.sairr.org.za/
South African Social Attitudes Survey (SASAS)	www.hsrc.ac.za/SASAS
Southern African Labour and Development Research Unit (SALDRU), University of Cape Town	www.saldru.uct.ac.za/
TNS South Africa (formerly Research Surveys)	www.tnsglobal.co.za/

Cross-References

- [Durban \(South Africa\), Quality of Life](#)
- [Relative Standing and Subjective Well-being in South Africa](#)

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South African Quality of Life Trends Study (SAQoL)

► [South Africa, Quality of Life](#)

South African Social Attitudes Survey (SASAS)

► [South Africa, Quality of Life](#)

South African Township Transformation

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Synonyms

[Lokasie; Shanty towns in South Africa](#)

Definition

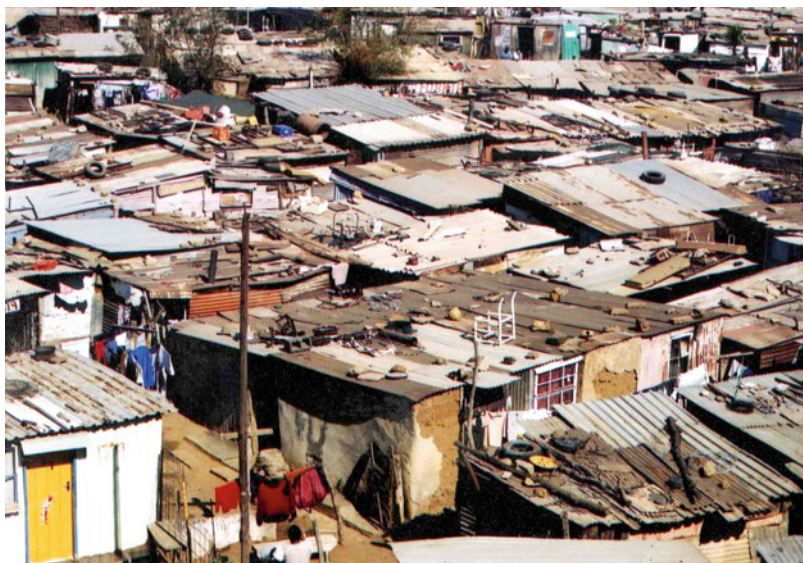
Townships are defined as areas that were designated under apartheid legislation for exclusive occupation by people classified as blacks, coloreds, and Indians. Townships have a unique and distinct history, which has had a direct impact on the socioeconomic status of these areas and how people perceive and operate within them. Townships have developed an iconic image internationally as the core of where the struggle for ► [freedom](#) was waged. Since the demise of apartheid, townships have undergone dramatic transformation from a homogeneous to a differentiated urban landscape.

Description

In postapartheid ► [South Africa](#), townships no longer bear the marks of draconian state control as was experienced under National Party rule. The apartheid-created township spaces as experienced in the homogeneity of housing provision, access control, levels of infrastructure

South African Township Transformation,

Fig. 1 Informal living conditions in townships



(e.g., streets were unpaved, street names, street lights, trees), and governance have since the early 1990s been replaced by a differentiated landscape (Crankshaw & Parnell, 1999, p. 443). The spatial geography of urban apartheid is internationally well known. However, the most neglected urban spaces during apartheid are still largely the most neglected spaces in democratic South Africa (Jürgens & Donaldson, 2012). These are now referred to as exclusion areas that continue to suffer high levels of spatial, economic, social, and political exclusion from mainstream society. Today, they are typified by high levels of ► **poverty**, lack of adequate housing (see Fig. 1), and crime.

An estimated forty percent of households in South Africa (4.6 million) are living in townships. As acknowledged by the state, since South Africa's democratic elections in 1994, conditions in urban townships have not substantially improved (Co-Operative Governance Traditional Affairs, 2009). Statistics for households living in metropolitan townships indicate that living conditions have not improved between 1996 and 2007. An improvement has been experienced in the following: the % households in formal housing, a marginal improvement of 2 % (61–63 %); electricity for lighting, a moderate improvement of 9 % (71–80 %), and the biggest success story

being piped water with a significant improvement of 18 % (80–98 %). Various degrees of deterioration were experienced in other aspects of transformation: the percentage of households in informal housing has significantly deteriorated (28–37 %), weekly refuse removal deteriorated moderately (83–80 %), and toilet facility significant deterioration of 6 percentage points in access (88–82 %) (Co-Operative Governance Traditional Affairs, 2009).

Stemming from the Housing Act (1997) and the Reconstruction and Development Programme (1994), the first post-1994 South African state-subsidized housing type is colloquially known as the “Reconstruction and Development” (RDP) unit. These units have since been deemed to be inferior due to their poor construction, matchbox design, and the fact that many RDP settlements were developed on urban peripheries, in the process perpetuating spatial distortions of apartheid planning. On the other hand, these housing units are to some extent contributing to alleviating asset poverty and have indeed contributed to the residents' ► **quality of life**.

The township transformation timeline can be divided into two periods. The first is democratization (upgrading) between 1994 and 2004. The post-Mandela era was always to be seen as an era of rebuilding the country. For the

President Mbeki government (Mandela's successor), the transformation of townships became a laboratory for exploring ► **urban renewal** with the introduction of the Urban Renewal Programme (URP). The announcement of the URP came shortly after South Africa had completed a structural reform process at the subnational level, which resulted in the creation of nine provinces and 284 local governments, followed soon after in 2000 by the municipal elections. Considering the fact that townships emerged as a priority area of urban government restructuring, it is worthwhile questioning the absence of a national policy directive on township renewal. The current policy remains at programmatic level. The three most prominent of these plans of action since the advent of democracy are the Special Integrated Presidential Projects initiated in 1994, followed in 2001 by the national Urban Renewal Programme (URP), and more recently the Neighbourhood Development Programme of 2004. In the second period, from 2005 onward, the focus has shifted to urban integration. By 2007, all municipalities have adopted integrated development plans. To rectify the failures of housing and settlement planning, a new policy directive was formulated in 2004 entitled the Comprehensive Plan for the Development of Sustainable Human Settlements, more commonly known as "Breaking New Ground" (BNG). BNG seeks to move away from a service-delivery only approach and works instead toward the creation of sustainable housing settlements that provide residents with viable infrastructure, services, and access to economic opportunities. To fulfill these goals, four main focus areas were implemented: fully serviced sites, security of tenure, the provision of socioeconomic facilities, and the addition of tenure options. BNG also proposed – for the first time – the upgrading of informal settlements (Paquet & Donaldson, 2012).

As a laboratory for innovative ideas and flexibility, the URP as an area-based approach (ABA) was seen as an experimental policy, trying out new things and providing alternative policy ideas. The URP was founded on the principal concept of nodal development. Two important structuring mechanisms were used to drive the

program: spatial focus and the targeting of funding and resource allocation from the three spheres of government and strategic partners, made available in response to indicators of both poverty and economic opportunity. Township transformation has signaled in an era of innovative spatial structuring. Two of these are business and green developments. First, townships have become places where unique partnerships have been established between the private sector, the local authority, and the township community. For example, since the establishment of the township of Khayelitsha in 1983 as Cape Towns' largest township, informal trade flourished in the absence of formal commercial nodes – with the exception of a commercial complex of 800 m² with 3–4 shops, a mini-market, a post office, and a bank agency. Transforming a consumption environment in townships has witnessed new shopping centers and supermarkets being built, challenging the hegemony of traditional spaza shops and informal merchants. This competition leads to completely new distribution and consumption patterns and contributes to the displacement of many economic activities based on manual labor and small businesses. As part of the transformation of urban space process, the biggest urban renewal plan for the township is the Khayelitsha Central Business District (CBD), which turned out to be a unique development in South Africa. The CBD retail center (Fig. 2) is the only one in a South African township that is not commercially owned. In 2000, after intensive consultation with the Khayelitsha community and other role players (which, among other outcomes, resulted in the drafting of a stakeholders' forum agreement), the Khayelitsha Community Trust was anchored as the principal equity holder in the development. It essentially implies that the Khayelitsha retail center (CBD) is owned by the community. The first phase of the CBD project included bulk services and road infrastructure, a regional magistrates' court, offices for the Department of Social Welfare, swimming-pool complex, Khayelitsha cricket oval and clubhouse facility, transport interchange (taxi rank), CBD retail center, CBD multipurpose center, and the



South African Township Transformation, Fig. 2 Khayelitsha business district

230-bed Khayelitsha Hospital. The retail center was completed in December 2006 at a total capital cost of R86.5 million. Due to the high demand for trading space, a further 2,000 m² were subsequently developed. The second phase of the development includes extensions and improvements to the retail center and the transport interchange, a private academy, a mixed-use office complex, offices for the Criminal Investigation Department of the South African Police Services, and the further development of the railway-station area, including informal trading facilities and a transport interchange (Donaldson & Du Plessis, 2011). A second innovation in the transformation process relates to townships becoming sites of exploring new green technology and innovation. For example, the Kuyasa Clean Development Mechanism (CDM) pilot project in Khayelitsha involves the retrofitting of 2,300 RDP low-cost homes with solar water geysers, insulated ceilings, and energy-efficient lighting. The project has seen an immediate and significant impact on the social, health, and economic well-being of the targeted residents. This is South Africa's first internationally registered CDM project under the Kyoto Protocol on climate change. It is also the first Gold Standard Project to be registered in the world. The Kuyasa project has generated significant interest locally and internationally as a pilot for the energy-efficient adaptation and retrofitting of South African low-cost housing (Donaldson & Du Plessis, 2011).

One of the biggest spatial atrocities of the South African city has been the segregation of residential areas based on race as legal

classification. Residential desegregation has taken place at various levels across South Africa since the scrapping of the Group Areas Act in 1991. In the transformation of society, especially in terms of employment, ever-increasing numbers of black people have greater access to higher incomes and realize higher standards in housing, mobility, and consumption. The gap between affluent and poor blacks has grown, and the social geography has spilled over into the creation of a binary discontent, perhaps best mirroring the dual nature of the postapartheid city of today. On the one hand are the affluent (of whom a significant proportion is now categorized "Black Diamonds") who have relocated to the suburbs – as a symbol of increased social status and seeking a better quality of life – and on the other hand, the indigent, those who have yet to experience a spatially apartheid-free urban living, those living in the informal settlements and RDP estates, the unemployed, and homeless. However, there are also new residential areas being built, transforming the townships into attractive property markets, and in this context, there is a significant group of Black Diamonds who have opted not to relocate from townships. In 2005, 77 % of Black Diamonds still lived in townships compared to more recent figures for 2007 which indicate that this has dropped to 53 % (Donaldson, Mehlomakhulu, Darkey, Dyssel, & Siyongwana, *in press*). The Black Diamonds that opt to stay in the townships disassociate themselves from being stigmatized as such. Some protest that the term implies superiority and attempts to set them apart from their communities. The study of Donaldson et al. (*in press*)

verifies that the townships remain the preferred choice of residence for many of the emerging black South African middle class. Social, cultural, and to a lesser degree, economic reasons account for this choice. Most of the Black Diamonds see themselves as role models in the townships.

But all is not well in the townships of postapartheid South Africa almost 20 years into ► [democracy](#). Growing discontent over service delivery has again become the norm in townships since the 2000s onward. Jürgens, Donaldson, Rule and Bähr ([in press](#)) argue that the country's cities are essentially in a state of urban revolt, even perhaps a pseudo-urban revolution, and the townships are the fulcrum of this revolt. The inability to provide basic services, especially in the townships, has resulted in widespread protests over the failure to deliver water, sanitation, electricity, and, mostly, housing (Centre for Development and Enterprise [CDE], [2007](#)). Alexander ([2010](#)) provides a discussion on protests during the era of Mbeki and the early part of that of his successor, President Zuma. During the Mbeki era, the protests were principally about the lack of basic services and inadequate local administration and were not that widespread. However, Alexander ([2010](#)) highlights the role of unemployed youth and school students as a cause for concern. It was also during the Mbeki era that the country experienced its first major outbreak of xenophobic attacks. During the second half of May 2008 (and continuing through the month of June), a series of short violent outbursts took place mainly in urban informal settlements, townships, and hostels. According to Bekker ([2010](#), p. 1), “the violence during these outbursts was perpetrated by civilians, and was inflicted on the property and the person of civilians. The perpetrators were largely young poor black South African men; the targets largely the property and businesses of foreign African nationals as well as these civilians themselves, and the locations [...] Since the reaction of many of the victims was flight from their residential areas, a number of temporary refugee camps were

established (in Gauteng and Cape Town, in particular). During the aftermath of these outbursts, more than 20,000 refugees were accommodated in this way, numerous African foreign nationals were reported to have left the country, and government urged refugees in camps to return to the residential areas from which they had fled since these were said to have calmed down.” The CDE's ([2007](#)) report on urban protests states that “it is not the intensity of the disturbances that should concern us most [...] but] that they have been widespread, repeated over a long period, and triggered by a variety of grievances, thus illustrating a persistent and general malaise in our system of governance (CDE, [2007](#), p. 53). There was also a widely held belief that the protests were linked to power struggles within the ANC” (Alexander, [2010](#)). The intensity of the protests increased dramatically during the first 5 months of 2012. Protests during this period accounted for 14 % of all protests recorded since 2004, with May 2012 recording more protests than any other month since 2004. Recent protest action appears to be an increasingly accepted way for communities to air grievances and is very reminiscent of the apartheid era. In the context of the aftermath of the North African Arab Spring of 2011, ANC treasurer-general Mathews Phosa warned that if the government does not tackle rising unemployment among youth effectively, South Africa will experience its own Arab Spring.

The townships of South Africa were however the attention of billions of people around the world when the 2010 FIFA World Cup, the world's biggest sporting event (and in essence marketing event), kicked off and concluded in South Africa's biggest township, Soweto. This symbolic moment in the history of townships, it was hoped, inspired a new research agenda with a focus on township studies.

Cross-References

- [Social Exclusion](#)
- [Social Indicators](#)
- [Urban Renewal](#)

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South African Urban Growth (1911–2000)

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Synonyms

City development; City growth in South Africa;
City regions in South Africa; Urban migration in
South Africa; Urban transformation

Description

Introduction

A key hallmark of the twentieth century was the rapid growth experienced by large or megacities (i.e., cities with more than 10 million people) of the world. The larger cities in general, according to United Nations (UN) (2010) estimates, have been the focus of significant growth with some 47 % of urban dwellers globally now living in cities of more than 500,000 people. However, it is interesting to note that, in recent years, there now appears to be a relative slowing down of the growth of the largest settlements in favor of continued growth in smaller centers (Cohen, 2004; UN, 2010). A feature of the countries of the South, unlike the North, is that a very large proportion of the national urban population is often concentrated in a limited number of large cities. This is often in the capital city, which is sometimes termed the “primate” city (Potter & Lloyd-Jones, 1998; Cities Alliance, 2006).

South Africa is clearly not immune from the challenges of this rapid urban growth which was a particular hallmark of the late 1980s and 1990s (South African Cities Network [SACN], 2004). Urban growth in this country has been complicated by the realities of the history of apartheid, which for decades restricted urban expansion. Apartheid's eradication in the 1990s led to a surge of urbanization in the immediate postapartheid period, when cities grew at 4.5 % p.a. While this rate of growth moderated after 2000, by 2004, 58 % of the national population was urbanized, and it is noteworthy that 37 % of the national population was living in the nine largest urban concentrations, suggesting at the degree to which the largest centers dominate the urban hierarchy (SACN, 2004), and leading to this essay's contention that South Africa appears to be following the trend of having multiple key cities found in countries of the North, rather than the primate city phenomenon of countries of the South.

Urbanization patterns and the associated growth of the various settlement types are key themes in South African academic discourse (Van der Merwe, Ferreira, & Zietsman, 2005;

Zietsman, Ferreira, & van der Merwe, 2006; Todes, Kok, Wentzel, van Zyl, & And Cross, 2010). The rapid growth of the core metropolitan areas and the key role which they play in the national economy are a well-established theme of enquiry (SACN, 2004; Todes et al., 2010), while recognition of the role played, “city regions” in particular, is regarded as “crucial for the achievement of the South African Government’s national development goals and objectives” (Van Huyssteen, Oranje, Robinson, & Makoni, 2009, p. 175). In parallel, the recently released “New Growth Path” (Patel, 2010) recognizes the importance of rural development and associated settlement patterns. This may well lay a basis to consider policy and applied support, not just for the “city regions” but also for smaller settlements.

This entry provides an overview of demographic change in South Africa over a 100-year period, paying particular attention to the shifting rural–urban balance and the degree to which the various categories of urban centers and the rural population have grown, or declined, in both absolute and relative terms. Additional objectives include establishing whether urban primacy is a feature in South Africa and whether an increasing proportion of the urban population is concentrating in the largest centers. Within this context, a knowledge of urbanization trends over time can help in providing a better understanding of the degree to which different settlement types and rural areas are experiencing population growth, a reality which should not be ignored in policy debates.

Methodology

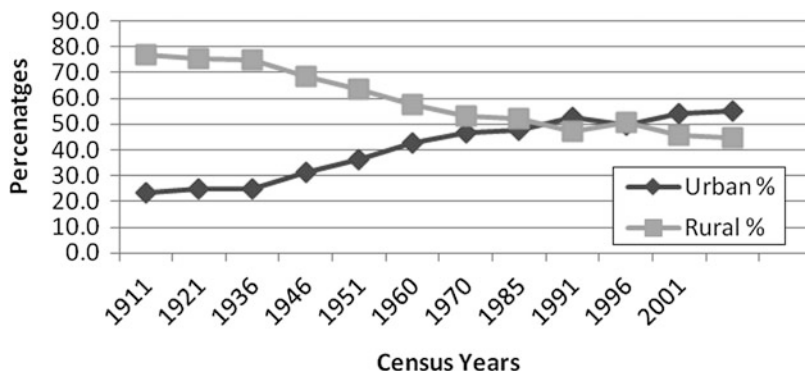
This entry identifies broad urbanization and urban development trends for different categories of settlement based on statistical data extracted from South African national census data, from the formation of Union in 1910 (starting with the 1911 census) through to the most recent one for which results are available, namely, 2001. The author acknowledges that the national census data sets are prone to error,

and 1990 DBSA (Development Bank of Southern Africa) data was used to address the reality that several of the homelands (former racial reserves) were excluded from government census statistics. In the graphs and tables which follow:

- The rural–urban distinction reflects definitions applied in the various census counts.
- In terms of urban areas, the category of “metropolitan areas and large cities” refers to the nine largest urban centers in the country, which are the members of the South African Cities Network, including all the formally designated metropolitan councils (SACN, 2004). These centers are Johannesburg, Ekurhuleni, Tshwane (Pretoria), Cape Town, eThekweni (Durban), Nelson Mandela (Port Elizabeth), Buffalo City (East London), Mangaung (Bloemfontein), and Msunduzi (Pietermaritzburg). As the larger centers have absorbed numerous smaller places over time, there was a need to aggregate these absorbed towns, from 1911, into the data sets of the larger centers of which they are now a part.
- The category “secondary cities” refers to all those centers in the country which in 1990 were smaller in size than the nine largest centers but larger than the commonly used size definition of a “small town” in the country (i.e., 50,000 people) (Centre for Development and Enterprise [CDE], 1996) (the exception being centers which were subsequently absorbed into the new metropolitan areas). This category also includes the ill-defined group of “large towns” hinted at elsewhere (Todes, 2001).
- The category of “small towns” proved difficult to calculate, given that there are some 500 centers in this category (CDE, 1996) and that there have been 11 census counts in the last 100 years which made this category a statistical challenge. In order to arrive at the data for the percentage of the national urban population living in small towns, the following calculation was applied:

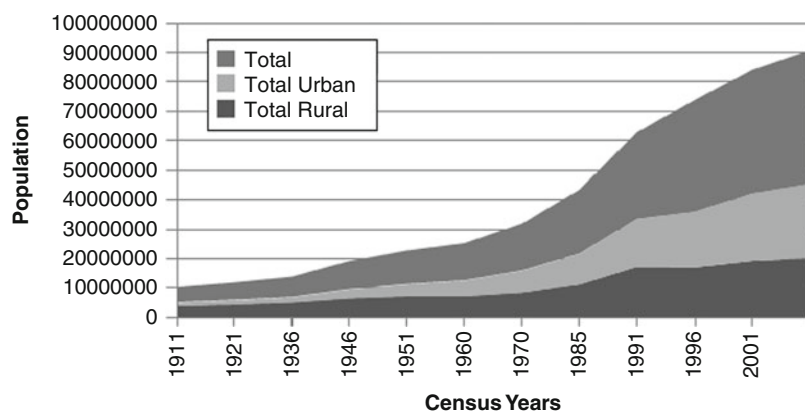
South African Urban Growth (1911–2000),

Fig. 1 South Africa's population transition from rural to urban (in %) (Source: Union Government, 1912, 1923, 1938, 1949, 1959; Republic of South Africa [RSA], 1968, 1970, 1985; Development Bank of Southern Africa [DBSA], 1991; StatsSA, 2006)



South African Urban Growth (1911–2000),

Fig. 2 Growth of the rural and urban populations (in absolute terms) (Source: Union Government, 1912, 1923, 1938, 1949, 1959; RSA, 1968, 1970, 1985; DBSA, 1991; StatsSA, 2006)



National population – (metro/large city population
+ secondary cities
+ rural population)
= the balance of the urban population
(i.e., the presumed small town population).

Data from the 11 census counts for the various categories of urban centers and the rural population over time was aggregated and analyzed. Raw data, i.e., actual town populations in the different census counts, is not reflected in the graphs which follow as the size of the data sets would have made depiction difficult, rather the various aggregated categories of settlement type have been depicted.

Key Findings

The Rural to Urban Shift in the Population

One of the most distinctive features of South Africa's twentieth century history was the transition which the country made from being a predominately rural to a predominantly urban

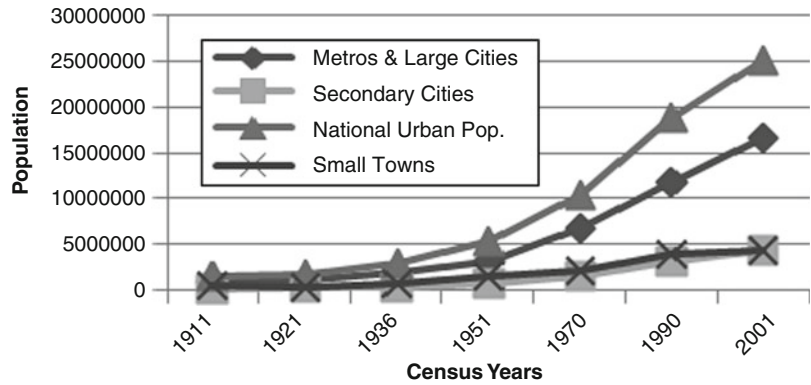
country. Figure 1 indicates this relative shift in the national population in percentage terms. In 1911, some 77 % of the population lived in rural areas and 23 % in urban. By 2001, 55 % of the population was urbanized and 45 % lived in rural areas, with the transition to an urban majority taking place in the early 1990s. South Africa appears to have experienced rapid urbanization firstly in the 1930s and then again from the 1970s with the latter period matching the weakening of apartheid controls and rapid growth experienced by cities throughout the Global South. While the urban population has grown dramatically in relative and absolute terms, it is noteworthy that the rural population has not actually declined and has in fact grown steadily and continuously since 1911 (see Fig. 2).

Urban Population Change

Within urban settlements, it is apparent that significant levels of growth have taken place

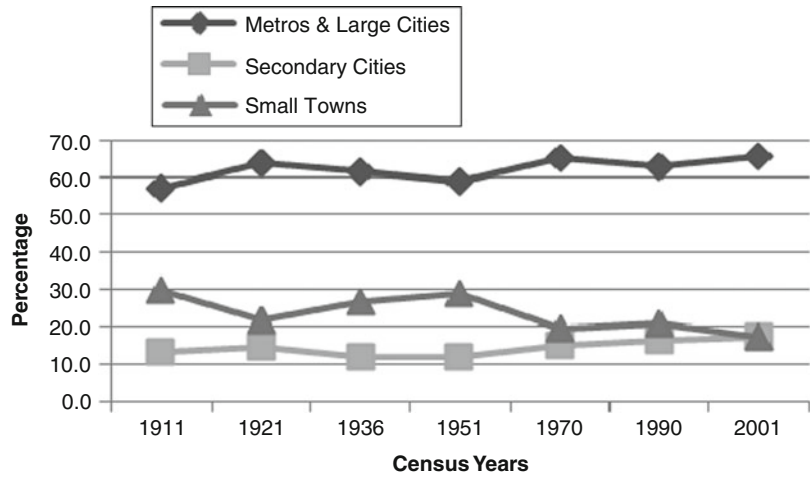
South African Urban Growth (1911–2000),

Fig. 3 The growth of the various categories of urban settlements (Source: Union Government, 1912, 1923, 1938, 1959; RSA, 1970; DBSA, 1991; StatsSA, 2006)



South African Urban Growth (1911–2000),

Fig. 4 The relative share of the national urban population in the three key urban categories (in %) (Source: Union Government, 1912, 1923, 1938, 1959; RSA, 1970; DBSA, 1991; StatsSA, 2006)



over the twentieth century in all three categories of urban settlements, but particularly since 1970. While the total urban population increased significantly from 1.5 mn in 1911 to 25 mn in 2001, the metropolitan areas and large cities combined increased nearly 100 % in size from 1970 to 1990 alone and then increased another 50 % in the next 10 years. Growth of the secondary cities parallels this trend, while small town growth did not lag that far behind. Figure 3 depicts the growth in the total national urban population and the aggregated totals of the three settlement classes. The significant and seemingly accelerating growth experienced in the largest settlements is important to note; however, the two other categories have also grown in relative terms.

Finally, national urban statistics permit an assessment to be made of whether growth has focused on the largest centers, paralleling trends noted elsewhere at the world and hinting at potential urban primacy. Data reflected in Fig. 4 indicates that the share of the national urban population in the largest centers increased modestly from 1911 to 2001 (from approximately 57 % to 66 %) and in fact has probably remained unchanged for the last 40 years. It is significant to note that the share of the urban population in secondary cities has increased by some 4 % of the total, while the percentage living in the smaller centers has fallen. These statistics suggest that, in relative terms, urban growth is not focusing on a single city but rather on a range of cities in the two largest categories of settlement, at the expense of the

smallest centers. When one looks at the metropolitan areas and the largest cities (all of which have over 500,000 residents), it is striking that nearly two thirds of the urban populations live in only nine major centers, while the remaining one third live in the secondary cities and the approximately 500 small towns. The domination of the large cities parallels the experience of many other countries and in fact significantly exceeds the UN's (2010) estimate that 47 % of the world's urban population lives in cities of more than 500,000. The notion of a "primate" city does not, however, exist in the country, given that several of the largest centers are similar in size (around three million). Rather, the notion of "rank-size" which prevails in the city systems of the North prevails, where there are modest size differences between the largest center and an increasing number of smaller ones (Potter & Lloyd-Jones, 1998).

Discussion and Conclusion

The preceding figures reveal several striking features about South Africa's evolving population distribution and urban concentration. Over the twentieth century, the country witnessed a significant shift in the national population from one living predominantly in rural areas to one which, by the 1990s, was predominantly urban based. In absolute terms, it is noteworthy that the rural population, unlike in the countries of the North, has not declined and remains a key element in the national population. In terms of the three categories of urban settlement, all have experienced growth, particularly in the 1930s and especially after the 1970s. In terms of where urban growth is focusing, it is noteworthy that while the percentage share of the national urban population in the largest centers has increased, so too has it increased in the secondary cities. This relatively dispersed growth pattern seems to contradict trends in other countries in the South, where the largest centers have generally experienced the highest growth levels. Further, while South Africa does not have a single primate city, but rather several large metropolitan areas which parallels the "rank-size rule," the percentage of the national urban

population living in cities of over 500,000 people significantly exceeds international norms. In fact, longitudinal data suggests that the nine largest centers have occupied this unusually dominant position for nearly a century. In terms of future considerations, it is apparent that development support needs to be targeted to meet the challenges posed by rapid growth not just in the nine largest centers but also in the secondary cities. In smaller towns, by contrast, coping with growth is still a consideration, albeit that, in relative terms, their percentage share of the national urban population is declining. In line with both the "New Growth Path" (Patel, 2010) and the National Spatial Development Perspective (The Presidency, 2003), there is a need for a more considered evaluation of the growth trends influencing the various settlement types and the identification of appropriate levels of support.

Cross-References

- ▶ [Census](#)
- ▶ [Data Analysis](#)
- ▶ [Data Collection Methods](#)
- ▶ [Demographics](#)
- ▶ [Developing Countries](#)
- ▶ [Durban \(South Africa\), Quality of Life](#)
- ▶ [South Africa, Quality of Life](#)
- ▶ [South African Township Transformation](#)
- ▶ [Urban Life, Quality of](#)

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South America

- [Brazil, Quality of Life](#)

South Korea, Quality of Life

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Definition

South Korea, officially the Republic of Korea, is on the southern half of the Korean peninsula. The northern half is occupied by North Korea, officially the Democratic People's Republic of Korea. They have been divided since 1945 when it was liberated from Japanese colonial rule. South Korea is neighbored by ► [Japan](#) to the east and China (► [People's Republic of China](#)) to the west. Its capital is Seoul, the largest city in the country.

Description

Demographically, South Korea is a densely populated country with 49 million people living in the land area of 38,000 square miles. With a declining fertility rate, its population growth steadily slowed down. Births per woman dropped from 1.5 in 2000 to 1.1 in 2009, and the annual rate of population growth decreased from 0.8 % in 2000 to 0.3 % in 2009. As a consequence, South Korea is becoming one of the fastest aging societies in the world. In 2009, people aged 14 and below accounted for 17 % of the population; people aged 15–64, for 73 %; and people aged 65 and more, for 11 % (Statistics Korea, 2011). As international marriages rose from 3.5 % in 2000 to 10.8 % in 2009, the number of families with different ethnic and cultural backgrounds increased rapidly, especially in rural areas (Statistics Korea, 2011). Nonetheless, South Korea still remains an ethnically and linguistically homogeneous society.

As South Korea moved from a rural to a highly urban society with 80 % of the population living in cities, its family system has transformed from the extended family to the nuclear family, which

typically consists of parents and their children. It is less common for urban South Koreans to live in households with three generations or for married children to live with their parents. With a marked preference for modern lifestyles, apartments become a more popular type of housing than detached houses. In 1985 the number of apartments accounted for only 13 % of all housing units, but by 2005 it had risen to 53 % (Statistics Korea, 2011).

South Korea is a religiously diverse society. Buddhism and Christianity are two popular religions. In 2005, 23 % were Buddhists, 18 % protestant, and 11 % Catholics. Meanwhile, nearly half (46 %) profess no religion (Statistics Korea, 2011). Despite its lingering impact on many aspects of everyday life, few profess ► **Confucianism**, which is no longer considered religion. Yet, due to Confucian cultural tradition, South Korea still remains a male-dominant society. According to the ► **Gender Gap Index**, whose scores range from 0 (inequality) to 1 (equality), South Korea received a score of 0.6157 in 2006 (92nd out of 115 countries) and a score of 0.6342 in 2010 (104th out of 134 countries) (Hausmann, Tyson, & Zahidi, 2010). Despite recent reforms for gender equality, wider gap between men and women still exists in terms of political empowerment: for example, those in parliament and ministerial positions are far less likely to be female.

Economically, South Korea has transformed from one of the world's poorest countries into an economic powerhouse; less than half the geographic size of Great Britain, it is now the 12th largest economy in the world. With rising economic affluence, the human condition in South Korea has improved significantly. According to the latest Human Development Report (UNDP, 2010), the life expectancy at birth is 79.8 years; the combined gross enrollment ratio in education is 98.5 %; and GDP per capita measured by purchasing power parity is US\$29,326. As a result, South Korea receives a score of 0.877 on the ► **Human Development Index**, ranking 12th worldwide. The average South Korean now lives a longer and a healthier life, gets better education, and enjoys a more

decent standard of living than the average world citizen.

In the midst of economic affluence, income inequality has gradually deteriorated. The ► **Gini coefficient**, a measure of inequality of income distribution with values between 0 (perfect equality) and 1 (perfect inequality), steadily rose from 0.292 in 2003 to 0.312 in 2006 to 0.320 in 2009. The relative poverty rate, the percentage of people in households which earn less than 50 % of the median income, increased from 13.1 in 2003 to 14.8 in 2006 to 15.4 in 2010 (Statistics Korea, 2011). The average annual hours worked per employed person in South Korea steadily declined from 2,520 in 2000 to 2,364 in 2005 to 2,256 in 2008. Yet, it still has the most average hours worked among the OECD countries (OECD, 2010). Alarming, suicides per 100,000 increased sharply from 17.9 in 2002 to 24.7 in 2005 to 31.0 in 2009, rendering South Korea to rank first in the OECD countries (OECD, 2010). In the wake of fast economic and social changes, South Korea today sees a rising tide of depression among its population.

Politically, South Korea has fully replaced an authoritarian regime with a representative democracy by institutionalizing free and fair elections, multiparty competition, and peaceful transfer of power. According to its latest report, Freedom House (2011) awards South Korea a combined score of 1.5 on its seven-point political rights and civil liberties scale, which runs from 1 (most free) to 7 (least free). In 2010, the Economist Intelligence Unit (2010) considers South Korea a full democracy in East Asia, along with Japan. The South Korean people as a whole now enjoy more civil liberties and political rights than ever before.

Economic development and rising levels of education notwithstanding, the South Korean people are still predominantly oriented toward the need for having (Park, 2009). Their most cherished values remain tied up with meeting basic needs such as having enough to eat and having a comfortable home. Only a few strive for nonmaterial goals such as achieving a sense of belonging and self-actualization. The need for relating such as companionship and solidarity

is valued more than the need for being, but less than the need for having. Overall, the majority of the South Korean people are still pursuing materialist and acquisitive goals rather than post-materialist and self-expressive goals. The South Korean people's penchant for materialism over ► [post-materialism](#) goes deeper than the country's economy.

As the South Korean people became better fed and better housed, had a longer life expectancy, and became more affluent than before, the quality of life that they themselves experienced on a daily basis improved. In 2001 those reporting the feelings of well-being were 42 % in happiness, 20 % in ► [enjoyment](#), and 18 % in accomplishment (Shin & Rutkowski, 2003). In 2006 they were 56 % in happiness, 69 % in enjoyment, and 50 % in achievement (Park & Shin, 2005). Although it is still lower than that of the rich countries of North America and Northwest Europe, nonetheless, the feelings of well-being prevail over the feelings of ill-being in South Korea today. Yet, not everyone experiences a good quality of life. A sense of well-being varies significantly depending on life circumstances. It is found that old people, those with no high school education and those with a low income, are the least happy people, while young people, those with a college education and those with a high income, are the most happy (Park & Shin, 2005). The experience of happiness among the South Korean people proves to be related to their command of socioeconomic resources.

The quality of life experienced by South Koreans varies across life domains. In 2001 they were most satisfied and least dissatisfied with the domains of interpersonal life such as friendship, marriage, and family life (Shin & Rutkowski, 2003). In 2002 they were most satisfied with friendship, which was followed by family life and marriage (Park & Shin, 2005). In 2006 they were most satisfied with friendship, which was followed by marriage, family life, and neighbors (Park, 2009). The South Korean people today tend to be more satisfied with interpersonal aspects than with any other aspects of life. They also turn out to be least satisfied with public

conditions of life such as social welfare services and democratic institutions.

It is discovered that some life domains are more central than others to their general sense of well-being. In 2002 family life, standard of living, health, and marriage had greater influence on feelings of happiness. The domains that contributed most to life satisfaction turn out to be household income, family life, and health (Park & Shin, 2005). In 2006 happiness was most strongly related to standard of living, marriage, household income, and family life (Park, 2009). The closer and more immediate the life domains are to one's daily life, the larger their contributions are to one's experience of life quality. The farther and more remote the life domains are to one's daily life, the smaller their contributions are to one's experience of life quality. The South Korea people's sense of well-being today tends to be more dependent on material and interpersonal aspects of life.

Despite recent global as well as Asian economic crises, South Korea has steadily progressed toward a prosperous market democracy. Yet, the global quality of life experienced by the South Korean people does not match objective circumstances in which they live. They tend to be least satisfied with their material life as consumers as well as their public life as citizens. Facing its rapidly aging population and growing polarization of wealth, South Korea has slowly moved toward a welfare state by increasing government social expenditure and reforming welfare institutions. There is plenty of room for improvement in the quality of life in South Korea today (Shin, Rutkowski, & Park, 2003).

Cross-References

- [Asia, Quality of Life](#)
- [Asian Versus Western Views](#)
- [Attitudes Toward Government Spending in Asia-Pacific Region](#)
- [Democracy and Quality of Life in Asian Societies](#)
- [Public Attitudes Toward the State in Asia-Pacific Region](#)

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Southern African Labour and Development Research Unit (SALDRU)

- ▶ [South Africa, Quality of Life](#)

Spain

- ▶ [Spanish Geography and the Quality of Life](#)
- ▶ [Values of Adolescents and Their Parents](#)

Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older

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Synonyms

[Personal well-being \(PWI\) of older Spaniards](#); [Satisfaction with life](#); [Satisfaction with quality of life domains](#); [Subjective well-being \(SWB\)](#)

Definition

The Personal Well-being Index (PWI) was applied to evaluate the ▶ [subjective well-being](#) of community-dwelling people aged 50 years old and more in Spain. The essay summarizes the psychometric performance of the PWI, analyzes the PWI in its global and domain-specific contexts, and shows the relationship with sociodemographic parameters and other relevant domains of quality of life. A comparison of the evaluation of PWI for the adult and older Spanish population with other international PWI results is provided. Data source comes from the pilot survey of the ELES Project (Spanish Longitudinal Study of Ageing Longitudinal Study) carried out in 2011.

Description

The Use of the PWI Within the Pilot Study on the Spanish Longitudinal Study of Ageing (ELES Project)

In current social research, essential strategies include cross-sectional and longitudinal studies, objective and subjective measures, and the combination of quantitative and ▶ [qualitative](#)

methods. Similarly, the use of validated and comparable scales and instruments is one of the outstanding challenges in the analysis of social phenomena, irrespective of the geographical area considered, as stated in international scientific literature.

Of the many instruments that can be considered, the ► **Personal Well-being Index** (PWI) was designed to study the subjective dimension of ► **quality of life** of the general population (International Well-being Group, 2006) but has been used in our case with older adults who reside in family housing in Spain, as part of the Spanish Longitudinal Study of Ageing (ELES Project). This project, whose purpose is to analyze the ageing of the Spanish population over 50, is a longitudinal research study based on monitoring population cohorts born after 1960. It is interdisciplinary in nature, with the collaboration of researchers from demography, economics, geography, psychology, sociology, medicine, public health, etc. It combines various data collection strategies and is structured around several subject areas to produce complex and extensive information, looking for a multiplier effect in Spanish research on ageing.

Among other objectives, it is expected to provide scientific evidence on the complex relationships that occur throughout the lifetime of the population between sociodemographic conditions, ► **health**, social structures, and cognitive and emotional aspects or indicators of well-being and ► **quality of life**. Finally, the ELES Project is committed to generating data on multiple dimensions into which the ageing process can be broken down, as appropriate tools for planning and improving Spanish public policies on the older population.

In this context, satisfaction with living conditions of individuals and their ► **personal well-being** have been considered essential in the overall structure of the ELES Project, because their knowledge and analysis in the Spanish older population is a new issue for the research in Spain. The choice of PWI as a means of measuring personal well-being was due to its widespread use in social research, its relationship with other available instruments designed for the same purpose,

and its validation in different geographical and cultural contexts and among diverse demographic groups (as shown in the bibliography). Furthermore, for the Spanish older population, it has been used by the authors in previous research studies (Fernandez-Mayoralas et al., 2012).

Characteristics of the ELES Pilot Study Survey

The PWI measuring instrument was included in the ELES Pilot Study survey, along with ► **satisfaction with life as a whole** question and other domains relevant to the quality of life of older adults (Fernández-Mayoralas, Rojo-Pérez, Frades-Payo, Martínez-Martín, & Forjaz, 2011), such as way of living, housing, work, and use of free time. Personal relationships were also researched at several sublevels: spouse or partner, children, other relatives (other than spouse or partner and children), friends, and neighbors.

The language used was Spanish, while the translation, produced by the research team for a previous study (Fernandez-Mayoralas et al., 2012), is available at <http://www.deakin.edu.au/research/acqol/auwbi/index-translations/pwi-a-spanish-spain.pdf>.

To avoid the difficulties experienced by individuals in rating satisfaction with life using the two-way dissatisfaction-satisfaction response scale (Davern & Cummins, 2006), the ELES Pilot Study used a unipolar response scale, from the lowest level of satisfaction imaginable to the highest, represented by values from 0 to 10, respectively. The wording of the question to obtain an answer to satisfaction with life subdomains was, “For the next question, on a scale of 0–10, where 0 is the lowest level of satisfaction imaginable and 10 the highest (i.e., you are completely satisfied), you would say that your level of satisfaction with . . . [item] is . . .”

To verify the design of future longitudinal research, the ELES Pilot Study combined the collection of information through a questionnaire with the taking of biomarkers (blood, saliva), stress exercises, and anthropometric measurements. The questionnaire covered several dimensions of the life of the older adult population, and the information from it was collected in various phases (telephone interview,

nursing visit, CAPI, and self-administered questionnaires). The nursing questionnaire included a cognitive deterioration detection scale, the Mini-Mental State Examination (MMSE), considering the value 24 as the cutoff for suspected cognitive deterioration.

The total sample was 1,747 people, including a specific subsample in the Basque Country (a region located in northern Spain). To correct the overrepresentation of people from that region, the sample was weighted so that the final number of interviews was 1,357. The ELES Project Pilot Study was approved by the Ethics Subcommittee of the Spanish National Research Council.

The PWI instrument with eight domains and the item on satisfaction with life as a whole were included in the telephone questionnaire phase, a procedure also followed in other research studies used by this instrument (Lau, Cummins, & McPherson, 2005; Wills-Herrera, 2009). From this, items PWI1 to PWI6 and satisfaction with life as a whole obtained the highest response rate (>99 %), and satisfaction with your future security and with your spirituality or religion the lowest (86 % and 92 %, respectively).

What are the general characteristics of the population that did not answer the PWI questions? It was discovered through the joint sex and age variable that the oldest population members and specially women at that age had a higher no response rate ($p \leq .05$). There was also a significant statistical association ($p \leq .05$) based on relationship with the activity, size of household, and size of area of residence, whereby there was a higher no response rate from people devoted to household chores and care work, who lived alone and in low-medium-sized municipalities (10,000–50,000 inhabitants). A one-way analysis of variance with the post hoc Bonferroni correction test showed that those who did not respond had a higher average age than those who did respond (69 years old vs. 66 years old) and a higher level of functional limitations; other health conditions (number of illnesses, depression), feelings of loneliness, and the size of family and social networks showed no statistical difference from their means.

In order to work with comparable results, overall satisfaction or domain-specific data, whose original route is 0.0–10.0, were standardized in units of 0.0–100.0.

The feasibility of using this measuring instrument in Spain with the older adult population has been shown although the relative higher no response rate in items 7 and 8 suggests reconsidering an alternative procedure for collecting information, such as a self completion or face-to-face type.

A Note on the Psychometric Performance of the PWI Within the ELES Pilot Study

Descriptive results related to data quality for PWI and “satisfaction with life as a whole” items are shown in Table 1. The item “satisfaction with your spirituality or religion” was excluded from the PWI total score due to its low score in the item-total-corrected correlation (.241) based on the criterion value of $\geq .300$ (Rodríguez-Blázquez et al., 2011). Thus, the PWI scale (seven domain scores) was fully computable for 90.5 % of cases, with a mean \pm standard deviation of 74.5 ± 11.1 (range 14.3–100.0). PWI scale showed a mild/moderate ceiling effect (scoring for values 85+: 16.3 %) but not a floor effect (scoring for values 0–15: 0.0 %).

With regard to ► **internal consistency**, the Cronbach’s α was .798; the homogeneity index was .365, the inter-item correlation ranged from .239 to .496, and the item-total-corrected correlation (relationship of the any given item with the scale excluding this item) ranged from .446 to .591. The accepted criterion values for this measures were $> .700$ for Cronbach’s α and $\geq .300$ for the rest of the coefficients (Rodríguez-Blázquez et al., 2011). A unidimensional component based on ► **factor analysis** accounted for 45.7 % of the total variance, meeting the Kaiser-Meyer-Olkin criteria (.827) and Bartlett’s test of sphericity ($p < .001$).

The regression of the seven PWI dimensions against the satisfaction with life as a whole was based on multiple linear regression analysis (see Table 2). The total explained variance of satisfaction with life as a whole was 47.6 %, while the

Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older, Table 1 Quality of the data of PWI items, life as a whole, and PWI 7 domains score (Rojo-Perez et al., 2012)

PWI items	Fully computable N = 1,357 (%)	Mean	Median	Standard deviation	Observed minimum	Observed maximum
1. Standard of living	99.9	71.4	70.0	16.9	0.0	100.0
2. Health	99.9	69.6	70.0	18.3	0.0	100.0
3. Achieving in life	99.4	73.9	80.0	16.3	0.0	100.0
4. Relationships	99.9	82.2	80.0	13.6	0.0	100.0
5. Safety	99.6	78.8	80.0	15.8	0.0	100.0
6. Community connectedness	99.5	77.0	80.0	16.3	0.0	100.0
7. Future security	91.6	67.8	70.0	17.8	0.0	100.0
8. Spirituality/religion	95.3	74.2	80.0	24.3	0.0	100.0
PWI 7 domains score (excluded PWI 8)	90.5	74.5	75.7	11.1	14.3	100.0
Life as a whole	99.9	77.1	80.0	16.0	0.0	100.0

Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older, Table 2 Regression of personal domains on satisfaction with life as a whole (Rojo-Perez et al., 2012)

Personal domains	Life as a whole						B coefficients	Beta coefficients	sr ² (squaring part coefficient)	
	1	2	3	4	5	6				
1. Standard of living	.530**						.264*	.280	.052	
2. Health	.443**	.379**					.140*	.159	.020	
3. Achieving in life	.525**	.468**	.427**				.189*	.192	.023	
4. Relationships	.419**	.235**	.237**	.353**			.150*	.127	.010	
5. Safety	.439**	.372**	.256**	.342**	.489**		.135*	.135	.011	
6. Community connectedness	.389**	.243**	.247**	.347**	.473**	.427**	.111*	.113	.009	
7. Future security	.365**	.426**	.283**	.366**	.302**	.493**	.383**	-.010	-.011	.000

**Correlation is significant at the 0.01 level. * $p < 0.001$

Adj R2: .476

Total explained unique variance: .125

Total explained shared variance: .351

domains had an uneven contribution to unique variance (12.5 %), where the highest contribution was in relation to shared variance (35 %). The largest unique contribution was made by the items “standard of living,” followed by “achieving in life” and “► health.” The “future security” domain was not significant in the model, apart from being one of the items, together with “spirituality or religion,” with the highest no response rate. It could be hypothesized that in line with a probable shorter life course of the older population, this segment of the population might not

have found a suitable response to satisfaction with future security.

The results are in line with the validity of the resulting construct of applying PWI in other contexts (International Well-being Group, 2006), so that the total variance of satisfaction with life as a whole explained by the PWI items was similar to these. In short, the PWI among the older adult population, residing in family housing in Spain, showed appropriate metric attributes, although additional analysis is required to ascertain the reasons for a lower rate of response to item 7,

which will be possible from successive waves of the Spanish Longitudinal Study of Ageing.

The Comparative Backgrounds of the PWI

In comparison with other studies that used the same measuring instrument, the personal well-being of the population analyzed was higher relatively, superior to the results for the general population in Algeria (mean 52.3 ± 21.1 standard deviation) (Tiliouine, Cummins, & Davern, 2006), the over 18 population in Hong Kong (65.9 ± 16.9) (Lau et al., 2005), the Spanish population over 60 ($71.0 \pm SD 13.5$) (Rodríguez-Blázquez et al., 2011), and the adolescent and university population in Gerona (Spain) (73.3 ± 15.3) (Casas, González, Figuer, & Malo, 2009). The highest values were obtained from Austrian university students (75.4 ± 13.9) (Renn et al., 2009), the over 18 population living in Colombia (75.9 ± 11.7) (Wills-Herrera, 2009), and the over 18 population in Australia (78.8 ± 15.7) (Lau et al., 2005).

Table 3 shows the PWI mean scores according to the sociodemographic and personal characteristics of older adults. Differences were noted in personal well-being in the age, studies, ► [social class](#), relationship with current activity, ► [health](#), morbidity, and size of social network categories (Table 3). Therefore, people aged 65–74 years old – who had primary and higher education, who belonged to a social class of nonmanual workers, who were still working or retired, who perceived their health as good or very good, who reported no illness or having fewer than two illnesses, and who had an extensive social network – had the highest personal well-being scores (above average).

There were no mean differences in the gender and size of family network categories, although men in general and those who reported an extensive family network showed higher personal well-being. Other studies found that the PWI decreases with age among the older population (Rodríguez-Blázquez et al., 2011), but when considering the general population, the well-being curve is U-shaped (Tiliouine et al., 2006; Wills-Herrera, 2009); slightly higher results were also obtained from men

(Rodríguez-Blázquez et al., 2011). With regard to education, our results are consistent with other research in that the PWI increases with level of education (Rodríguez-Blázquez et al., 2011; Tiliouine et al., 2006).

The PWI and Its Relationship with Other Instruments Measuring Living Conditions Among the Older Population

Knowing that most scales designed for use with the general population cannot be employed with all population subsets as well as that the quality of life experienced by minority groups cannot be norm-referenced back to the general population (International Well-being Group, 2006), our team firstly applied the ► [Schedule for the Evaluation of Individual Quality of Life-Direct Weighting \(SEIQoL-DW\)](#) in a sample of 499 people aged 60 and over (living in a community dwelling in Madrid, Spain, 2005) (Rojo-Pérez & Fernández-Mayoralas, 2011) to define their most important domains for their quality of life. After that, the team designed a wider survey on quality of life including objective and subjective questions about the obtained domains, as well as the PWI and the National Well-being Index (NWI) and a new index on ► [Community Well-being \(CWI\)](#) developed by the team (Forjaz et al., 2011) to cover subjective well-being at different levels, among a sample of 1,106 people aged 60 and over living in a community dwelling in Spain, 2008.

The SEIQoL-DW is well adapted to the research strategy in quality of life by considering the multidimensionality of the construct and the objective-subjective approach. However, there are some obstacles to a general use of the SEIQoL-DW: firstly, this measure must be applied in a face-to-face interview; secondly, the elderly may have trouble completing the steps of the instrument; and, finally, the sample size of people to be interviewed, as each questionnaire must be codified a posteriori by the researcher. On the contrary, the Personal Well-being Index (PWI) measures the subjective dimension of QoL – subjective well-being (SWB) – in a more reliable way than a single-item measure such as satisfaction with life and employing the theoretical principle of “levels of deconstruction,” i.e., SWB is

Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older, Table 3 PWI 7 domains score according to sociodemographic and personal characteristics of the sample (Rojo-Perez et al., 2012)

		PWI 7 domains score	
		Mean	Standard deviation
Gender	Male	74.9 _a	10.9
	Female	74.1 _a	11.3
Age	50–64 years old	74.4 _{a,b}	10.8
	65–74	75.7 _a	11.2
	75+	73.5 _b	11.4
Education	Less than primary studies	72.7 _a	11.9
	Primary school	75.4 _b	11.5
	Secondary education, university degree	75.5 _b	10.0
Social class	Nonmanual workers	75.8 _a	9.6
	Manual workers	73.7 _b	12.1
Relationship with current activity status	Working	74.8 _{a,b}	9.59
	Retired	75.9 _a	10.42
	Housework, care	73.3 _b	12.03
	Inactives (unemployed, students, disabled, other)	71.9 _{b,c}	13.41
Perceived health status	Very bad	54.7 _a	11.8
	Bad	65.9 _{a,b}	13.4
	Fair	70.4 _b	10.9
	Good	76.9 _c	9.6
	Very good	80.5 _d	8.9
Morbidity	0	78.6 _a	9.5
	1–2	75.6 _b	10.4
	3+	72.2 _c	11.3
Size of the family network	1–7	74.5 _a	11.0
	8–11	73.8 _a	11.1
	12+	76.1 _a	11.3
Size of the social network	0	71.6 _a	12.7
	1–4	73.8 _a	10.7
	5–6	76.3 _b	10.2
	7+	76.9 _b	10.6

Note: values in the same column and subtable not sharing the same subscript are significantly different at $p < .05$. Tests are adjusted for all pairwise comparisons within a column of each innermost subtable using the post hoc test (Bonferroni correction)

measured by the minimum set of domains which represent the first-level deconstruction of satisfaction with “life as a whole” fulfilling the principle of parsimony (Cummins, 2005).

According to the SEIQoL-DW instrument, health, relationship with family network, economic resources, relationship with social network, and spare time and leisure activities were the five most important areas for the QoL of people aged 60 and over living in a community dwelling in Madrid, and the result for the SEIQoL

index was 71.2 ± 11.7 (Fernández-Mayoralas et al., 2011). In line with this figure, the PWI resulted in a mean value of 71.0 ± 13.5 among noninstitutionalised older adults living in Spain (Fernandez-Mayoralas et al., 2012). The PWI showed a correlation of .50 with the “satisfaction with life as a whole” item and -.54 with the HADS-Depression, while coefficients were less than .300 with the ► [Functional Independence Scale \(FIS\)](#) and ► [Barthel Index](#). Moderate correlation coefficients were observed between PWI

Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older, Table 4 Convergent validity of the PWI (Spearman's correlation coefficient)

The 6-item De Jong Gierveld Loneliness Scale	-.353**
The Duke-UNC Functional Social Support Questionnaire (DUFSS)	.330**
Scale of Positive and Negative Experience (SPANE)	.291**
Center for Epidemiological Studies Depression Scale (CESD-10)	-.402**
Functional ability	.163**
Cognitive status (Mini-Mental State Examination, MMSE)	.054 ns
Satisfaction with life as a whole	.646**

ns nonsignificant

**Correlation is significant at the 0.01 level

and the ► [Sense Of Coherence](#) (SOC), Loneliness Scale (LS), ► [EuroQoL-5D](#), and Duke-UNC Functional Social Support (DUFSS), all of which measured ► [QoL-related concepts](#), and accordingly, the PWI (in a bipolar response scale) could be considered to have shown satisfactory convergent validity (Rodríguez-Blázquez et al., 2011).

For the ELES Project Pilot Study introduced here, using the PWI in a unipolar response scale, convergent validity (Table 4) was measured with the LS, the DUFSS, the Scale of Positive and Negative Experience (SPANE), the ► [Center for Epidemiological Studies Depression Scale 10 items \(CESD-10\)](#), the Functional Ability scale (FA), and the Mini-Mental State Examination (MMSE). In line with our previous research, PWI also showed a moderate level of correlation with LS and DUFSS, higher with CESD-10, lower than .300 with SPANE and FA, and non-significant with MMSE, the latter possibly due to the fact that most of the analyzed population had high cognitive level scores (≥ 24). The correlation between PWI and “satisfaction with life as a whole” item was .646.

The Findings Implications of the PWI and Data Sharing Policy in the Context of the ELES Pilot Study

The PWI has proven to be a useful instrument for comparing groups in a country and between

countries. The PWI was used in the ELES Project Pilot Study in a representative sample of the population aged 50 and over living in family housing in Spain. A cross-validation was successfully carried out, showing its usefulness for deploying in different waves of the Spanish Longitudinal Study of Ageing to gauge the satisfaction of the elderly with their living conditions in Spain and in the ageing process, considering transitions in health, functional capacity, work life, family network, social support, economic resources, and other dimensions of life.

Although the PWI used in the Spanish case has not been widely used in other longitudinal ageing studies, it is very important to establish a comparative framework between these studies to detect the explanatory capacity of the instruments and scales of analysis of the well-being of the population. This goal is very important because it is based on two essential hypotheses: firstly that the older population is not a uniform group, with foreseeable differences, therefore existing between groups, and secondly that the circumstances of geographical, social, and political environments where the older population lives may have clear effects on behavior differentiation. These same hypotheses are the basis for applying public policies designed to improve the quality of life of the older population in Spain. Policy design requires consistent and detailed analysis of those behaviors.

The PWI, inserted within the ELES Project research strategy, is undergoing at the moment an evaluation process through the data obtained in the pilot study. The aim of this process is to assess its usefulness as a measuring instrument to be used in the future longitudinal development of the project. Two procedures are being followed for this. The first is being carried out by our research team for internal validation. This process requires an assessment of the response to the variables that make up the PWI, validating it through the classical test theory (CTT) and the item response theory (IRT) and analyzing the relations with other variables on the older adult population in Spain. The second

procedure is external validation. The objective here is to offer pilot study data to different research groups interested in the study of the ageing process as established in the ELES Project, for its analysis and scientific discussion. A dual strategy is provided for this which will firstly involve preparing files that document the structure of the contents researched, processes developed, and database generated and secondly presenting the ELES Project to Spanish researchers interested in a scientific meeting to be held at the beginning of 2013 to assess the structure of the contents and data obtained in the pilot study.

In this respect, the usefulness of sharing data between researchers arises from the ELES Project strategy of harmonizing their information with that from other international longitudinal studies and to highlight the specific traits of the Spanish ageing process in relation to other countries.

Cross-References

- ▶ [International Well-being Group](#)
- ▶ [Personal Well-being Index](#)
- ▶ [Satisfaction with Life](#)
- ▶ [Satisfaction with Quality of Life Domains](#)
- ▶ [Spain](#)
- ▶ [Subjective Well-Being](#)

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Spain, Personal Well-Being Index; Validation with Older Adults

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Synonyms

[Personal Well-Being Index \(PWI\)](#)

Definition

The [PWI](#) is a measure of [subjective well-being](#), addressing the satisfaction with several aspects of personal life and representing the first-level deconstruction of “satisfaction with life as a whole” (Cummins, Eckersley, Pallant, Van Vugt, & Misajon, 2003; International Well-being Group, 2006). Initially formed by 7 items, an item about spirituality/religion was added later on (International Well-being Group, 2006). The final version of the scale includes items each one corresponding to a [quality of life](#) domain: satisfaction with standard of living, health, achieving in life, relationships, safety, community connectedness, future security, and spirituality/religion. Items are scored in a 0–10 rating scale, with 0 representing completely dissatisfied, 5 the neutral point, and 10 completely satisfied. The total score is obtained by averaging the items’ scores and linearly converting the result into a 0–100 scale. The PWI has been translated into several languages, and normative data are available for some countries (International Well-being Group, 2006).

This entry summarizes the PWI validation results with a sample of community-dwelling

older adults residing in Spain, using both the classical test theory (CTT) and [Rasch analysis](#) (Rodriguez-Blazquez et al., 2011; Forjaz et al., 2012). Analysis were based on the 7-item PWI (without the spirituality item), which was supported by Rasch analysis (see below). Information will be presented on the PWI reliability and internal and construct validity, as well as its main associated factors. More information about the PWI with a different sample of older adults may be found in the entry “[Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older.](#)”

Description

The Spanish PWI was applied to a nationally representative sample of 1,106 community-dwelling adults aged 60 years or more (mean age \pm standard deviation, $M \pm SD = 72.07 \pm 7.83$; range: 60–96 years), with no cognitive impairment (Fernandez-Mayoralas et al., 2012) and the following sociodemographic characteristics: 56.3 % of women, 70.7 % with primary or lower education, 59.9 % retired or pensioners, and 58.5 % lived with a partner or spouse and 25.0 % alone. Participants rated their [satisfaction with life as a whole](#) as 6.36 ± 1.55 (range: 0, completely dissatisfied, to 10, completely satisfied) (Rodriguez-Blazquez et al., 2011). The PWI showed a $M \pm SD = 71.0 \pm 13.5$, range = 14.7–100, skewness = -0.56 , and absence of floor or ceiling effects (0.09 % and 0.18 %, respectively).

Results from Rasch analysis indicate that three of the original 8 items measure a different construct and that the response scale could be modified from 11 to 8 response options, by collapsing the initial categories 1–4 into a single one (Forjaz et al., 2012). The modified PWI, a linear measure with 5 items (achieving in life, relationships, safety, community connectedness, and future security), displayed a $M \pm SD = 59.61 \pm 15.55$ (range: 7.42–99.97), with no floor effect (0.09 %) and a small ceiling effect (4.45 %). The 5-item PWI

linear measure may be drawn from previous data obtained with the original PWI, following a few steps (Forjaz et al.).

Reliability

Applying CTT methods, the PWI showed good internal consistency, measured with Cronbach's alpha (0.88). Item homogeneity was 0.52, and item-total corrected correlation ranged from 0.44 (health) to 0.79 (safety). Test-retest reliability was not analyzed. Using exploratory factor analysis, one factor was identified, accounting for 60.1 % of the variance.

When Rasch analysis was used, the 5-item PWI showed a reliability (person separation index) of 0.91, after adjusting the response scale format (Forjaz et al., 2012). The 5-item PWI showed a good fit to the Rasch model, with strict unidimensionality and local independence of items.

Validity

Following the CTT methods, PWI convergent and known-groups validity were tested (Rodríguez-Blázquez et al., 2011). The PWI showed a correlation coefficient of 0.50 with the item "satisfaction with life" and moderate to high correlation coefficients with rating scales assessing related constructs: depression (Hospital Anxiety and Depression Scale-Depression subscale, $r_S = -0.54$), ► [sense of coherence](#) (Sense of Coherence scale, short version, $r_S = -0.48$), loneliness (6-item Loneliness scale, $r_S = -0.43$), social support (Duke-UNC Functional Social Support Scale, $r_S = 0.40$), and health-related quality of life (EQ-5D Index, $r_S = 0.40$). The 5-item PWI also showed an adequate convergent validity with these measures, although a lower correlation was found between the 5-item PWI and EQ-5D index ($r_S = 0.31$). This might be due to the fact that the 5-item PWI does not include the item "health." The correlation with the item "► [satisfaction with life as a whole](#)" was 0.51 (Forjaz et al., 2012).

PWI scores were significantly lower in the following groups: women, older subjects, people with less social support, those with lower

educational level, and people with suspected depression (Mann-Whitney or Kruskal-Wallis tests, $p < 0.00001$) (Rodríguez-Blázquez et al., 2011). Known-groups validity results were similar to those found for the 5-item PWI linear measure (Forjaz et al., 2012).

Finally, PWI precision was calculated by means of the standard error of measurement (SEM), with a result of 4.67, which is below the arbitrary criterion of half a standard deviation (Rodríguez-Blázquez et al., 2011).

Rasch analysis of the 5-item PWI supported its interval validity and indicated that almost all items were not biased (free from differential item functioning) by gender, age, education, and living arrangements. However, item 5 (relationships) showed a bias by social support (Forjaz et al., 2012).

Determinants of Well-Being

In a linear regression model, the PWI main determinants were psychosocial variables (► [social support](#), loneliness, depression, and sense of coherence), followed by health state (current health perception and comorbidity) and functional aspects (functional independence and health-related quality of life). This model accounted for 46.8 % of the variance (Rodríguez-Blázquez et al., 2011).

The PWI is also influenced by the residential setting (Rodríguez-Blázquez et al., 2012). In a study comparing the well-being (PWI) of 468 older adults living in the community or in a residential setting, depression (standardized $\beta = -0.32$), health status (0.24), loneliness (-0.19), and age-institutionalization interaction (-0.14) were significant determinants of the PWI (linear regression model, 34 % of the variance explained). In the noninstitutionalized group, younger people (less than 78 years old) reported a significantly higher PWI scores than younger counterparts.

Discussion

The psychometric properties of the PWI in older adults have been established using CTT and Rasch analyses. Data from CTT procedures reflect that the PWI is reliable and valid and is

adequate for assessing well-being in older adults. Rasch analysis has established a 5-item version with similar psychometric properties than the original version and supported the unidimensionality of the PWI. The main determinants of the PWI in older adults are related with residential setting, health status, and psychosocial and functional variables.

Although the ► **psychometric analysis** lacked measures of content validity, test-retest and inter-rater reliability, and responsiveness, this is the first time the PWI performance is tested in older adults applying both CTT and Rasch analysis. The 5-item PWI scores can be transformed into a linear measure preserving its psychometric properties and allowing for the use of parametric tests and calculation of change scores. However, further studies in representative samples, including younger adults, are needed to replicate these results. In conclusion, PWI is an easy-to-apply measure and provides a comprehensive, multidimensional measure of well-being in older adults.

Cross-References

- [International Well-being Index](#)
- [Personal Well-being Index](#)
- [Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older](#)
- [Psychometric Analysis](#)
- [Quality of Life](#)
- [Rasch Analysis](#)
- [Satisfaction with Life as a Whole](#)
- [Sense of Coherence](#)
- [Social Support](#)
- [Subjective Indicators of Well-Being](#)
- [Subjective Well-being](#)

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Spanish Geography and the Quality of Life

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Synonyms

[Data envelopment analysis \(DEA\)](#); [Objective index of quality of life in Spain](#); [Spain](#); [Value efficiency analysis](#)

Definition

Spain is geopolitically divided into 17 autonomous communities (ACs) with a high degree of political autonomy. Most policies have been

transferred to the ACs, including education and health services. The objective index of QoL in Spain shows important differences across ACs. But ACs can be further subdivided into provinces (although some ACs are composed of just one province) and provinces into municipalities. There is a historical north-south gap in socioeconomic conditions across the Spanish territory. Recent studies have measured the levels of ► **quality of life** (► **QoL**) at the province level (Murias, Martínez, & de Miguel, 2006) and, at the municipal level, some focusing on specific provinces (López, Sánchez, & Iglesias, 2003; Royuela, Suriñach, & Reyes, 2003; Zarzosa, 2005) and more recently covering all the Spanish geography (González, Cárcaba, & Ventura, 2011a, 2011b, 2011c). According to these studies, the central-northern part of Spain concentrates the highest levels of ► **QoL**, while the south and the Canary Islands show the poorest levels. At the municipal level, none of the ten biggest cities are in the top 50 ► **QoL** ranking. Medium cities (those with population between 50,000 and 250,000) dominate the ranking.

Description

González et al. (2011a) proposed an estimation of the ► **QoL** of all the Spanish municipalities with population over 10,000. For each of the 643 municipalities of the sample, 19 partial indicators covering the main areas of ► **QoL** as suggested in (Stiglitz et al. 2009) were collected. The estimation of the ► **QoL** indexes was done using value efficiency analysis (VEA), a refinement of the well-known DEA technique. While DEA was developed to measure efficiency in productive activities (Charnes et al., 1978), it has also been used as an aggregator of partial information into a composite indicator. Hashimoto and Isikawa (1991) were the first to apply this technique to the measurement of ► **QoL**. The advantage of DEA over other methodologies is that the technique internally assigns weights to the partial indicators without external value judgment. For each ► **municipality** in the sample, DEA actually assigns for each partial indicator

the weight that maximizes the ► **QoL** index of that ► **municipality** as compared with the rest (on the same weights). Of course this is a very conservative approach, since it allows huge differences in the weights assigned to the same partial indicator by different municipalities. In other words, municipalities with a poor value in partial indicator X will assign a weight near to zero to X, and municipalities with an excellent value in partial indicator Y will assign an extremely high value to the weight of Y.

VEA introduces a soft restriction on the weights that are allowed in the DEA program. A ► **municipality** must be selected externally as the most preferred solution (MPS), and it will be used to restrict the sets of weights that are considered reasonable. As with DEA, each ► **municipality** will assign the weights to each partial indicator that maximize its comparative composite indicator of ► **QoL**. But unlike DEA, those weights must take the MPS to the ► **QoL** frontier. That is, the MPS must obtain a value of 1 for the composite indicator of ► **QoL** with all the sets of weights that are finally assigned to each ► **municipality** in the sample. If the MPS is a ► **QoL** referent, all these sets of weights (while different) can be considered to be reasonable.

We applied VEA to the sample of 643 municipalities using 19 partial indicators. Eight of them refer to undesirable traits or drawbacks of living in a given ► **municipality**: unemployment rate, pollution, lack of parks, lack of cleanliness, acoustic pollution, delinquency/vandalism, bad communications, and commuting times. These are treated as inputs in the VEA model; these are variables to be reduced. The lower the values of these variables, the higher the comparative composite indicator of ► **QoL**. Eleven variables refer to desirable traits or advantages associated with each ► **municipality**: socioeconomic condition, commercial market share (a proxy for purchasing power), cultural and sport facilities, health facilities, education facilities, social care facilities, average education level, post-compulsory education, university studies, average size of dwellings, and living conditions of dwellings. These are treated as outputs in the

Spanish Geography and the Quality of Life, Table 1 Summary of VEA results grouped by autonomous regions (MPS = Pamplona) (Source: González et al. 2011a)

	n	Average	Min	Max	SD	Frontier (%)
Andalucía	134	0.854	0.755	0.972	0.051	0 (0)
Aragón	12	0.965	0.877	1	0.038	3 (25.0)
Asturias	21	0.884	0.809	0.984	0.041	0 (0)
Baleares	17	0.915	0.863	1	0.039	1 (5.9)
Canarias	36	0.856	0.762	0.976	0.059	0 (0)
Cantabria	10	0.934	0.901	1	0.033	1 (10.0)
Castilla y León	23	0.938	0.877	1	0.032	1 (4.3)
Castilla-La Mancha	28	0.902	0.839	0.970	0.038	0 (0)
Cataluña	96	0.923	0.814	1	0.044	6 (6.2)
Com. Valenciana	81	0.892	0.806	0.975	0.036	0 (0)
Extremadura	13	0.920	0.877	1	0.032	1 (7.7)
Galicia	56	0.875	0.779	0.997	0.054	0 (0)
Madrid	38	0.882	0.766	1	0.062	2 (5.2)
Murcia	26	0.868	0.805	0.937	0.033	0 (0)
Navarra	7	0.988	0.960	1	0.017	4 (57.1)
País Vasco	40	0.945	0.866	1	0.045	7 (17.5)
La Rioja	3	0.951	0.916	0.980	0.032	0 (0)
Ceuta/Melilla	2	0.808	0.805	0.811	0.004	0 (0)
Total	643	0.893	0.755	1	0.057	26 (4.0)

VEA model; these are variables to be increased. The higher the values of these variables, the higher the ► **QoL** score.

All these variables are weighted in a ratio of weighted advantages on weighted drawbacks. For ► **municipality** *j*, VEA assigns weights to maximize the former ratio, with the condition that all the municipalities in the sample obtain a ratio lower than or equal to 1. The value therefore represents the ► **QoL** frontier. If ► **municipality** *j* obtains a value 1, it is because it is part of the ► **QoL** frontier. If ► **municipality** *j* obtains a score lower than 1, it is because there is at least another ► **municipality** in the sample that using the most favorable weights for ► **municipality** *j* obtains a higher ratio. All these weights are conditioned to bring the MPS to the ► **QoL** frontier. In our case, the MPS was set to be the city of Pamplona in the AC of Navarra. Pamplona was selected as the MPS because (1) it was part of the DEA ► **QoL** frontier, (2) it was one of the cities with the best balance between drawbacks and advantages, and (3) it was a good ► **QoL** referent by other studies that used

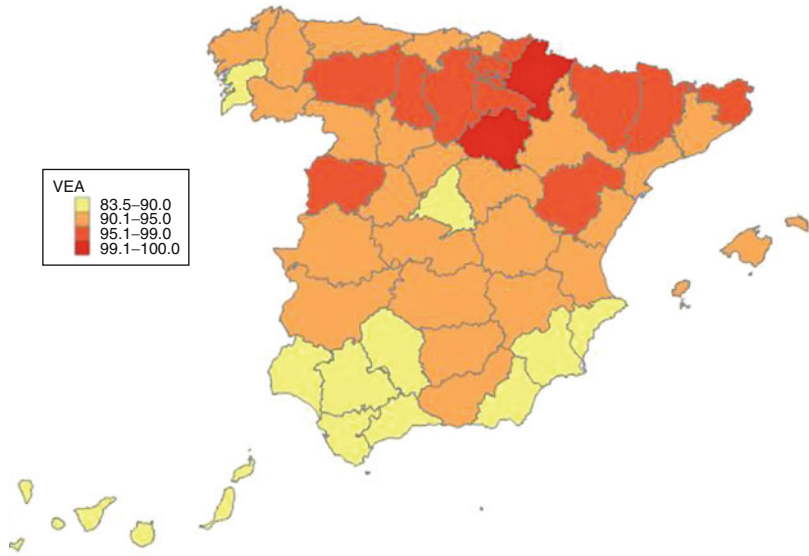
different methodologies (Murias, Martínez, & de Miguel, 2006; Marchante & Ortega, 2006; OCU, 2008). A synthetic indicator of ► **poverty** estimated by Zarzosa (2009) using Pena's (1977) P2 Distance also shows Navarra (whose capital is Pamplona) as the best province in terms of this indicator.

Results

Table 1 summarizes the results for the 17 Spanish ACs and the autonomous cities of Ceuta and Melilla. The highest average levels of ► **QoL** are obtained in Navarra (0.988), Aragón (0.965), La Rioja (0.951), País Vasco (0.945), Castilla y León (0.938), and Cantabria (0.934). In contrast, the lowest average levels of ► **QoL** are obtained in Ceuta and Melilla (0.808), Andalucía (0.854), Canarias (0.856), and Murcia (0.868). The Spanish global average is 0.893, which coincides with the average of Comunidad Valenciana. Only 26 municipalities (4 % of the sample) determine the ► **QoL** frontier, with which the rest are compared. Navarra, Aragón, and País Vasco are the ACs most represented in the frontier, with 57 %, 25 %, and

Spanish Geography and the Quality of Life,

Fig. 1 Weighted averages of ► QoL in the Spanish provinces (Source: González et al., 2011a)



27 % of their municipalities having the highest standards of ► QoL. In contrast, Andalucía, Asturias, Canarias, Castilla-La Mancha, Comunidad Valenciana, Galicia, Murcia, and La Rioja do not have any ► municipality on the ► QoL frontier.

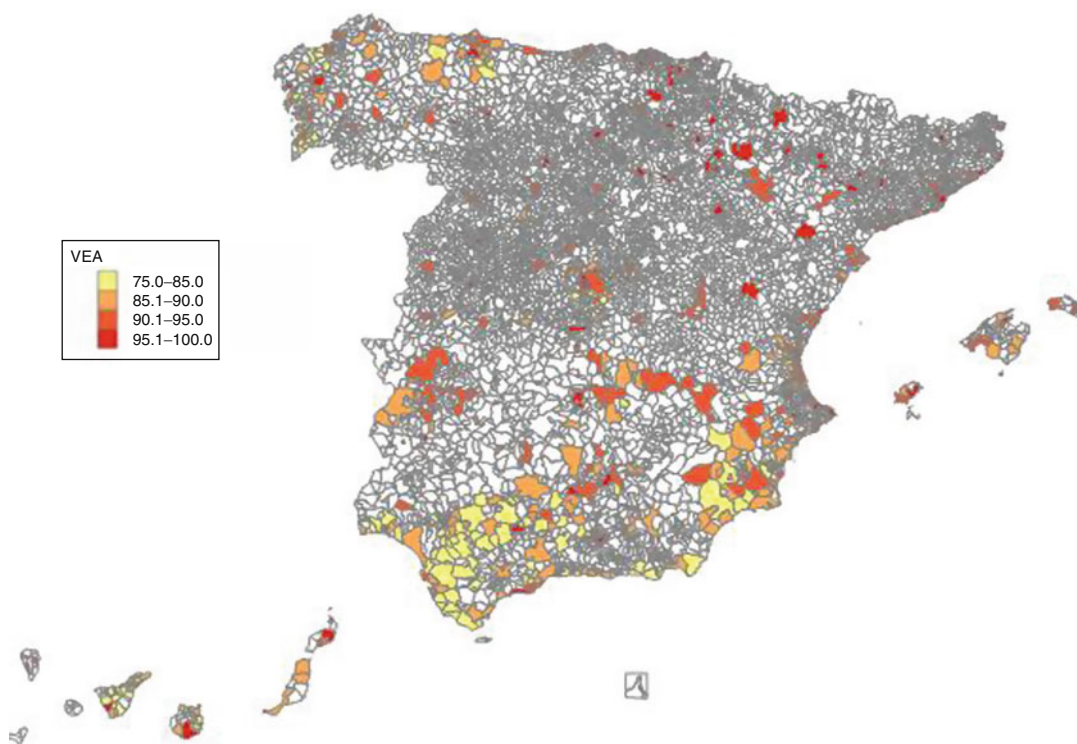
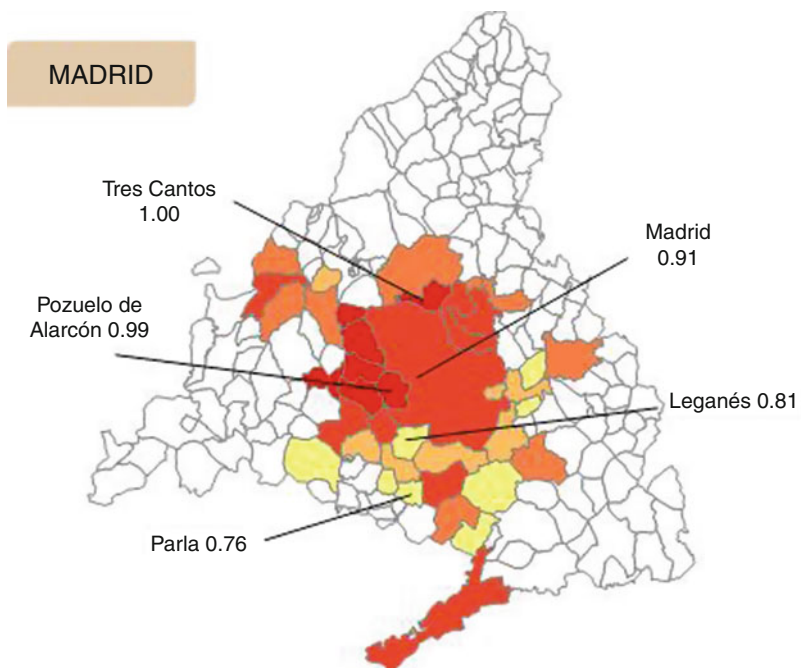
The results show a geographic concentration of the ► QoL on the northern-central part of Spain (from Castilla-León to Aragon, including Navarra, País Vasco, La Rioja, and Cantabria). Figure 1 clarifies this distribution showing the population-weighted averages at the provincial level. The figure shows some interesting variance within ACs. The most notable case is Cataluña that shows average results (0.923) in Table 1 but in reality has two provinces with very high levels of ► QoL (Lérida (0.970) and Gerona (0.967)), while the other two show moderate results (Tarragona (0.928) and Barcelona (0.924)). Obviously, by concentrating most of the population, the province of Barcelona dominates the average of the entire AC, concealing the excellent ► QoL conditions in Lérida and Gerona. The distributions in Castilla and León and in Aragon show similar dispersion. For instance, the province of Zaragoza (0.927) has a significantly lower ► QoL score than the other two provinces of Aragon (Huesca (0.987) and Teruel (0.976)). In a similar way, some provinces in Andalucía have ► QoL indexes above 0.90 (Granada and Jaén).

Going down to the municipal level of analysis, we also find notable differences between municipalities within the same province. For instance, the average ► QoL in the province and AC of Madrid is relatively low (0.882). However, as shown in Fig. 2, Madrid has some of the best and the worst places regarding ► QoL concerns. The figure shows a central part that concentrates most of the ► QoL, with some municipalities even on the ► QoL frontier (Tres Cantos, Torreldones) or very close to it (Pozuelo de Alarcón, Las Rozas) with other municipalities in the southern and eastern zones with very low ► QoL scores (Parla, Leganés, etc.).

González et al. (2011a) showed that the municipal level accounts for almost 53 % of the variance in ► QoL, the AC nearly 38 % of the variance, and the province level only the remaining 9 %. Therefore, even though AC is responsible for many decisions that affect the ► QoL of the citizens, it is fundamental to go down to the municipal level of analysis to measure it. Figure 3 shows the full municipal distribution of the ► QoL in Spain for the sample of the largest 643 municipalities. Although this sample barely covers 10 % of the surface (the remaining municipalities are shown in white), it comprises more than 76 % of the Spanish population.

Spanish Geography and the Quality of Life,

Fig. 2 ▶ QoL dispersion within the province of Madrid (Source: Own elaboration)



Spanish Geography and the Quality of Life, Fig. 3 Municipal distribution of the ▶ QoL in Spain (Source: González et al., 2011a)

Cross-References

- ▶ [Composite Indicator\(s\)](#)
- ▶ [Poverty](#)
- ▶ [Quality of Life \(QoL\)](#)

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Spanish Social Service Recipients

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Synonyms

[Elderly people](#); [Persons with AIDS](#); [Persons with drug dependences](#); [Persons with HIV](#); [Persons with intellectual disability](#); [Persons with mental health problems](#); [Persons with physical disabilities](#); [Social service users](#)

Definition

Spanish social service recipients are people at risk of social exclusion needing supports from organizations all around Spain; among them there are elderly people, persons with intellectual disability, persons with physical disabilities, persons with sensorial disabilities, persons with drug dependences, persons with mental health problems, and persons with HIV or AIDS.

A good example of the kind of organizations providing supports in Spain is the Spanish Confederation of Organizations in Favor of People with Intellectual Disability (*Confederación Española de Organizaciones en Favor de las Personas con Discapacidad Intelectual*, FEAPS), whose main goal is to enhance quality of life of persons with intellectual and developmental disabilities.

Description

The main goal of this entry is to examine the quality of life of Spanish social service recipients

in terms of quality of life personal outcomes and supports. It is widely accepted that quality of life concept is important in social services to implement person-centered programs and practices, to assess and report personal outcomes, to guide quality improvement strategies, and to improve the effectiveness of those practices and strategies using evidence-based or outcome-based measurements. In this study, we understand quality of life as a multidimensional phenomenon composed of core domains that are influenced by personal characteristics and environmental variables; these core domains are the same for all people, although they may vary in relative value and importance, and quality of life domains are assessed on the basis of culturally sensitive indicators (Schalock, Verdugo, & Gómez, (2011)).

Methods

Sample Selection

A stratified and polytypic sampling design was made according to the type of collective and the geographical location of the center providing the services. In view of the characteristics of the population to be evaluated, one sampling was made for elderly people and another for people in situations of social disadvantage – which encompassed people with intellectual disability, physical disability, mental health problems, substance abuse, and HIV/AIDS. It was estimated that there should be at least 1,110 people in each group, whereby the sampling errors were calculated to be 2.43 % for the first group and 2.62 % for the second one.

Participants

A total of 608 professionals working in 239 centers of social services participated filling in the field-test version of the GENCAT Scale for 3,029 users from Catalonia (Spain). The mean number of evaluated persons per service was 12.67 (SD = 7.75), and the mean number of evaluated persons per professionals was five (M = 4.98). A probabilistic multistage planning and implementation sample design was carried out to select the participants with the purpose of guaranteeing

the representativity. The requirements for professionals to participate in this study were (1) to be working in some kind of social service for handicapped adults and (2) to have been working directly with the client for at least 3 months. The only requirement to apply the scale to a social service user was that this was older than 16 years old. Related to the main sociodemographic characteristics of professionals, most of them were female (85 %), had been working with the client for more than 2 years (55.74 %), were psychologists (23.01 %) and social workers (18.41 %), and had been working in social services more than 5 years (52.80 %). Regarding the users of the social services evaluated, the sole criteria governing their inclusion in the research were (1) to be users of some kind of social services attached to the ICASS (Catalan Welfare and Social Services Institute) and have done so for at least 3 months and (2) to be over the age of 18. Concerning to their sociodemographic data, 55.7 % were female. Their ages ranged between 16 and 105 (M = 64.72; SD = 21.34). More than half of sample (57.57 %; n = 1,711) was older than 60. Actually, the biggest group (n = 791) was composed of people aged 81–90 years old, and only 17.39 % (n = 515) were younger than 41. The most representative group was the one composed of older people living in residence settings (44.70 %), followed by people with ► [intellectual disability](#) (19.35 %), physical disabilities (11.72 %), mental health problems (10.33 %), and ► [elderly people](#) in ► [day centers](#) (8.75 %). Percents of people with drug dependences and HIV/AIDS ranged from 2.48 % to 2.67 %.

Instrument

The instrument used was the GENCAT Scale (Gómez, 2010; Verdugo, Arias, Gómez, & Schalock, 2008a, 2008b, 2009, 2010): an instrument for the objective evaluation of quality of life designed according to the advances made on the eight-dimensional model proposed by Schalock and Verdugo (2002, 2007, 2008; see also Gómez, Verdugo, & Arias, (2010a)). The GENCAT Scale evaluates a series of observable aspects related to the eight areas that make up a person's quality of

life and which may be the focus of customized support programs arranged by different types of social services. The validation process used the Catalan language version (Verdugo et al., 2008a), but there are also Spanish and English versions.

The GENCAT Scale is used for the objective evaluation of the quality of life of adult users of social services. The ones completing the scale are the professional staff of these services that know well the person whose quality of life is to be evaluated and who have had recent opportunities to observe that person over prolonged periods of time and in different facets of their life.

In total, the questionnaire has 69 items that cover observable aspects related to quality of life. They were all drafted as statements using the third person and were randomly arranged around the eight subscales that correspond to the dimensions of the underlying theoretical model. Approximately half the items have a positive valence ($n = 35$), while the other half has a negative one ($n = 34$). The format for answering involves four frequency options: *never or hardly ever*, *sometimes*, *often*, and *always or almost always*. Nevertheless, regarding those items that might be difficult to rate with this frequency scale, instructions have been given to answer bearing in mind a four-point Likert scale: *strongly agree*, *agree*, *disagree*, and *strongly disagree*. Although all the items are observable, specific, and easy to understand, below each subscale a few simple clarifications were added for some of them.

For its correction, different yardsticks were provided for users of social services in general and specific ones for the various collectives: *the elderly* (aged over 50), *people with intellectual disability*, and *all the other collectives at risk of social exclusion* (people with physical disability, problems of mental health, substance abuse, and HIV/AIDS). The composite scores recorded in each dimension and for the overall scale are converted according to these yardsticks into standard scores ($M = 10$; $DT = 3$), into percentiles, and into a *Quality of Life Index* ($M = 100$; $DT = 15$). These scores allow identifying a person's *Quality of Life Profile* in order to draw up person-centered support programs and

provide a reliable measure for monitoring the program's progress and results.

Scale content validity was obtained from consultation with experts and from the discussion groups. In order to provide validity evidence based on internal structure, we conducted a confirmatory factor analysis (CFA) whose results can be found in Gómez, Verdugo, Arias & Arias (2010b) and Verdugo et al. (2010); the best data fit by far is the eight-domain model by Schallock and Verdugo (2002). Accordingly, this was the theoretical model used to inform the structure of the GENCAT Scale in the eight dimensions or factors of quality of life (Schallock & Verdugo, 2002, 2007, 2008). The ► **internal consistency** coefficients can be rated as high in the case of the overall scale. The most reliable dimensions are self-determination and emotional well-being, whereas the least reliable dimension is physical well-being. All the other dimensions record suitable coefficients. Finally, data about its calibration of the GENCAT Scale with the Rating Scale Model (RSM) can be consulted in Gómez, Arias, Verdugo, & Navas (2012).

Results

The results of the evaluation of quality of life involving the users of social services in Catalonia are positive, as is the case in most studies, although there are significant differences in the quality of life of the users according to several sociodemographic variables (gender, age, diagnosis group, marital status, place of residence, and level of ► **education**).

The distributions both of the scale in general and of each one of the dimensions were clearly asymmetric and negative, rejecting the hypotheses of univariate and multivariate normality in all cases. Furthermore, almost all the items recorded means of three and four in most cases, and both the means and the modes and medians always exceeded the scale's theoretical mean points. The participants recorded the highest scores in rights and material well-being, which is not surprising in our country (where civil and human rights are guaranteed) and in a sample such as

the one in question (recipients of social services). In fact, within material well-being, the place of residence and the place of work are the aspects with the highest scores, whereas the lowest scores refer to income (although they are still positive, 33 % provide a negative response). Elsewhere, the highest scores in rights are recorded for the item "He/she is exposed to exploitation, violence or abuse" (97 % answer never or hardly ever) as well as for those items related to respect for rights by the organization providing the social services. In this sense, there might be an element of bias in the answers as professional staff working for these services fills in the questionnaires. In turn, the areas with the greatest shortcomings in matters of rights are related to the information users receive regarding their legal rights and their ability to defend them.

Positive Results in Quality of Life

A more unexpected result involves the very high scores recorded in physical well-being (the next highest after rights), above all when we consider that among the participants there is a large group of disabled people and more than half are elderly (the majority are aged over 80). This suggests that the efforts made and work undertaken by the organizations charged with solving the problems most closely associated with care and improving health are successful, above all in the supervision of medication (96 % answer always or almost always). The most problematic issues are those directly related to the user's physical state: pain, discomfort, or the inability to lead a normal life.

The next ones are the dimensions of interpersonal relations, ► **self-determination**, and ► **emotional well-being**, in which the participants record average scores in comparison to other dimensions. In interpersonal relations, we note that a very positive score is given to the user's relationships with friends and family, whereas they are less so in relationships with partners and sexual relations. Regarding self-determination, the item "The service he/she attends caters for their preferences" records the highest scores, which leads us to suspect that there may once again be some form of bias in the answers. On the other hand, the aspects in

which the users seem to show less self-determination are those involving the ► **choice** of whom they live with and taking decisions in their personal life, such as how to spend their money and what time they go to bed. Moreover, it is significant that almost half the sample (45 %) does not organize their own lives. In emotional well-being the most positive results are the low frequency of affirmative responses to those items related to feelings of insecurity, depression, ► **anxiety**, and conduct issues, whereas somewhat lower responses were recorded for the items dealing with satisfaction (with oneself and with one's present life), ► **motivation** at work, and being happy and in a good ► **mood**.

On the other hand, it seems that the people evaluated have the greatest problems (and therefore the lowest scores) in personal development and ► **social inclusion**. The highest score in personal development is recorded in the work undertaken in the organization providing social services ("The service he/she attends caters for their personal development and the learning of new skills"). By contrast, the greatest difficulties involve access to technologies (only 16 % do so *always* or *almost always*) and involvement in the design of their individual program (only 18 %).

Finally, one of the more positive results in social inclusion is the low frequency of affirmative responses to the item "He/she is rejected or discriminated against by others" (4 % answer *always* or *almost always*). In addition, high scores are recorded in encouraging participation in the various activities in the community by the service (54 % reply *always* or *almost always*). The areas most lacking, however, are the use of communal areas, support from friends, and friendships outside the service.

Significant Differences in Quality of Life

Gender: Although we detect significant differences in favor of men in the overall score ($t_{(2582)} = 2.57$; $p = 0.010$), emotional well-being ($t_{(2582)} = 3.61$; $p = 0.000$), physical well-being ($t_{(2582)} = 4.32$; $p = 0.000$), self-determination ($t_{(2582)} = 4.48$; $p = 0.000$), and personal development ($t_{(2582)} = 3.28$; $p = 0.001$), these were



Spanish Social Service Recipients, Fig. 1 Regions of Catalonia (Spain)

very small and could largely be due to the high number of participants.

Age: The analyses of variance gave rise to significant differences ($p < 0.05$) in all the scores except in emotional well-being ($p = 0.143$). Nevertheless, post hoc tests only confirmed these differences in the overall score, self-determination, social inclusion, and rights. Significantly lower scores than those for people aged under 20 were recorded by persons aged 31–40 in the overall score and those aged 61–70 in social inclusion. However, in self-determination and rights, those users aged between 71 and 80 recorded significantly higher scores than those aged 21–40.

Geographical Location: Although the analysis of variance revealed significant differences between the various regions (Fig. 1) in all the variables ($p < 0.05$), the corresponding post hoc tests for uniform groups showed only two or more

differentiated groups in terms of overall score (*Tierras del Ebro*, *Ámbito de Poniente*, and *Campo de Tarragona* recorded significantly higher scores than *Comarcas Gerundenses*), material well-being (*Tierras del Ebro* scores higher than *Comarcas Gerundenses*), physical well-being (*Comarcas Centrales* records a significantly higher score than *Alto Pirineo and Aragón*, *Comarcas Gerundenses*, and *Ámbito Metropolitano*), self-determination (*Campo de Tarragona* scores significantly higher than *Alto Pirineo and Aragón* and *Comarcas Gerundenses*), social inclusion (*Tierras del Ebro* scores significantly higher than *Comarcas Gerundenses*), and rights (*Campo de Tarragona* scores significantly higher than *Comarcas Gerundenses* and *Tierras del Ebro*).

Diagnosis Group: The “diagnosis group” variable gave rise to significant differences both

in overall score ($F_{(6)} = 10.85$; $p = 0.000$) and in all the dimensions ($p = 0.000$). This meant that people with intellectual disability record significantly lower scores overall (compared to people with substance abuse) as well as in self-determination (compared to all the groups), in personal development (compared to people with substance abuse, HIV or AIDS), and in rights (compared to all the groups), whereas they record significantly higher scores in emotional well-being (compared to people with HIV/AIDS), material well-being (compared to people with physical disability or HIV/AIDS), and physical well-being (compared to all the other groups). This makes them the group with the highest fluctuations in the scores, with these differences suggesting shortcomings in the areas most directly related to abilities and (perhaps) a certain lack of realism or general satisfaction with their conditions of life. On the other hand, people with HIV/AIDS have the greatest difficulties in those aspects most closely associated with their social environment as well as in satisfaction with their emotional and physical state. People with substance abuse, however, reveal the greatest problems in terms of material well-being (which seems logical to us as they have recently had problems with substance abuse and are still in rehabilitation). In addition and as is to be expected given that they are not living in rest homes, elderly people in day centers record significantly higher scores in interpersonal relations (compared to people with HIV/AIDS and those with mental health problems) and social inclusion (compared to people with HIV/AIDS and those with physical disability). Elderly people in homes tend to be at the more positive end with high scores except in personal development (indeed, they record significantly lower scores than all the other groups apart from disabled people). This result is consistent with the situation of greater dependence of these people suffering from various physical and mental disorders associated with dementias and which, therefore, reduces their ability to learn new skills and also leads to the loss of skills already acquired. Elsewhere, people with mental health issues generally record high scores and are at the

more positive end with significantly higher scores in personal development, self-determination, social inclusion, and rights, whereas the more problematic areas appear to be interpersonal relations. When we consider that many of these people have symptoms of depression, anxiety and other mental disorders, it comes as no surprise that this is the area with the lowest scores. Finally, people with physical disability tend to be at the end with the lowest scores, although they only record the most significantly low scores in material well-being and social inclusion and the highest in interpersonal relations. This suggests that there is still some work to be done with this collective regarding the existence of physical and social barriers.

Marital Status: This gave rise to significant differences in all the scores ($p > 0.05$). People who were separated recorded significantly lower scores in all the dimensions except for self-determination and rights (in which they recorded significantly higher scores). In self-determination, single people without a partner, married people, and widows/widowers recorded significantly lower scores, and in rights single people are the ones in the worst conditions. By contrast, widows/widowers and single people without a partner record significantly higher scores in material well-being (which is logical when we consider that they do not have to share expenses with a partner or pay alimony to an ex-partner). Single people without a partner record significantly higher scores than everyone else, whereby they are the ones with greater satisfaction both with themselves and with their lives. In turn, married people and single people with a partner and widows/widowers are the ones with the highest scores in those areas related to interpersonal relations and social inclusion, whereby it can be deduced that having a partner leads to a better social life. In personal development, divorcees and single people with a partner record the highest scores, while single people without a partner do so in physical well-being. Separated people and divorcees record significantly higher scores in self-determination, which suggests they have greater abilities and opportunities for making choices and taking

decisions. Finally, widows/widowers, divorcees, and separated people are the ones who best know, exercise, and enjoy their legal and human rights.

Place of Residence: Although the ANOVAS gave rise to significant differences in all the scores ($p > 0.05$), the post hoc tests only confirmed the existence of several groups differentiated between each other in physical well-being and self-determination. This meant that people living in sheltered accommodation and independently without any support recorded significantly higher scores than the others in physical well-being and those who lived independently (both with and without support) recorded the highest scores in self-determination.

Discussion

As the main conclusion of this work, we should note that this study is a first and unprecedented approach to the evaluation of the quality of life of the users of Spanish social services. Rather than simply concluding that it is a valid and reliable instrument, it is our understanding that we have provided validity evidence for the GENCAT Scale that is more than satisfactory and based on (a) its content and adaptation to the Catalan population (experts, discussion groups, discriminatory power) (Verdugo, Schalock, Gómez, & Arias, 2007), (b) its factor structure (CFA) (Gómez et al., 2010b; Verdugo et al., 2010), and (c) people's individual responses (RSM) (Gómez et al., 2012).

In terms of reliability, we consider an acceptable level has been reached by most of the dimensions; however, physical well-being has a highly questionable reliability. Accordingly, it would be convenient to review the content of this subscale, with there probably being a need to discard some of the listed items (or move them to other more appropriate dimensions) and include others more closely linked to the construct. We have also noted that an improvement could be made to the accuracy and ► **reliability** of subscales such as ► **material well-being** and rights, including more difficult items for this population. In turn, the dimensions self-determination and emotional

well-being can be considered the most appropriate ones.

A further highlight is the fact that both the GENCAT Scale and the quality of life model underpinning it appear to function better and provide better results with the elderly instead of with the collective of people at social disadvantage. This finding leads us to consider the need to increase the number of participants in the various subgroups included here in order to confirm this differential performance or, in the best of cases, ratify that it is due simply to this group's major diversity.

Finally, although we should view the results obtained in physical well-being with some caution, we can conclude that the quality of life of social services users is fairly high. The results are excellent in material well-being and rights. By contrast, it seems advisable to dedicate more effort to improving personal development and social inclusion.

Cross-References

- [Confirmatory Factor Analysis \(CFA\)](#)
- [Education](#)
- [Quality of Life](#)
- [Rating Scale Model](#)
- [Reliability](#)

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Spanish Version of Meaning in Life Schedule

► [Schedule for Meaning in Life Evaluation, Spanish Version](#)

Spare Time

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Synonyms

[Discretionary time](#); [Free time](#); [Leisure](#); [Leisure time](#)

Definition

Spare time is the segment of a standard unit of time such as the day devoted to activities for which a person is not formally or informally committed to perform by necessity or for another party.

Description

Students of time use typically assess the differing amounts of daily and/or weekly time people devote to different kinds of activity. This is done to compare how the daily lives of people vary in different countries, by different working conditions, by gender, and in specific contexts of research or policy interest. An underlying motive for such analyses is its representation of ingredients germane to quality of life. Concern has been raised, for example, by data showing inordinate amounts of daily time many employed women spend in a combination of paid employment and domestic and childcare – the so-called *double day* (or *second shift*) (Hochschild, 1989).

Daily activities are most commonly specified according to distinct types of behavior, such as paid employment, food preparation, laundry, housecleaning, gardening, socializing, studying, traveling, worshipping, reading, and watching television. Code lists commonly include from 25 to 250 distinct activities. However, some sociologists have argued that it is both possible and fruitful to reduce activity categories

to just a few that make significant distinctions of salience to quality of life among human populations. Indeed the first major study employing time use data, by Stanislav Strumilin from the 1920s industrial workers in the post-revolution Soviet Union, boiled daily activity into only three categories: work, sleep, and free time. Strumilin believed that the day should optimally be divided evenly among these three functions (Zuzanek, 1980).

Much later, after the proliferation of time use studies with long, detailed activity codes (Michelson, 2005), Dagfinn Aas proposed the reduction of activities to four categories: *contracted* time, *committed* time, *necessary* time, and *free* time (Aas, 1982). Contracted time is that formally committed to another party, such as an employer. Committed time is that informally provided to another person on a regular basis, such as cooking dinner for a family or attending regular church services. Necessary time covers what is needed for health and survival, for example, eating, sleeping, and personal hygiene. Anything else that is done without a contractual or informal commitment or without reference to survival needs is referred to as free time – free from the various forms of compulsion. Spare time is used as a synonym for free time.

Spare time is a common indicator of quality of life. People ought not be starved for spare time. But then again, having inordinate amounts of spare time in place of contracted, committed, and necessary time generally accompanies people in poor health or the unemployed (Jahoda, Lazarsfeld, & Zeisel, 1933).

Cross-References

- ▶ [Leisure](#)
- ▶ [Leisure Time](#)

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Spastic Colon

- ▶ [Irritable Bowel Syndrome](#)

Spatial Analysis

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Synonyms

[Data analysis, spatial](#); [Geographic data analysis](#); [Locational analysis](#); [Modeling, spatial](#); [Spatial statistics](#)

Definition

The term spatial analysis describes methods to study the location, distribution, and relationship of spatial phenomena.

Description

The history of spatial analysis is strongly linked to cartography and the development of geography as an academic discipline in the eighteenth and nineteenth centuries. It is now being used in a wide range of disciplines. In biology, spatial analysis can be used to analyze the spatial distribution of plant species or migration patterns of animals, economists use it within spatial

econometrics and regional science, while criminologists can analyze the spatial distribution of crime patterns. Within the interdisciplinary field of quality of life research, there are many applications as methods of spatial analysis allow studying the spatial interrelationship of different factors impacting on the quality of life at a specific place.

Maps are a fundamental tool, and the interpretation of spatial features on maps is a simple form of spatial analysis. While for a long time this was relying on paper maps, the development of Geographic Information Systems (GIS) since the 1960s and advancements in information technology means that more advanced forms of spatial analysis can be more easily applied. A GIS is at its core a database. Different to a normal database, it allows storing spatial information for each stored element. Furthermore, it allows visualization in the form of maps, and it contains a set of built-in spatial analytical tools. When storing features in a GIS, one has to simplify the complex reality into elements that the system can store and process. For example, streets and roads can be represented as line features within a GIS, buildings or urban blocks as polygons, and locations of social infrastructure as points. Apart from these types of vector datasets, modern GIS systems can also store and analyze raster datasets, most commonly based on satellite and aerial photography. The simplification of the complex reality in a GIS system means that one has to consider the phenomenon of ecological fallacy. These are errors in analysis due to limited resolution in aggregate datasets. In most cases, elements in a GIS are stored with two-dimensional spatial information, often referred to as *x* and *y* value, though most modern GIS also allow processing the third dimension of height, which allows, for example, the analysis of flooding phenomenon in hydrology or the simulation of microclimate in urban meteorology.

Once one has different spatial datasets available in a GIS, one can use methods of geostatistics to analyze the underlying datasets, or one can apply geoprocessing tools to combine the elements in different ways and to create new datasets. So, for example, one can apply a simple

spatial model by selecting statistical wards that are located in a defined proximity to a motorway to assess the noise pollution impact. Most GIS systems contain a model builder which allows developing more complex process or simulation models.

Another aspect of spatial analysis is the study of spatial interaction. This can include the analysis of point-to-point commuting or migration datasets based on census data or the analysis of traffic or water flows along networks within transport planning or environmental modeling. While the analysis of point-to-point interaction often requires bespoke tools, the analysis and modeling of flows along networks is a built-in feature of many GIS systems.

Though most GIS systems allow the design of quite advanced types of modeling, there are also bespoke forms of spatial models used in spatial analysis and research. These include disaggregate, agent-based models often used to simulate travel behavior or land use change (Wegener, 2005; Benenson & Torrens, 2004). Other examples for applying such complex models include the simulation and forecasting of weather and climate change.

Spatial analysis with full GIS packages requires technical knowledge and significant investment in software and datasets. Therefore, it is worth noting that advancements in internet technology have led to new forms of web mapping systems, based on online maps such as Google Maps, OpenStreetMap, or OS Open Space. While earlier web mapping systems only allowed visualizing existing predefined maps, the content of newer mapping system is increasingly interactive, allowing simple GIS functionalities and spatial queries. At the same time, an increasing amount of spatial datasets are made publicly available in open data initiatives, particularly those datasets that have been created by public funding. This means that basic forms of spatial analysis will increasingly be available to anyone with a computer and an internet connection – though advanced forms of spatial analysis and modeling will remain the domain of experts using GIS software packages.

Cross-References

- ▶ [Data Collection Methods](#)
- ▶ [Ecological Fallacy](#)

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Spatial Planning (Europe)

- ▶ [Community Planning](#)

Spatial Representation

- ▶ [Faceted Smallest Space Analysis \(Faceted SSA; FSSA\)](#)

Spatial Statistics

- ▶ [Spatial Analysis](#)

Specialization Advantage

- ▶ [Comparative Advantage](#)

Spielberger State-Trait Anxiety Inventory

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Synonyms

[State-Trait Anxiety Inventory](#)

Definition

The Spielberger State-Trait Anxiety Inventory (STAI) is a 40-item self-completed questionnaire that aims to assess separately state anxiety (a temporary state influenced by the current situation where the respondent notes how he/she feels right now at this moment) and trait anxiety (a general propensity to be anxious where the respondent notes how he/she feels “generally”) with 20 items each.

Description

Rationale for Development

The scale was developed by Charles Spielberger (with collaborators Gorsuch and Lushene), professor of Psychology at the University of South Florida and former president of the American Psychological Association (Spielberger, Gorsuch, & Lushene, 1970). The main aim was to develop a scale that could distinguish between state anxiety and trait anxiety. The fundamental distinction of the two forms of anxiety was first conceptualized by Raymond Cattell and Ivan Scheier (Endler & Parker, 1990). They considered state anxiety as a transitory and emotional condition while trait anxiety was a more stable personality characteristic that predisposed individuals to manifest anxiety in threatening situations. Spielberger considered these forms of anxiety as unidimensional constructs and aimed to develop a scale to independently assess these constructs in adults.

The original version of STAI was first published in 1970 (STAI-X) although an earlier version (Form A) had been used since 1964. Spielberger began revising it in 1979 taking into account factor analyses and new developments in the concept of anxiety, and the current version, STAI-Y, was finally published in 1983 (Spielberger, 1983).

Description of the Items/Subscales

There are two subscales, the state anxiety subscale (S-Anxiety) and the trait anxiety subscale (T-Anxiety), consisting of 20 items

each. The S-Anxiety subscale consists of questions related to unpleasant feelings of tension, apprehension, nervousness, worry, and physiological symptoms of anxiety. The respondent is asked to select how he/she feels “right now.” Half of the questions relate to the presence of S-Anxiety while the remaining to the absence of S-Anxiety. Examples of key questions include:

- I feel calm
- I feel pleasant
- I feel nervous
- I feel jittery

The T-Anxiety subscale consists of items related to more stable aspects of anxiety proneness and to tendencies to perceive stressful situations as threatening. The respondent is asked to rate how he/she generally feels on a 4-point scale. Examples of key questions include:

- I am “calm, cool and collected”
- I am happy
- I worry too much over something that really doesn’t matter
- I have disturbing thoughts

The scale is administered as a paper-and-pencil questionnaire for self-completion, but an interviewer can also assist in special cases (e.g., poor vision). The scale has been translated and/or validated in at least 48 languages across the world.

Scoring and Cutoffs

Each subscale uses a 4-point Likert scale with a range from 1 (“not at all” for S- or “almost never” for T-Anxiety) to 4 (“very much so” for S- and “almost always” for T-Anxiety). Reverse scoring is used for anxiety-absent items (e.g., “I feel calm” or “I am happy”), and therefore, a higher score indicates more severe anxiety with a potential range from 20 to 80 for each subscale.

According to the developer (Spielberger, 1983) scores of 20–39, 40–59, and 60–80 indicate low, moderate, and high anxiety, respectively. Normative values are available in the manual (Spielberger, 1983).

Acceptability/Ease of Administration

The inventory can be completed in approximately 10 min, and it is appropriate for those

who have at least a sixth-grade reading level. The STAI is not available for free and can be obtained from the publisher (www.mindgarden.com). Cost is less than 1 US\$ for a single assessment for bulk purchases, and there is also a scoring service from the publisher.

Psychometric Data

The psychometric characteristics of the STAI have been reviewed by Spielberger and Sydeman (1994).

Reliability

Test-Retest: Detailed reliability data are reported in the manual. The test-retest coefficient for Form Y was quite high for the T-Anxiety for all samples assessed ranging from 0.73 to 0.86, showing that this subscale is relatively insensitive to change in the short term. As expected from the definition of the concept, the state anxiety subscale is not very stable with a median test-retest coefficient of 0.33 probably reflecting the effect of situational factors at the time of the testing.

Internal Consistency: The developers recommend the use of ► **Cronbach’s alpha** coefficient to assess reliability because (state) anxiety states vary as a function of perceived stress. The median alpha coefficient for S-Anxiety was 0.93 for large, independent samples of students, working adults, and military recruits. The median alpha coefficient of T-Anxiety for the same groups was 0.90. More than half of the items on both scales had item-remainder correlations of 0.50 or higher (Spielberger & Sydeman, 1994).

Validity

Factorial Validity: The factorial validity of the STAI has been reviewed by Bieling, Antony, and Swinson (1998) and more recently by Vigneau and Cormier (2008). Earlier studies of the original version of the STAI (STAI-X) have generally confirmed the existence of two factors broadly corresponding to the state and trait dimensions. However, more elaborate analyses and further experience gained in subsequent studies showed that a four-factor solution may be more accurate. According to this solution, the two basic

dimensions should be further divided on the basis of whether the items reflect the presence or absence of anxiety. Therefore, this model includes the following factors: state anxiety present, state anxiety absent, trait anxiety present, and trait anxiety absent. Vigneau and Cormier (2008), however, have also suggested an alternative factor structure model based on the two-construct, two-method model. According to this model, the two method factors (positive polarity – negative polarity) are kept orthogonal to one another and to the construct factors (state – trait). This model remains compatible with the traditional unidimensional, bipolar view of state and trait anxiety, but also provides the opportunity to estimate the size of the polarity effect because it treats the construct and method variance separately. It is worth noting that the polarity-based factors explain a higher percentage of item variance compared to the construct-based factors (9 % vs. 3–8 % relative to the simple one-factor model).

Concurrent Validity: According to Spielberger and Sydeman (1994), the Trait subscale of the STAI shows strong correlation with similar measures of anxiety popular at the time of its development such as the “Anxiety Scale Questionnaire” ($r = 0.73$) and the “Manifest Anxiety Scales” ($r = 0.85$).

Construct Validity: According to the developer (Spielberger, 1983; Spielberger & Sydeman, 1994), the T-Anxiety subscale has shown its construct validity in studies of psychiatric patients compared with healthy people. All patients, except patients with personality disorders, had higher mean scores on the T-Anxiety compared to control groups. In addition, medical patients with comorbid psychiatric conditions also scored higher compared to non-comorbid medical patients. Regarding the S-Anxiety scale, it has been shown that during stressful situations, such as college exams, the scores on the scale are significantly higher compared to non-stressful situations.

Uses in Various Settings: Clinical Experience

The STAI has been used in more than 8,000 studies across the world for both

research and clinical purposes in the fields of medicine/dentistry, psychology, and education (Sesti, 2000). It has been also used as an outcome measure in clinical trials of anxiety disorder.

A special version of the scale for use with children has been developed, the STAIC, and this can be used with adolescents also (Spielberger & Sydeman, 1994). Use of the STAI as a screening tool for common mental disorders in older adults has also been investigated with positive results regarding sensitivity and specificity (Kvaal, Ulstein, Nordhus, & Engedal, 2005).

Discussion

This entry shows that the STAI is a very well-established scale to detect anxiety in various settings and the use of the scale both in research and in clinical practice is widespread across the world. Even though the unidimensionality and bipolarity of the state-trait distinction have been criticized, recent work on the factorial validity of the scale shows that this is still a valid distinction, although the method construct involved in the scale (anxiety absent – anxiety present) is an important factor and should be taken into account. Another point of criticism is that especially the trait anxiety subscale may not discriminate well from depression (Bieling et al., 1998), but this is a common problem of all anxiety scales due to the high comorbidity of anxiety with depression that has been attributed to the negative affectivity dimension that is common in both.

With such a long tradition and strong cross-cultural adaptation, the STAI is considered as one of the most useful instruments for the assessment of state and trait anxiety especially in research settings in the fields of medicine, psychology, and education.

Cross-References

► [Cronbach's Alpha](#)

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Spiritual Fitness Assessment

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Synonyms

SFA

Definition

The Spiritual Fitness Assessment (Fletcher, 2007) is a 40-item paper-and-pencil psychometric test designed to measure spiritual beliefs, ► **attitudes**, and practices from a Christian perspective. The instrument was initially developed

for use by ► **health** and fitness professionals to work with clients who are interested in exploring and facilitating their spiritual well-being in addition to their physical health. A complete copy of the test can be found at the following Web address: http://www.faithandhealthconnection.org/wp-content/uploads/2007/11/spiritual_fitness_assessment____4_8_071.pdf.

Note that the SFA should not be confused with the Spiritual Fitness Assessment incorporated into the US Military’s controversial Comprehensive Soldier Fitness program in October 2009.

Description

Religion and ► **spirituality** have become topics of interest to scientists and health practitioners alike, and available research indicates that they significantly associated to psychological, physical, and social health and well-being (e.g., Koenig, King, & Carson, 2012; Oman & Thoresen, 2005). One area that has not produced the same amount of scholarly work but has nevertheless given growing amounts of attention to spirituality is health and fitness training/consultancy. In particular, as witnessed in the websites and periodicals that are available (e.g., www.faithandhealthconnection.org; Faith and Fitness magazine), life and fitness trainers/coaches/instructors have been turning to more holistic models of health in their approach to working with their clientele and concomitantly have been increasingly incorporating spirituality and spiritual wellness as part of their regimens.

While there are a wide variety of measures available to assess spiritual and religious variables (e.g., Hill & Hood, 1999; MacDonald, LeClair, Holland, Alter, & Friedman, 1995; Meezenbrock et al., 2010), most of these have been developed for research or clinical applications, and few have been devised for specific use in life and/or fitness coaching. The Spiritual Fitness Assessment (SFA) was created by Dale Fletcher, a professional wellness coach, to serve as a tool for use in health and fitness programming. More specifically, he devised the test to serve as an operationalization of 18 “spiritual exercises” that he identified from his

understanding of biblical scripture as well as his review of the scientific literature on the relation of spirituality to health. These exercises can be understood as reflecting behaviors that Fletcher views as having the potential to cultivate spiritual wellness (Fletcher, n.d., see http://www.faithand-healthconnection.org/the_connection/what-your-can-do/spiritual-%20exercises-spiritual-fitness-assessment/). He organizes the exercises into three broad categories relating to Beliefs and Attitudes (i.e., belief in God, belief that God forgives, and belief that God lives within the person), Relationship with God (i.e., study of scripture, belief in and reception of God's ► [love](#), love of God, obedience to God, crying out to God, surrendering to God, abiding in God's presence, and having faith and trust in God), and Practice of Faith (i.e., confession of sins, forgiveness, worship and church attendance, participation in a community, love and servitude to others, and thinking spiritual thoughts). In terms of the SFA content, 12 items were constructed to represent Beliefs and Attitudes (i.e., items 1–12), nine for Relationship with God (i.e., items 13–21), and 17 for Practice of Faith (i.e., items 22–38). The last two items of the test are designed to gather information on religious affiliation and whether or not the respondent has interest in conferring with a professional about their spiritual health. For most items, a seven-point rating scale ranging from 1 = strongly disagree to 7 = strongly agree is used. For six items belonging to the Practice of Faith category (items 30–35), the seven-point scale does not solicit respondent agreement with item content but instead asks for frequency of behavior with the scale ranging from 1 = never to 7 = more than once a week. For three items (items 36–38), the seven-point response scale remains anchored in frequency of behavior but changes to 1 = never to 7 = more than once a day.

Though ostensibly most suited for utilization with Christians, the SFA deserves some recognition for being the first measure constructed for life and fitness evaluations. Nevertheless, in order to garner confidence for such uses, there is a need to ensure that the test demonstrates evidence of sound psychometric properties. With this in

mind, Kassab and MacDonald (2011) completed an investigation designed to provide information on the ► [reliability](#) and validity of the instrument.

The study employed a sample of 196 undergraduate students from a religiously affiliated university in the midwestern United States. The sample was mostly female ($n = 139$) with an average age of 23.09 years ranging from 18 to 61. Approximately 80 % of the sample reported a Christian religious denomination. In addition to the SFA, study participants completed measures designed to assess a multidimensional model of ► [spirituality](#) (Expressions of Spirituality Inventory; ESI; MacDonald, 2000a, 2000b), ► [self-esteem](#) (Rosenberg, 1965), social desirability (Balanced Inventory of Desirable Responding; Paulhus, 1988), and mental, physical, and spiritual well-being (Mental, Physical, Spiritual Well-Being Scale; MPSWBS; Vella-Brodick & Allen, 1995). A general demographic survey was also administered which obtained information on age and sex.

Data analyses involved examining both item- and scale-level properties of the test via descriptive statistics, reliability analysis (inter-item correlations and ► [Cronbach's alpha](#)), item-level ► [exploratory factor analysis](#), and correlations with demographic variables and all measures incorporated into the study. The SFA was scored by summing all 38 items to arrive at a total score. Subscale scores were produced by summing items assigned by Fletcher to each of his three categories. The last two items pertaining to religious affiliation and consultation with a professional were not included in any statistics. [Table 1](#) reports scale-level descriptive statistics and ► [reliability](#) information for the SFA as well as correlations with demographics and all measures included in the study.

Examination of ► [reliability](#) statistics reported in [Table 1](#) indicated that the items within each subscale and the entire test produced mean item intercorrelations and inter-item consistency coefficients that reflect satisfactory ► [reliability](#).

Product-moment correlations with demographic variables emerged significant for the total SFA score as well as all three subscales. Coefficients for sex were found to be negative,

Spiritual Fitness Assessment, Table 1 Descriptive, reliability, and convergent/discriminant validity statistics

	Spiritual fitness assessment scores			
	Beliefs/attitudes	Relation to God	Practice of faith	Total SFA
Descriptives				
Number of items	12	9	17	38
Mean	66.76	47.24	73.36	187.35
Standard deviation	14.35	13.50	21.75	45.67
Range	22–84	9–63	17–119	49–262
Reliability				
Mean item correlation	.55	.67	.40	.44
Inter-item consistency	.94	.95	.92	.97
Convergent/discriminant correlations				
Age	.20**	.17*	.16*	.19**
Sex	-.21**	-.21**	-.17*	-.21**
BIDR-impression management	.23**	.19**	.32***	.28***
BIDR-self-deceptive enhancement	.14	.17*	.20**	.19**
BIDR-total score	.23***	.22**	.33***	.29***
ESI-cognitive orientation toward spirituality	.82***	.66***	.73***	.80***
ESI-experiential/phenomenological dimension	.40***	.31***	.38***	.40***
ESI-existential well-being	.13	.17*	.18*	.18*
ESI-paranormal beliefs	.10	.01	.07	.07
ESI-religiousness	.84***	.81***	.75***	.86***
MPSWBS mental well-being	.20**	.08	.20**	.18*
MPSWBS physical well-being	.05	.06	-.01	.03
MPSWBS spiritual well-being	.70***	.56***	.72***	.73***
Rosenberg self-esteem	.25***	.24***	.30***	.29***

Note: All statistics from Kassab and MacDonald (2011). For all analyses, $N = 196$ except for age $n = 186$. For sex, female coded as 1 and male coded as 2

BIDR balanced inventory of desirable responding, *ESI* expressions of spirituality inventory, *MPSWBS* mental, physical, spiritual well-being scale

* $p < .05$, ** $p < .01$, *** $p < .001$

indicating that women tended to get higher scores. The magnitude of these correlations were interpreted by Kassab and MacDonald (2011) as being fairly modest and as suggesting that the SFA did not demonstrate serious problems.

Correlations with the Balanced Inventory of Desirable Responding (BIDR), a measure of a two-factor model of social desirability consisting of Impression Management (IM) (i.e., overt efforts at presenting one's self favorably) and Self-Deceptive Enhancement (SDE) (i.e., unconscious efforts at denying faults with one's self), emerged significant in all cases except with SFA Beliefs/Attitudes and BIDR-SDE. The strength of association manifested in these coefficients was generally small though the

correlations between BIDR-IM and BIDR-Total Score, and SFA Practice of Faith did exceed .30, reflecting a moderate \blacktriangleright effect size. Kassab and MacDonald (2011) concluded that these findings can be interpreted as suggesting that the SFA scores are not unduly compromised by socially desirable responding.

Since the SFA is a measure of a spiritual construct, the inclusion of a scale that explicitly assesses \blacktriangleright spirituality seemed relevant to test \blacktriangleright convergent validity. The Expressions of Spirituality Inventory (ESI) taps a multidimensional descriptive model of spirituality that was derived from a large-scale factor analytic study of existing measures of \blacktriangleright spirituality and associated concepts. In particular, it measures five dimensions called Cognitive Orientation toward

Spirituality (COS; spiritual beliefs including spiritual identity and perception of spirituality as having relevance to day-to-day functioning), the Experiential/Phenomenological Dimension (EPD; experiences characterized as spiritual, religious, mystical, transcendent, numinous, transpersonal), Existential Well-Being (EWB; perception of one's self as having meaning in life and the capacity to effectively handle existential adversity), Paranormal Beliefs (PAR; belief in the validity of parapsychological phenomena and abilities), and Religiousness (REL; intrinsic religious orientation including religious practice).

Correlations between the SFA and ESI dimensions revealed strong significant correlations between all SFA scores and ESI-COS, ESI-EPD, and ESI-REL. In addition, all SFA scores except Beliefs/Attitudes generated significant but small coefficients with ESI-EWB. There were no significant correlations involving ESI-PAR. These correlations provide reasonably good evidence of convergent and, in the case of ESI-PAR, discriminant validity. Kassab and MacDonald did note, however, that these results suggest that the SFA may lack construct specificity due to the fact that the significant correlations with the three ESI dimensions did not appear very different from each other in terms of magnitude.

Along the same lines, the Mental, Physical, Spiritual Well-Being Scale (MPSWBS) was included as a convergent validation tool since the SFA is supposed to be a measure of spiritual well-being. As well, Fletcher asserts that spiritual wellness is supposed to be linked to ► [physical well-being](#), so the MPSWBS allows for a way to test this claim. Correlations between the two tests showed a pattern where all SFA scores were highly and significantly correlated with MPSWBS Spiritual Well-Being, while all SFA scores but Relation to God were significantly but more modestly associated to MPSWBS Mental Well-Being. No correlations with MPSWBS Physical Well-Being were found to be significant. Kassab and MacDonald (2011) commented that these findings provide some support for the ► [convergent validity](#) of the SFA, though the lack of significant results involving physical

well-being seems to challenge Fletcher's claims that spiritual fitness is linked to physical wellness. They noted, however, that another study found no relation between the benefits of physical exercise and spiritual well-being (Marinelli & Plummer, 1999).

As an index of ► [subjective well-being](#), the Rosenberg self-esteem scale was included. Correlations came out significant with all SFA scores with coefficients manifesting small to medium ► [effect size](#). These results are generally favorable for the SFA.

As a last but important statistic done by Kassab and MacDonald (2011), an item-level principal axis ► [factor analysis](#) done with the 38 items of the SFA resulted in the extraction of five factors with eigenvalues greater than 1.0 which accounted for 64.55 % of item score variance. Examination of factor loadings after varimax rotation of the initial solution revealed that all items produced at least one elevated loading (i.e., loadings in excess of .29) on a factor with many items obtaining high loadings on two or more factors. Factor one was observed to be comprised of strong loadings from 24 items which cut across Fletcher's three categories (i.e., items 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 30, 32). Examination of the items showed that most had content involving overt usage of the word "God." The second factor housed notable loadings from 21 items which also came from more than one of the categories (items 4, 5, 6, 9, 10, 13, 14, 19, 20, 22, 23, 24, 25, 30, 31, 32, 33, 34, 35, 37, 38). Item content generally made reference to the impact of spirituality and/or God on functioning. The third factor contained 11 items from two categories (items 1, 2, 3, 4, 5, 6, 9, 10, 12, 36, 37). Factor four was made up of five Practicing Faith items (items 24, 26, 27, 28, 29). All items made reference to forgiveness. The fifth and final factor contained high loadings from six Practicing Faith items (i.e., items 30, 32, 34, 36, 37, 38). Based upon an analysis of item content, Kassab and MacDonald labeled the factors Beliefs and Attitudes Attributed to God, How Belief in God is Perceived in Affecting Ones Life, How Spiritual Affects Physical Aspects of Life and Gives

Personal Strength, Forgiveness, and Practices Related to Seeking God, respectively. They argue that these results presented the greatest affront to the SFA since they suggest that Fletcher's categories may not correspond to what is actually measured by his test. The SFA appears to be factorially complex.

Discussion and Recommendations for Future Research

Overall, the results of Kassab and MacDonald (2011), the only empirical investigation on the SFA to appear in the literature to date, provide generally good evidence for the psychometric properties of the instrument. In total, the SFA seems to be measuring something that is strongly linked to ► [spirituality](#) and spiritual well-being and seems to do so in a reliable manner. Nonetheless, the researchers urge further research on the test. In particular, they advocated for three lines of inquiry. First, they suggest studies aimed at examining the relation of the SFA to physical health using different measures of the latter since they used a self-report measure and their negative findings may have been an artifact of how they assessed physical health. Second, they encouraged additional item-level factor analytic work to help better identify the latent constructs embedded in the SFA and to enable ways of revising the instrument by eliminating items that do not meaningfully contribute to the assessment of those constructs. Third, they suggest that the SFA be tested with samples drawn from different populations other than university students. Particularly relevant would be to use samples comprised of people who are involved with programs of health and fitness training since it is precisely these individuals that Fletcher designed the SFA for use.

Cross-References

- [Convergent Validity](#)
- [Correlation Coefficient](#)
- [Demographics](#)
- [Discriminant Validity](#)

- [Effect Size](#)
- [Exploratory Factor Analysis](#)
- [Factor Analysis](#)
- [Health](#)
- [Physical Well-Being](#)
- [Psychometric Analysis](#)
- [Reliability](#)
- [Self-Esteem](#)
- [Social Desirability Bias](#)
- [Spirituality](#)
- [Subjective Well-Being](#)

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Spiritual Life

- [Religion/Spiritual Fulfillment, Satisfaction with](#)

Spiritual Needs of Those with Chronic Diseases

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Synonyms

Care, spiritual; Chronic illness and spiritual needs; Existential needs and chronic diseases; Interpretation of illness and spiritual needs; Palliative medicine; Religiosity and chronic diseases; Self-transcendence; Spirituality; Transcendence

Definition

Spiritual needs are those essential requirements, expectations, or purposes related to the non-tangible sacred or the immaterial soul which would contribute to attain optimal well-being but are not satisfied at a given situation. They may refer to the broad categories: (1) connection, (2) peace, (3) meaning/purpose, and (4) transcendence.

Description

In 1943, Abraham Maslow (1943) described an idealized hierarchy of specific human needs: *physiological* (breathing, nutrition, sleep, etc.), *safety* (personal and financial security, ► [health](#), etc.), *belongingness*/► [love](#) (friendships, ► [family](#), intimacy, acceptance, etc.), *esteem* (self-esteem, confidence, social status, respect, etc.), and *self-actualization* (creativity, realization of potentials, etc.). Victor Frankl would add a further dimension, self-transcendence. The basic needs appear to be more important than the higher-level (secondary) needs. Because this hierarchical structure was very idealistic, Clayton Alderfer modified Maslow's model in terms of his *existence, relatedness, and growth* (ERG) theory (Alderfer, 1972). Maslow's lower-order needs are categorized into the *existence* category, while love and esteem are categorized as *relatedness*, and self-actualization and esteem form the *growth* category. These three categories have no hierarchical structure – their importance may vary interindividually. In case that a specific need cannot be fulfilled, then the others become more important. This concept is of importance for patients with chronic diseases with their often restricted possibilities to develop. Thus, stronger needs for relatedness with friends and family and maybe also a connection with their own religious tradition would be the consequence when growth needs cannot be fulfilled any longer.

Patients with chronic diseases often do have specific needs, albeit these needs are not always clearly expressed. It is a fact that the members of the health-care system may have limited time, courage, and/or skills to address patients' specific psychosocial and spiritual needs. Moreover, one may argue that this topic should be seen under the responsibility of professional chaplains. In a recent study among patients with advanced cancer, a majority (72 %) reported that their spiritual needs were supported minimally or not at all by the medical system, and 47 % felt supported minimally or not at all by a religious community (Balboni et al., 2007) – which could be regarded to be in charge for this topic.

Psychosocial and Spiritual Needs of Patients with Chronic Diseases

A review of the psychosocial needs of patients with cancer identified physical and treatment-related needs (i.e., physical impairment, fatigue, sleep disturbance, side effects of treatment, etc.), psychological and social needs (i.e., emotional distress, depression, loss of sense of control, affected ► **body image**, impaired social function and relationship, etc.), and informational and support needs (i.e., management of illness, prognosis, treatment options and side effects, support groups, complementary therapies, etc.) (Schmid-Buchi, Halfens, Dassen, & van den Borne, 2008). In contrast to these (conventional) psychosocial needs which are often expressed as loss of social role function, lack of support by family or friends, needing help in managing disruptions in work or daily life, lack of material and logistical resources, depression and other ► **negative emotions**, disease associated distress, etc. (reviewed by Adler & Page, 2008), spiritual needs are “the needs and expectations which humans have to find meaning, purpose and value in their life. Such needs can be specifically religious, but even people who have no religious faith or are not members of an organized ► **religion** have belief systems that give their lives meaning and purpose” (Field & Cassel, 1997).

It is important to differentiate whether these complex needs are expressed in acute and not primarily fatal courses of disease, in chronic conditions, or in a palliative situation, because the respective needs may vary strongly. In fact, most studies addressing spiritual needs were performed among patients with advanced (fatal) diseases (2007; Balboni et al., 2007; Daaleman, Usher, Williams, Rawlings, & Hanson, 2008; Grant et al., 2004, Hampton, Hollis, Lloyd, Taylor, & McMillan, 2007, Hermann, 2001, 2006; Kang et al., 2011), while ambulant patients were rarely investigated (Büssing, Balzat, & Heusser, 2010; Büssing, Lux, Janko, & Kopf, 2011; Büssing, Lux, Janko, Kopf, & Frick, 2012).

A review of the qualitative literature on spiritual perspectives of patients at the end

of life revealed the following thematic pattern (Williams, 2006): spiritual despair (alienation, loss of self, dissonance), spiritual work (forgiveness, self-exploration, search for balance), and spiritual well-being (connection, self-actualization, consonance).

In US patients with cancer (Moadel et al., 1999), help to deal with fear, to find hope and ► **meaning in life**, to find spiritual resources, and to talk with someone about peace of mind, and life and ► **death** was of relevance.

In French patients at the end of life, the following topics were identified (Raoul & Rougeron, 2007): reinterpretation of life, search for meaning, connection to the world, self and others, vital energy, ambivalence to the future, confrontation with death, and relationship to transcendence.

In Taiwanese patients with advanced cancer, four main themes of spiritual needs were identified (Hsiao et al., 2010): hope for survival and peaceful mindset, meanings of life and dignity, reciprocal human love, and facing death peacefully.

In Korean patients with cancer, five sub-constructs of spiritual needs were differentiated (Yong, Kim, Han, & Puchalski, 2008): love and connection, hope and peace, meaning and purpose, relationship with God, and acceptance of dying.

In German patients with chronic pain diseases and cancer, four main dimensions were differentiated (Büssing et al., 2010, 2012): religious needs (i.e., praying, participate at religious ceremony, turning to a higher presence etc.), need for inner peace (i.e., wishes to dwell at places of quietness and peace, beauty of nature, finding inner peace, talking with others about fears and worries, etc.), existential needs (i.e., reflection and meaning in life and suffering, dissolve open aspects in life, and talk about the possibility of life after death, etc.), and giving/generativity (i.e., solace someone, pass own life experiences to others, be assured that life was meaningful and of value).

Of course one may question the different approaches to categorize the identified needs, particularly whether these needs are in

fact “spiritual.” In fact, religious patients may interpret their existential and spiritual needs in religious terms, while nonreligious individuals would interpret the same needs as existential and humanistic. While it is adequate from a theoretical point of view to differentiate psychosocial, existential, and spiritual needs, it is not practicable to separate these interconnected needs in a clinical context. Moreover, the interpretation whether or not a specific need is a “spiritual” one depends on the individual attitudes and convictions, the underlying world view, and the specific cultural context.

Recently, a conceptual framework for further research and clinical practice was suggested which categorized four (interconnected) core dimensions of psychosocial and spiritual needs (Büssing & Koenig, 2010), i.e., connection, peace, meaning/purpose, and transcendence, which can be attributed to the underlying categories of social, emotional, existential, and religious. This model can be referred to Alderfer’s ERG model as follows.

Although it is adequate that board-certified chaplains should assess patients’ spiritual needs and resources (Puchalski et al., 2009), one cannot ignore that particularly in secular societies, more and more nonprofessionals have to care for specific issues which go beyond their primary expertise. Frick et al. (2006) found that majority of German tumor patients wanted their medical doctor to be interested in their spiritual orientation. A survey among patients with chronic pain conditions revealed that 23 % talked with a chaplain/priest about their spiritual/religious needs and 20 % had no partner to talk about these needs, while for 37 % it was important to talk with their medical doctor about these needs (Büssing et al., 2009). Thus, there seems to be a relevant fraction of patients which lack an adequate partner who has the necessary time and skills to address their spiritual needs, albeit they seem to be of outstanding importance to them. In fact, spiritual support from the medical team and pastoral care visits was significantly associated with cancer patients’ quality of life (as measured with the ► [McGill quality of life questionnaire](#)) (Balboni et al. 2007, 2010).

Similarly, among advanced cancer patients, those who “received less spiritual care than desired” had significantly more depressive symptoms and less meaning and peace (Pearce et al., 2012). Of outstanding importance within this context were findings of Balboni’s group that cancer patients’ spiritual needs which were supported by the medical team received more hospice care than those with less supported needs (Balboni et al., 2010), while those who stated that their spiritual needs were inadequately supported were more likely to die in an intensive care unit – and their end of life cost was significantly higher (Balboni et al., 2011).

If it is true that several patients do have psychosocial and spiritual needs which are important to them, then these needs have to be identified. When these needs are identified, health-care professionals and patients’ relatives have the chance to react and support the patients in their struggle with chronic or fatal disease. To uncover and address specific needs, either interview in terms of spiritual history taking and formal spiritual assessment (see Puchalski et al., 2009) or standardized questionnaires/checklists (see Büssing, 2012) might be appropriate, depending on the intention and clinical context (Table 1).

Spiritual Needs and Quality of Life-Associated Variables

In US American cancer patients, their spiritual and existential needs were addressed by seven specific items (Moadel et al., 1999). Here, patients wanted help with overcoming their fears, to find hope, meaning in life, spiritual resources, or someone to talk to about finding peace of mind, while talking about meaning of life and dying and death was less important. Interestingly, ethnicity had an impact on the level of needs (i.e., Hispanic or African-American patients expressed more needs than White Americans) but also time since diagnosis and not having a partner (Moadel et al.).

In Korean cancer patients, *hope* and *peace* were scored highest, followed by meaning and purpose, *love and connection*, and *acceptance of dying*, while *relationship with God* (divine,

Spiritual Needs of Those with Chronic Diseases, Table 1 Categories of psychosocial and spiritual needs referring to Alderfer's ERG model

Categories of psychosocial and spiritual needs (Büssing & Koenig, 2010)	Needs according to the ERG model (Alderfer, 1972)
<i>Peace</i> (inner peace, hope, balance, forgiveness, distress, fear of relapse, etc.)	<i>Existence</i> (safety)
<i>Connection</i> (love, belonging, alienation, partner communication, etc.)	<i>Relatedness</i>
<i>Transcendence</i> (spiritual resources, relationship with God/sacred, praying, etc.)	
<i>Meaning/purpose</i> (meaning in life, self-actualization, role function, etc.)	<i>Growth</i>

sacred) was less important (Yong et al., 2008). Similarly in German patients with chronic pain disorders and cancer, needs for *inner peace* and *giving/generativity* were scored highest, while *religious* or *existential needs* were just weakly expressed (Büssing et al., 2010, 2012). In a study among chaplains from the United States of America and Canada, *meaning and purpose*, *love and belonging*, and *hope, peace, and gratitude* ranked the highest, and *morality/ethics* and *appreciation of art and beauty* the lowest, while the dimensions *religion and divine guidance* and *death concerns and resolutions* are ranked between (Flannelly, Galek, Bucchino, & Vane, 2006). This means that the secular dimension of *meaning/purpose*, *peace*, and *connection* are valued highest.

In German patients, their symptom score was weakly (negative) associated with *religious needs*, but not with the other needs, while ► *life satisfaction* was weakly (negative) associated only with need for *inner peace* and *existential needs* (Büssing et al., 2012). Significant

predictors of *religious needs* were the positive disease interpretation of “something of value to grow” and patients’ age; *existential needs* were predicted best by the illness interpretation as “call for help” and “value” and by a low life satisfaction; also, need for *inner peace* can be predicted best by “value” and low life satisfaction, while *giving/generativity* was predicted by a mix of both positive and negative disease interpretations (Büssing et al.). The fact that the disease interpretation “value” is in general the best predictor of these needs may indicate patients’ ability to see illness not only as an “adverse interruption of life” but also as a “chance” to reflect and to change behavior and priorities in life to adjust. Moreover, this would mean that they regard their life – despite their symptoms – as something of value and worth the effort.

In German elderly living in nursing homes (>80 years), the respective needs decrease strongly when compared to (younger) patients with chronic diseases. Here, the dimensions of *peace* and *connectedness* are of importance, while *religious issues* are of low relevance (Erichsen et al., in preparation); particularly, their needs to talk with others about fears and worries, for higher devotion by others, and to find inner peace were negatively associated with their quality of life (r between $-.31$ and $-.44$).

Patients’ need for *peace*, *unaffected health*, and *social support* is universal human needs which correspond with the Alderfer’s *existence* and *relatedness* dimensions. These needs can be interpreted as a desire to return to a peaceful state of safe completeness – instead of suffering pain, distress, insecure future perspectives, and finally death (Büssing & Koenig, 2010). In German patients, the need for active *giving/generativity* was of importance. To pass own life experiences to others, to solace someone, and be assured that life was meaningful and of value mean that the patients by themselves intend to leave the role model of a “passive sufferer” and to become an active, self-actualizing, giving individual (Büssing & Koenig). Support for this suggestion came from qualitative results of Murray, Kendall, Boyd, Worth, and Benton (2004) that “spiritual needs were expressed in terms of the needs to

maintain a sense of self and self-worth, to have a useful role in life, retaining an active role with family and friends.”

Spiritual needs, either expressed actively or not, thus could be regarded as patients' longing for psycho-spiritual well-being which should be supported by health-care professionals as an independent resource of relevance. Lin and Bauer-Wu (2003) found that “patients with an enhanced sense of psycho-spiritual well-being are able to cope more effectively with the process of terminal illness and find meaning in the experience.” If patients experience this gap between their expectancies and their concrete experiences, they implicitly point to this lack of psycho-spiritual well-being. To address these needs and to respond adequately remains a task for a modern health-care system. The 2009 Consensus Conference in Pasadena, California, provided practical recommendations to be implemented in palliative, hospice, hospital, long term, and other settings (Puchalski et al., 2009).

Cross-References

- ▶ [Care, Palliative](#)
- ▶ [Palliative Patients, Symptom Cluster Measurement](#)

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Spiritual Quality of Life

- ▶ [Spirituality, Overview](#)

Spiritual Self

- ▶ [Independent/Interdependent Self](#)

Spiritual Socialization

- ▶ [Religion/Spiritual Fulfillment, Satisfaction with](#)

Spiritual Struggles

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Synonyms

[Relations with God](#); [Religious doubting](#)

Definition

Spiritual struggle is a term used to characterize facets of religious or spiritual engagement that entail costs for the individual and may undermine health and well-being. Although researchers have identified a number of types of spiritual struggles, three types have received the most empirical scrutiny in recent years: (a) divine, or troubled relationships with God; (b) intrapsychic, or religious doubting; and (c) interpersonal, or negative encounters with coreligionists.

Description

Some individuals experience their relationship with God or a Higher Power as difficult or unsatisfying (Exline, 2002; Pargament, 2002). For persons encountering such divine struggle, God may seem (a) distant and unresponsive to

their needs or (b) punitive, unloving, and unforgiving. Consequently, these persons may develop a range of negative cognitions and emotions toward God. For example, divine struggle may take the form of disappointment at God, among those persons whose hopes and expectations of comfort and guidance go unmet (Exline, Yali, & Lobel, 1999). Those persons who are grappling with personal pain or challenges may question whether God cares about them or whether God is powerful enough to help them in their times of need. Indeed, some individuals may come to wonder whether God exists at all (Exline, 2002; Pargament, 2002). Alternatively, individuals experiencing difficulties may wonder whether God is judging them for sinful behavior or lack of spirituality, and they may feel anger at God for abandoning them or for causing or allowing bad things to happen to them or their loved ones (Exline, Park, Smyth, & Carey, 2011). Such divine struggles may impede individuals' ability to draw upon spiritual resources constructively when facing acute or chronic stressors and in fact may amplify feelings of strain and discomfort (Exline et al., 2011; McConnell, Pargament, Ellison, & Flannelly, 2006).

Intrapsychic struggle, often conceptualized and measured partly in terms of religious doubting, constitutes a second major type of spiritual struggle (Ellison & Lee, 2010). Doubts may emerge from a wide range of sources; examples include the problem of evil in the world, new developments in scientific and historical knowledge, uncertainty over religious doctrines themselves, disagreements with the practices of religious institutions, and real or perceived hypocrisy on the part of religious leaders or group members (Krause & Ellison, 2009). Although it has been argued that doubting can be an important impetus to spiritual maturation, doubts can also be a source of extreme discomfort. For example, doubts are nonnormative or stigmatized by religious communities. Believers who come to have significant doubts may feel cognitive dissonance due to the apparent inconsistency between their personal identities as religious persons and their lack of unquestioning

commitment to their faith (Krause & Ellison, 2009; Krause & Wulff, 2004). Doubting may also incur feelings of guilt and remorse, as well as worries about divine punishment. Further, individuals may hesitate to share their spiritual uncertainty or questioning with clergy or coreligionists, who might be able to provide assistance (Ellison & Lee, 2010).

Yet a third type of spiritual struggle is interpersonal in nature. Such interpersonal struggle may stem from many causes. For example, religious groups can be demanding, asking more of members – in time, energy, money, and conformity – than they are able or willing to give (Exline, 2002; Krause, 2008). Failure to comply with collective expectations can elicit negative social sanctions and can result in feelings of shame and guilt. There is also the potential for conflicts over doctrine and theology, political disputes, attitudes toward the clergy member and administrative matters, as well as many other issues (Krause, Chatters, Meltzer, & Morgan, 2000). In general, negative interactions have been shown to be less common than positive encounters, but their deleterious effects on well-being are proportionally greater (e.g., Schuster, Kessler, & Aseltine, 1990). This may reflect the influence of broad norms regarding social civility, which make conflict unexpected and jolting (Rook, 1984). Negative interactions in religious settings or among coreligionists may be especially problematic because expectations of kindness and gentility pervade most religious communities (Krause, 2008).

Discussion

Spiritual struggle is thought to be more widespread among clinical samples as compared with samples drawn from the general population (Fitchett et al., 2004). In diverse clinical and population-based samples, the various types of spiritual struggle described here have been linked with a wide range of negative mental health outcomes (e.g., depression, ► [anxiety](#), distress) and physical health outcomes (e.g., poorer self-rated health, slower recovery from major health

problems, increased mortality risk) (Exline et al., 2011; Fitchett, Rybarczyk, DeMarco, & Nicholas, 1999; Galek, Krause, Ellison, Kudler, & Flannelly, 2007; Krause & Wulff, 2004; McConnell et al., 2006; Pargament, Koenig, Tarakeshwar, & Hahn, 2001, 2004). In the general population, associations between most types of spiritual struggle and well-being do not appear to vary by gender, race/ethnicity, or socioeconomic status (Ellison & Lee, 2010). Levels and deleterious effects of intrapsychic struggle are greatest among younger persons, and they decline consistently with age (Galek et al., 2007). Divine struggle also appears to amplify the noxious effects of ► [stressful life events](#) on mental health outcomes (McConnell et al. 2006). It is important to note that much of the work on this topic has been conducted in the USA and a few other developed Western nations. Therefore, additional research in other social and cultural contexts is needed.

Cross-References

- [Distress](#)
- [Emotional Well-Being](#)
- [Health](#)
- [QOL](#)
- [Religion](#)
- [Spirituality](#)

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Spirituality

- [Spiritual Needs of Those with Chronic Diseases](#)

Spirituality and Adjustment to Divorce

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Definition

► **Religion** and ► **spirituality** are both terms that refer to practices, beliefs, and feelings that primarily function to facilitate an individual's search for the sacred (Pargament, 1997). The core of the sacred consists of concepts of God, the divine, and the transcendent. Other objects or situations can also be infused with spiritual character and significance by association with divinity (Pargament & Mahoney, 2005). For example, a person might sanctify ► **family relationships** (Mahoney, Pargament, Murray-Swank, & Murray-Swank, 2003).

Description

Research Among Adults

Research on religion and divorce has primarily examined the relationship between religious characteristics such as religious affiliation or church attendance in relation to divorce rates. Empirical studies on the role of religion and spirituality in adjusting to divorce are limited. One qualitative study suggested that in the US, those belonging to religious communities tend to rely on themselves rather than their religious community to cope with divorce (Jenkins, 2010). Interviews with 41 individuals experiencing divorce while active in one of six contemporary US religious communities indicated that participants relied heavily on individual rather than communal strategies for responding to the psychological and emotional changes created by divorce. This was because participants tended to view divorce recovery as a private effort and commonly experienced a sense of isolation

within their religious communities resulting from personal shame and congregational silence on the topic of divorce.

Nevertheless, research indicates that individuals often employ religious and spiritual coping methods in response to divorce. A theme among the available research is that religion and spirituality can function as positive resources during divorce adjustment. An early qualitative study of 12 women regarding their personal divorce experience and spiritual history indicated that 91 % of the women reported spirituality facilitated their recovery after divorce (Nathanson, 1995). A theme for many of the women was that the experience of disappointment, confusion, and anger stemming from divorce led to a spiritual search for sense and meaning, which ultimately offered them deeper understanding and insight. Spirituality aided participants' adjustment by helping them redefine and integrate aspects of life that had been changed by the divorce, such as their goals, ► **values**, beliefs, and perceptions. Though limited in terms of examining only a small sample of women, this study emphasized that spirituality can be a powerful tool for divorce recovery.

The role of religion and spirituality in divorce adjustment has also been studied quantitatively. Webb et al. (2010) examined the effects of religious coping in response to major life problems among a large ($N = 9,441$) US national sample of Seventh-Day Adventists. They examined how religious coping related to depression among those who had divorced in the previous 5 years (4 % of sample) compared with those who had not divorced in the previous 5 years. Having a positive religious coping style was inversely associated with depression for the entire sample, and reduced depression to a greater extent among those who had experienced recent divorce. Thus, it seems that reliance on positive religious coping following divorce might buffer individuals from depressive symptoms. Krumrei, Mahoney, and Pargament (2009) reported similar cross-sectional analyses among a smaller ($N = 100$) sample of recently divorced adults recruited on the basis of court records. Despite the fact that this sample was slightly less religious

than the general US population, most reported spiritual interpretations of and religious coping with divorce. A 1-year follow-up with this sample (89 % retention) indicated that engaging in positive religious coping with divorce predicted greater posttraumatic growth over time, even when controlling a host of prior psychological and religious variables (Krumrei, Mahoney, & Pargament, 2011). Positive religious coping predicted higher levels of personal strength, appreciation of life, openness to new possibilities, and positive interaction with others. Positive religious coping included helpful religious/spiritual thoughts and behaviors such as benevolent religious reappraisal (e.g., trying to find a lesson from God through the divorce), collaborative religious coping (e.g., working together with God to relieve one's worries), seeking religious direction (e.g., looking to God for a new direction in life following the divorce), seeking spiritual support (e.g., seeking comfort from God), religious focus (e.g., praying to get one's mind off of divorce-related problems), and seeking support from clergy or members of one's spiritual community (e.g., asking others to pray about the divorce-related outcomes).

In addition to finding that religion and spirituality can function as a positive coping mechanism following divorce, a second trend in this research is that certain forms of religion and spirituality can relate to higher levels of maladjustment following divorce. For example, forming cognitive appraisals of one's divorce as the loss or desecration of something sacred predicted higher levels of depressive symptoms and dysfunctional conflict tactics with the ex-spouse over time, even when controlling general religiousness and prior levels of depression and conflict (Krumrei et al., 2011). Similarly, engaging in negative religious coping in the year following divorce predicted more depressive symptoms, even above the variance accounted for by similar nonreligious forms of coping when controlling prior levels of depression. Negative religious coping includes religious/spiritual thoughts and behaviors such as punishing God reappraisal (e.g., thinking God was using the divorce as a punishment), reappraisal of God's powers (e.g., questioning

God's power in the situation), passive religious deferral (e.g., not taking action because one assumes God will handle everything), pleading for direct intercession (e.g., bargaining with God to make the divorce situation better), spiritual discontent (e.g., wondering whether one has been abandoned by God), and interpersonal religious discontent (e.g., feeling dissatisfied with the clergy).

Mediation analyses have indicated that negative religious coping fully mediates links between appraising the divorce as a sacred loss or desecration at the time it occurs and depressive symptoms 1 year later (Krumrei et al., 2011). Thus, it seems that negative religious coping is the vehicle through which negative spiritual interpretations of divorce result in maladjustment over time. As may be expected, moderation analyses have also indicated that negative religious coping is more strongly associated with depressive symptoms among those who form high versus low appraisals of their divorce as a sacred loss or desecration (Krumrei et al., 2011).

Research Among Children and Families

Other studies have considered the role of religion and spirituality for adjustment among children and families after a divorce takes place. One study highlighted that religion can enhance postdivorce family relationships. A nationally representative random-digit-dial sample of adults aged 25–74 was used to examine the influence of religion on 163 fathers' relationships with their children after divorce (King, 2003). The results indicated that fathers who scored higher on six dimensions of religiousness were more involved with their children and reported higher quality relationships with their children, even after controlling demographic and background factors such as traditional attitudes. Three of the examined dimensions of religiousness (importance of religiosity, having a religious preference, and believing religious instruction is important for children) were much more predictive of the quality of the postdivorce relationship than the other three (seeking religious comfort, identification with a particular religious group, and church

attendance). This study suggests that specific aspects of fathers' spirituality enhance their ties to their children after divorce.

Similar to studies with samples of divorced adults, religion has been shown to play an important role in coping with divorce for the entire family. In a study designed to identify factors that promote resilience and family well-being after divorce, religion was found to be a distinguishable factor that aided families' ability to adjust after the crisis (Greeff & Van Der Merwe, 2004). One parent and one adolescent within 98 families, who had experienced divorce between 1 and 4 years prior, were asked the open-ended question: "What are, in your own words, the most important factors, or strengths, which helped your family through the stressful time?" The joint responses of the parent and the child were ranked according to the themes that were indicated most often. Religious faith was ranked fourth among factors that helped the divorced families cope and was reported as a helpful coping mechanism by 51 % of participants. Parents specifically indicated that an important coping strategy was the search for religious support.

Other studies have examined cognitive and behavioral factors that may offer an explanation for these links. An early study of religious and spiritual variables among children of divorce demonstrated that the nature of spiritual appraisals of divorce was predictive of the type of religious coping activities employed in response to the parental divorce, even after controlling religious dispositional variables (Shortz & Worthington, 1994). Among a sample of 131 college students with divorced parents, those who appraised their parental divorce as being part of God's plan made use of more positive and less negative religious coping methods, whereas those who appraised their parental divorce as being caused by God's anger made use of more negative religious coping strategies such as religious discontent, anger at one's church, and pleading with God for a miracle.

A more recent study has indicated that the specific nature of religious coping with parental

divorce, in turn, influences the nature of psychological and spiritual adjustment. Among a sample of 274 young adults with divorced parents, positive religious coping reported about the time of the divorce was tied to greater current posttraumatic growth and spiritual growth (Warner, Mahoney, & Krumrei, 2009). On the other hand, those who had appraised their parents' divorce as a sacred loss/desecration or engaged in negative religious coping with the family divorce reported higher current levels of depression, anxiety, and painful feelings about the divorce. These symptoms included greater paternal blame, self-blame, loss, abandonment, seeing life through the filter of divorce, and intrusive thoughts. Nevertheless, negative spiritual appraisals and religious coping were also associated with greater spiritual growth. As in studies with divorcees, negative religious coping mediated links between having appraised the divorce as a sacred loss or desecration and the psycho-spiritual outcomes. In addition, each of the findings emerged while controlling general religiousness in the sample.

Discussion

Clearly, the body of empirical research on spirituality and divorce adjustment is scarce. Only four cross-sectional and one longitudinal study of spirituality and personal divorce adjustment were located. Four additional studies have been published about the role of spirituality in divorce adjustment of children and families. There is a need for additional in-depth, longitudinal research on this topic.

A few themes emerge from the current body of research. First, spirituality does not seem to exhibit one overarching positive or negative effect when adjusting to divorce. Rather, different expressions of religion and spirituality are uniquely related to positive and negative psychological, social, and spiritual outcomes. For this reason, some religious variables have been termed positive religious coping, because they relate to various forms of personal growth, whereas others have become known as negative religious coping, because they have been associated with harmful psychosocial outcomes.

This indicates that it matters less *whether* a person has religion and more what is the *nature* of the person's religion. The *specific* ways in which spirituality infused perceptions and behaviors among research participants accounted for variance in their individual and interpersonal adjustment to divorce, even when controlling their general levels of religiousness (which included frequency of church attendance and prayer and self-rated importance of religion and spirituality). This indicates that divorce outcomes are impacted by specific spiritual interpretations and behaviors rather than by general religious characteristics such as religious affiliation or frequency of church attendance.

Second, a few of the studies indicated that religious coping predicts psychosocial adjustment above parallel forms of nonreligious coping. This suggests that there may be something essential about spirituality that contributes to the way family members respond to divorce, rather than that divorce adjustment is impacted only by the psychosocial functions of religion, such as social networks, traditional values, and personal or social resources.

Finally, this research highlights the importance of considering spirituality when conducting divorce education and intervention in legal, family, mental health, and clerical settings. The available research indicates that spirituality can facilitate or hinder divorce adjustment. Therefore, tapping spiritual strengths or working through spiritual struggles may have profound influence on those adjusting to divorce. Resources are available for clinicians working with family members from whom religious and spiritual issues are salient to divorce adjustment (Mahoney, Krumrei, & Pargament, 2008; Mahoney, Warner, & Krumrei, 2010; Murray, 2002).

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Spirituality and Coping in Patients with Schizophrenia

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Synonyms

Religiosity and coping with schizophrenia;
Religiousness

Definition

Spirituality/Religiousness

Spirituality and religiousness are multidimensional, complex concepts with substantive and functional aspects related to biological, affective, cognitive, moral, relational, personality or self-identity, social, cultural, and global phenomena.

Spirituality and religiosity/religiousness are closely linked and used interchangeably by some, while some others consider these to be two different concepts. There are many diverse definitions of spirituality and religiousness. (For a full review, see Zinnbauer & Pargament, 2005.)

Spirituality – Spirituality involves the ways in which people fulfill what they hold to be the purpose of their lives – a search for the meaning of life and a sense of connectedness with the universe. It is considered more personal with an individual meaning and not bound by rules, regulations, and responsibilities associated with religion.

► *Religion* – Religion, on the other hand, involves beliefs, practices, and rituals related to the sacred that are shared by a group of people (Koenig, 2009).

► *Religiousness* – It is understood as “a system of beliefs in a divine or superhuman power, and practices of worship or other rituals directed towards such a power” (Argyle & Beit-Hallahmi,

1975) or “the feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine” (James, 1961).

Some authors consider that religion in a broad sense includes both spirituality (concerned with the transcendent and addresses the ultimate questions about life’s meaning) and religiosity (specific social, behavioral, doctrinal, and denominational characteristics) (Huguelet, Mohr, Borrás, Gillieron, & Brandt, 2006). On the other hand, Zinnbauer (Zinnbauer & Pargament, 2005) defines spirituality as a broader construct – a personal or group search for the sacred, while religiousness is defined as a personal or group search for the sacred that *unfolds within a traditional sacred context*.

Coping

Coping has been conceptualized as any response to situational life stressors that serves to prevent, avoid, or control emotional distress. Lazarus and Folkman (1984) defined coping as ongoing cognitive and behavioral efforts to manage specific external and/or internal demands appraised as taxing or exceeding the resources of the person. Coping consists of an assessment of the stressful nature of the stressor and coping strategies. A coping strategy may be either consciously or unconsciously directed, that is, a person may plan the behavior which seems to be appropriate or may make the same kind of response without self-awareness and deliberation (Ray, Lindop, & Gibson, 1982).

Description

Measuring Spirituality/Religiousness

Scales measuring spirituality/religiousness have variably assessed general religiousness or spirituality, religious or spiritual commitment, religious or spiritual development, religious or spiritual coping, and religious or spiritual beliefs and values (for full review: see Hill, 2005). Measures of spirituality have been specific to the

condition/characteristics of the population (e.g., cancer patients, HIV/AIDS patients) or generic (Spiritual Well-Being Scale, SWBS; World Health Organization Quality of Life – Spirituality, Religiousness and Personal Beliefs, WHOQOL SRPB). Certain measures of spirituality/religiousness measure religiousness as a coping strategy in specific populations (Mohr, Gillieron, Borras, Brandt, & Huguelet, 2007).

A few prominent measures of spirituality and religiousness (as reviewed in Meezenbroek et al., 2010) are:

1. Spiritual Well-Being Scale (SWBS) – SWBS has three dimensions: a religious well-being (RWB) dimension, an existential well-being (EWB) dimension, and an overall spiritual well-being (SWB) dimension that is the combined RWB and EWB scores (Paloutzian & Ellison, 1982).
2. Spirituality Subscale of the Mental, Physical, and Spiritual Well-being Scale (MPS, Vella-Brodrick & Allen, 1995).
3. Self-Transcendence Scale (STS, Reed, 1991).
4. Spiritual Well-Being Scale of the Functional Assessment of Chronic Illness Therapy (FACIT-Sp-12; Brady et al., 1999).
5. Spiritual Involvement and Beliefs Scale (Hatch et al., 1998).
6. Spiritual Well-Being Questionnaire (SWBQ, Gomez & Fisher, 2003).
7. WHOQOL Spirituality, Religion and Personal Beliefs (WHOQOL SRPB; O’Connell et al., 2006).

Measuring Coping

Coping includes all efforts that an individual undertakes to manage his or her experiences, such as help-seeking, medication adherence, more specific coping strategies (e.g., cognitive self-talk and distraction), and substance use as a way of coping.

Ways of Coping Checklist – WCC developed from the theoretical framework of Lazarus and his colleagues (Folkman & Lazarus, 1980) consists of eight principal coping strategies which are either problem focused or emotion focused. Instrument for Assessment of Coping Behavior – IKB is another instrument for assessment of coping.

Measuring Spiritual/Religious Coping – Religion is believed to supply a conservational force in coping as the individual makes an attempt to hold on to or sustain the sense of meaning, control, comfort, intimacy, or spiritual connection in the midst of life crisis. Beyond conservation, religion also plays a transformational role (Pargament, 1996). Religious or spiritual coping may be active or passive. Religious coping activities represent five key religious functions when a person is faced with a stressful event: search for meaning, search for mastery and control, search for comfort and closeness to God, search for intimacy and closeness to God, and search for a life transformation (Pargament, Koenig, & Perez, 2000) (for detailed review, Pargament, Ano, & Wachholtz, 2005).

Spirituality and Coping in Schizophrenia

Spirituality and religiousness are highly prevalent in patients with schizophrenia. Patients with chronic schizophrenia or schizoaffective disorder have been found to be more likely to use religious coping when compared to patients with affective disorders (as reviewed in Koenig, 2009). Religion has been considered important in their lives by 85 % of the patients (Mohr, Brandt, Borras, Gilliéron, & Huguelet, 2006) and has been considered “helpful” for coping with the illness in more than 45 % to almost 80 % of the patients (reviewed in Koenig, 2009).

Religious coping appears to be important for patients with schizophrenia as a way of coping with their disorder and other life issues. It also helps in defining one’s identity and setting important life goals (Huguelet et al., 2009a). Also, spirituality and religiousness may influence or mediate the coping strategies used by these patients when faced with any stressful situation.

Using various coping mechanisms, spiritual and religious coping can be helpful/positive or harmful/negative or mixed. In case of helpful use of religion, religion provides patients with a positive sense of self or a spiritual sense of their illness that helps them accept it and mobilize their religious resources to cope. Negative use of religion causes negative sense of self, in terms of

despair and suffering or feelings of fear, anger, or guilt (Mohr et al., 2011).

Helpful Form/Positive Effects of Religious Coping

- Religion and spirituality can offer an answer to the problems of human insufficiency.
- Religion and spirituality gives positive sense of self in terms of hope, comfort, ► [meaning of life](#), enjoyment of life, ► [love](#), compassion, self-respect, and self-confidence and gives meaning to their illness.
- Religious coping has a positive impact on positive symptoms such as delusions and hallucinations as it helps to reduce the emotional and behavioral reactions to the psychotic experiences such as aggressive behavior.
- Religious coping also affects positively the dealing with negative and general symptoms.
- Spirituality also helps in reducing ► [anxiety](#), depression, and negative symptoms.
- Religion can provide guidelines for interpersonal behavior, leading to reduced aggression and improved social relationships (Mohr et al., 2006).
- Religion and spirituality are seen as offering great help by providing coping and problem-solving strategies, a source of ► [social support](#), and a sense of meaning in the midst of tragedy and confusion (Sullivan, 1998).
- Religious coping along with religious beliefs may play a protective role against suicide (Huguelet et al., 2007).

Outcomes of Positive Religious Coping

1. Positive religious coping has been associated with greater insight into illness, lesser rate of rehospitalization, better adherence to medications (attitude toward medical treatment may be shaped by spirituality/religiousness), and fewer suicide attempts (Koenig, 2009) as illness representations may be influenced by religion (Huguelet et al., 2009a). Religious involvement is significantly inversely correlated to substance use and abuse (Huguelet et al., 2009b) and smoking behavior (Borras et al., 2008). Religious coping improves hopefulness (Revheim, Greenberg, & Citrome, 2010) and social contact through religious/spiritual community (Mohr et al., 2010).

2. An increase in religious practice (i.e., spending more time in religious activities) has been predictive of better clinical and functional outcome in schizophrenia at 2 and 5 years (Verghese et al., 1989, 1990).
3. For patients with helpful religion at baseline, at 3-year follow-up, spirituality was predictive of fewer negative symptoms and better clinical global impression, social functioning, and ► [quality of life](#). Higher salience of religion in daily life was associated with a better outcome of negative symptoms. Higher salience of religion in giving meaning to life was associated with a better outcome in quality of life. Higher salience of religion in coping with symptoms was associated with a better outcome of the global evaluation of clinical and functional status. Frequencies of religious practices in community and support from religious community had no effect on outcome (Mohr et al., 2011).

Harmful or Negative Coping

A major misconception in patients with schizophrenia is that religious and spiritual beliefs take the form of religious delusions and are invariably psychopathological. Though some patients might have religious delusions, this does not mean that their spiritual experience is always illegitimate or the product of distorted thinking (Mohr & Huguelet, 2004). Many of these patients are able to employ religious coping in a positive and meaningful way. However, religion can be a source of despair and suffering in some patients. Patients are rejected by their faith community, burdened by spiritual activities, and disappointed and demoralized by their beliefs (Mohr & Huguelet, 2004). For patients with harmful religion at baseline, no relationships with any clinical or psychological variables were elicited at 3 years (Mohr et al., 2011).

Religion in the Problem-Solving Process

Pargament et al. (1988) described three ways in which religion can be involved in defining the locus of control in the problem-solving process:

1. *Deferring approach* – The individual relinquishes the responsibility for problem solving to God.
2. *Self-directing approach* in which the individual perceives God giving him or her the skills and resources to solve problems independently.
3. *Collaborative approach* in which the individual perceives God to be a partner who shares in the responsibility for problem solving.

Both self-directing and collaborative problem-solving styles have been linked to greater general psychological competence, while the deferring religious coping method has been related to lower levels of psychological resourcefulness (Hathaway & Pargament, 1990). However, a consistent pattern of positive outcomes emerges only for the collaborative coping style, while the other two styles yield mixed outcomes (Pargament, 1997).

Relation Between Spirituality/Religiousness and Coping Mechanisms

- Active coping – Persons with a sound spiritual or religious belief system have greater psychological competence and may find strength in their beliefs so as to face stressful situations, reappraise these, and, when faced with a stressful situation, employ active and adaptive coping techniques more often such as positive reappraisal, giving positive meaning to a situation by focusing on one's personal growth experience; accepting responsibility, recognizing one's role in solving a problem; planful problem solving, involves efforts to alter the situation, including an analytic approach; self-control, involves efforts to regulate one's feelings and actions; confrontive coping, aggressive efforts to alter a situation.
- Passive coping – Distancing is disengagement or detachment from a situation in an attempt to minimize the significance of the situation, suggesting that people with higher spirituality and religiousness may focus on the brighter side of the situation rather than the problematic side (Shah et al., 2011).

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Spirituality, Luck and Well-Being

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Definition

“Spirituality” is defined as “the quality of involving deep, often religious, feelings and beliefs, rather than the physical parts of life” (Cambridge Dictionary, 2012).

“Luck” is defined as “the force that causes things, especially good things, to happen to you

by chance and not as a result of your own efforts or abilities or success” (Cambridge Dictionary 2012).

“Well-being” is defined as “the state of feeling healthy and happy” (Cambridge Dictionary, 2012).

Spirituality has become a popular topic of research and theory, especially in psychology and religion. Yet, definitions of this concept can vary widely. Well-being and spirituality can be informed by religious motives. However, this depends on how people define spirituality and spiritual practice. A way to look at it is through experiences of “ecstasy” or “bliss.” These are “otherworldly,” that is to say that they are believed to happen outside normal consciousness (Thin, 2009: 33).

James ([1902] 1997) writes about the many dimensions of religious experience in the East and in the West and in particular about the individual experience of mysticism and/or spirituality. Some people talk about how spirituality can be achieved or felt when they are in contact and in harmony with the nonhuman environment (Thin, 2009: 31), feeling at peace when surrounded by nature. Many others associate spirituality with ► **mindfulness**, showing a positive correlation with well-being (Brown, Warren, & Richard, 2003). On the other hand, other individuals connect spirituality with the afterlife (Thin, 2009: 31), seeing it as inextricably related with their spiritual and religious experiences and states.

Research has shown that both spirituality and religion give hope, meaning, security, and ► **optimism** to individuals (Hadaway & Roof, 1978; Moberg, 1979). Some researchers have concluded that both religiosity and religious activity are positively related to ► **subjective well-being** (Moberg, 1972; Wilson, 1967), enabling individuals to achieve a sense of ► **social integration**. Durkheim (1951) wrote that well-being for individuals depends upon their finding a sense of meaning external to themselves, which may occur in the context of involvement with groups. Also, spirituality has often been associated with an increased ► **satisfaction with life**. Spiritual people have identified some important benefits, such as being able to explain events, feeling close to God, seeing beauty in the world, finding

comfort in their religious beliefs, and feeling their life has a purpose (Cohen, 2002; Myers, 1992).

Interestingly, Marian De Souza (2009) explains spirituality as human relationality. Inspired by Hay and Nye’s notion of “relational consciousness” (1998), she writes that individuals experience levels of connectedness to the self and everything other than the self. She highlights how it is through this human relationality, both within and outside oneself, that individuals experience empathy and compassion. It is through connectedness that a sense of self and place in one’s community is developed, providing a sense of meaning and purpose for the individual. If individuals feel that their lives are not worthwhile or if they become disconnected from their community or society, they can experience alienation and emotional instability.

The impact of spirituality and luck on ► **subjective well-being** has not been fully explored. Different understandings of spirituality and luck determined by different cultural contexts help explain the complexity of issues emerging when combining these aspects together. The definitions provided above are culturally constructed, providing a perspective that is not normative or universal. In the following section, a specific case study is described to set the scene for the subsequent discussion. The case study aims to demonstrate the importance of faith and the consequent resort to supernatural forces to acquire a sense of well-being and luck in a poor neighborhood in the city of El Alto, Bolivia. Being lucky means to be judged well by supernatural beings. To be judged well means to be in touch with supernatural forces through spiritual practice. In this specific cultural context, spirituality and luck are therefore inextricably connected with well-being. As evocatively analyzed by Whyte (1997), questioning misfortune is looking for security in the face of uncertainty in human life.

Description

In both English and Spanish languages, luck typically implies that there is some abstract good or

bad fortune that affects people that is beyond human beings' control, being "an unknown and unpredictable phenomenon that causes an event to result one way rather than another" (Collins English Dictionary, 2006). On the other hand, Calestani's research (2009) shows that in Bolivia the term used is the Spanish *suerte*, which is usually translated in English as luck. However, arguably Andean people also use the Aymara (one of the Bolivian ethnic groups) term *swirti*, which means something rather different, being actually closer to fortune or well-being. The concept of luck in El Alto also relates to ► **health** (body and psyche), protection, and success. Calestani (2009) explains that in Bolivia Aymara people think that *suerte* can be acquired through effort and work by asking for protection from supernatural forces. The kind of relation that is created with spirits is fundamental to assure a better ► **quality of life**. Yet, this process is considered to be extremely complex, requiring the full moral commitment of humans, who have to sacrifice their time and money in order to appease spirits and influence their *suerte*.

In the Bolivian plateau, well-being is largely attributed to harmonious relations with both other humans and with spiritual forces. Relations have to be continuously fed through the circulation of money. Money and what you can buy with it (e.g., objects and offerings) are obtained through effort and labor; thus, they become precious and are offered as special gifts to maintain those contacts so fundamental for "the good life" and for *suerte*, which is perceived as tutelary protection coming from supernatural forces.

But spending money is ineffective if not supported by faith. Commitment to spiritual beings is fundamental to create a sense of well-being. This commitment is expressed through rituals that vary according to the religious affiliation of individuals and households. The active pursuit of *suerte* through rituals is central because it is believed that if you have *suerte*, you have life: the practice of "reading la *suerte*" by local shamans is actually a tool to analyze a person's life and relations. *Suerte* represents an important aspiration for Aymara people.

Unless you are a breech baby, you are not born lucky, but you become so if you invest your resources in nourishing the forces that are believed to support the world. In exchange, these forces are believed to assure and control an individual's luck, freeing him/her from evil eye and envy – major sources of ill-being. This can be achieved through a ritual performed by a local shaman or other means, such as participating and dancing in a religious celebration in honor of a patron saint or engaging in regular acts of faith. Therefore, spirituality becomes part of everyday life and is inextricably connected with luck.

Spiritual forces are there to help people overcome their difficulties, but they cannot do it for free. You have to pay respect by making material offerings: the process of consumption of sacred practices and objects is fundamental. This is considered as a sort of "culinary" pact based on some sort of congruence between humans and gods. The offerings made by humans are going symbolically to be "eaten" through the burning of the objects offered. This allows one to enter into an empathetic relationship with spiritual forces as well as with the rest of his/her "community(ies)" (Calestani, 2009).

Despite the numerous studies on well-being, this concept has often generated confusion. Many have used it as a synonym for "development," "progress," "wealth," or even "► **happiness**," proposing an ethnocentric approach focused on quantitative methodologies (Thin, 2005: 2). Clearly, these terms are polysemic and can have multiple meanings according to the cultural context. Spirituality and luck can also be seen as acquiring multiple meanings according to the cultural context, as described above through Calestani's case study (2009).

Both luck and spirituality can be seen as important ► **values**, playing a crucial role in definitions of well-being. As shown by Brock (1999) and Sen (1993), values assume importance in their sociological sense and affect individual and collective well-being, that is to say that they are "conceptions of what is ultimately good, proper, or desirable in human life" (Graeber, 2001:1). "The good life" might revolve around money, material possessions, and

occupational status in certain cultures and classes and around harmony, spirituality, luck, peace, and positive relations regardless of material status of well-being in others. Diener and Suh (2000: 4) define ► **subjective well-being** as “values that people seek,” emphasizing how people live in agreement with or fulfillment of the values they hold dear.

Religious beliefs and practices have provided an important idiom for the expression of aspirations and the pursuits of ideals. The social role of emotions and its effects on well-being have been widely investigated in ► **anthropology**, especially in relation to issues of ► **solidarity**, feelings of confidence, and a sense of full personhood and ► **empowerment** (Barbalet, 2001; Turner, 2002; Bendelow and Williams, 1997). People’s loyalty to their notion of self-worth and the cosmological order is essential for their sense of fulfillment and empowerment.

The majority of studies that have looked at spirituality and well-being have been carried out within health sciences and have included the perspectives of patients (Daaleman, Kuckelman Cobb, & Frey, 2001; Reed, 1987). Yet, Emmons and McCullough (2003) focused their research on how blessings may have emotional and interpersonal benefits, shedding light on the effect of grateful outlook on psychological and physical well-being and focusing on positive affect.

Similarly, different scholars have shown that a belief in good luck may be adaptive and that positive illusions surrounding luck can lead to feelings of confidence, ► **control**, and ► **optimism** (Day & Maltby, 2003; Darke & Freedman, 1977a, b; Taylor & Brown, 1988). There is a well-known association between spirituality and happiness: in particular spirituality, religious coping, and belief were found to be good predictors of ► **quality of life** (Cohen, 2002; Emmons, Cheung, & Tehrani, 1998; Fabricatore, Handal, & Frenzel, 2000; Wills, 2009). Religious people report being happier and more satisfied with life than non-religious people (Myers & Diener, 1995; Koenig, McCullough, & Larson, 2001). Spirituality can also have a preventive or therapeutic effect on mental health outcomes (Levin & Chatters, 1998).

In the Andean case study described above, luck and spirituality appear to be inextricably connected and cannot be ignored when researching well-being. Not all cultures though would consider luck and spirituality as important for well-being research. Therefore, universal definitions of these terms require a reconsideration of the multiple local meanings emerging in different cultural contexts.

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Definitions

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Spirituality, Overview

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Synonyms

Spiritual quality of life; Well-being, spiritual

Definition

Various definitions of spirituality have been put forward by different researchers. Based on content analyses of 31 definitions of religiousness and 40 definitions of spirituality, Scott (1997) reported that the conceptions were distributed over nine content areas, with no category containing most of the definitions. These content areas include (1) connectedness or relationship, (2) processes contributing to higher level of connectedness, (3) reactions to sacred or secular things, (4) beliefs or thoughts, (5) traditional institutional structures, (6) pleasurable existence, (7) beliefs in the sacred or higher being, (8) personal transcendence, and (9) existential issues and concerns. Markow and Klenke (2005) pointed out that there were more than 70 definitions of spirituality at work.

Broad as well as narrow definitions of spirituality also exist in the literature. An example of a broad definition was put forward by Myers, Sweeney, and Witmer (2000) who defined spirituality as “personal and private beliefs that transcend the material aspects of life and give a deep sense of wholeness, connectedness, and openness to the infinite” (p. 265). According to this conception, spirituality includes (a) belief in a power beyond oneself, (b) behavior in relation to the infinite such as prayer, (c) meaning and purpose of life, (d) hope and optimism, (e) love and compassion, (f) moral and ethical guidelines, and (g) transcendental experience. Another broad definition can be seen in Lewis (2001) who conceived spirituality as the life affirmed in a relationship with God, self, community, and environment which leads to the nurturance and celebration of wholeness. Within this context, spiritual needs include meaning, purpose and hope, transcendence circumstance, integrity and worthiness, religious participation, loving and serving others, cultivating thankfulness, forgiving and being forgiven, and preparation for death and dying. On the other hand, there are relatively narrow definitions of spirituality such as focus on existential or transcendental questions, belongingness to involvement of

cardinal values underlying every aspect of life, and self-reflective behavior. For example, Worthington, Hook, Davis, and McDaniel (2011) conceived spirituality as “general feeling of closeness and connectedness to the sacred” (p. 205).

An integration of the literature shows that several elements are commonly employed in defining spirituality. These include meaning and purpose of life, meaning of and reactions to limits of life such as death and dying, search for the sacred or infinite, including religiosity, hope, hopelessness, forgiveness, and restoration of health (Shek, 2010). According to Worthington et al. (2011), there are four types of spirituality: religious spirituality (closeness and connection to the sacred defined by religion), humanistic spirituality (closeness and connection to mankind), nature spirituality (closeness and connection to nature), and cosmos spirituality (closeness and connection to the whole of creation).

Description

Assessment of Spirituality

Two broad strategies are commonly used to assess the construct of spirituality: quantitative approach and qualitative approach. To maximize the strengths and minimize the limitations of either approach, researchers commonly use both approaches to assess spirituality. In the quantitative approach, single items or scales are used to assess spirituality. For example, researchers have used one question to assess the respondent’s ranking of the importance of things in life, such as wealth, family, health, friends, social status, and peace of mind. Multiple items that assess religiosity and religious involvement are also commonly used. Such measures that contain either single or multiple self-reported questions are obviously problematic because their reliability and validity are often unexamined. To overcome these problems, psychological scales have also been developed to assess the construct of spirituality. Some examples include the Spiritual Well-Being Scale, Purpose in Life Questionnaire, Templer’s

Death Anxiety Scale, Enright Forgiveness Inventory, and Herth Hope Index. Unfortunately, there are few validated measures of spirituality in the field. For example, few researchers use advanced statistical techniques such as structural equation modeling to assess the construct of spirituality. It is also noteworthy that there are few validation studies of quantitative measures of spirituality (Shek, 2010).

There are researchers and clinicians arguing for the development of spiritual assessment tools (O’Connell & Skevington, 2007), and measures of spirituality are present in health and palliative care contexts (Borneman & Puchalski, 2010). Albers et al. (2010) reviewed the content and items of spiritual quality of life instruments that could be used in palliative care. In their discussion of the meaning of life measures, Steger, Frazier, Oishi, and Kaler (2006) pointed out that research on life meaning is sparse and there is a lack of measures of meaning in life with good psychometric properties. Based on a review of 29 measures related to the spiritual well-being of palliative care patients, Vivat (2008) concluded that there were conceptual and methodological limitations of the existing measures.

Second, qualitative methods are also used to examine spirituality (such as open-ended questions, drawing, verbal commentary techniques, and case studies), particularly in the clinical settings. The common features of qualitative research include naturalistic inquiry, inductive analysis, holistic perspective, qualitative data, personal contact and insight, dynamic system, unique case orientation, empathetic neutrality, and design flexibility. For example, children have been invited to draw pictures about the attitudes towards death and dying. While qualitative studies can capture the perspective of the informants and represent a more naturalistic form of research, it is often criticized as biased and polluted by ideological preoccupations. Shek (2010) pointed out that issues of objectivity and credibility should be examined in qualitative assessment of spirituality and suggested that the principles of qualitative research highlighted by Shek, Tang, and Han (2005) should be followed.

Spirituality and Quality of Life

Regarding the relationship between spirituality and quality of life, there are four possibilities. First, spirituality is a cause of quality of life. Second, spirituality is a concomitant of quality of life. Third, spirituality is a consequence of quality of life. Finally, the relationship between spirituality and quality of life are moderated and/or mediated by other factors. While studies have been conducted to examine the first two possibilities, research on the latter two possibilities is almost nonexistent.

Spirituality as a Cause of Quality of Life

There are theoretical accounts suggesting that spirituality is an antecedent of quality of life (i.e., the first possibility). In the theory of logotherapy proposed by Victor Frankl (1967), it is asserted that when there is existential vacuum (i.e., loss of meaning in life), mental problems come in to fill the vacuum. Emmons (2005) also argued that religion provides goals and value system that contribute to life meaning, which would eventually shape different aspects of a person's life.

Spirituality and Developmental Outcomes

There are research findings in the area of human development in both Western and Chinese contexts examining the influence of spirituality on developmental outcomes in different stages of life span. For example, there are studies showing that a higher level of spirituality was concurrently and longitudinally associated with better developmental outcomes, including lower levels of psychological ill-being and problem behavior and a higher level of positive mental health (Shek, 2010, 2012; Wong, 2012). On the other hand, Ellison and Lee (2010) showed that spiritual struggles, including troubled relationships with God, negative interaction in religious settings, and chronic religious doubting, were related to psychological distress. In the area of adolescent spirituality, Sawatzky, Gadermann, and Pesut (2009) commented that there are few studies on spirituality and quality of life in adolescents and that the mechanisms underlying the relationship remain relatively unknown.

Spirituality and Health Outcomes

There are reviews showing that spiritual well-being is positively related to health outcomes, although there are possible confounding effects in the reported relationships (Sinclair, Peperira, & Raffin, 2006). Regarding the relationship between spirituality and physical health, Powell, Shahabi, and Thoresen (2003) tested nine hypotheses with reference to mediated models (evaluation of the impact of religion or spirituality on health, regardless of whether or not such a relationship was mediated by established risk/protective factors) and independent models (evaluated religion or spirituality as an independent protective factor after controlling other effects) as follows:

Hypothesis 1: Church service attendance protects against death (persuasive evidence for both mediated model and independent model).

Hypothesis 2: Religion or spirituality protects against cardiovascular disease (some evidence for the mediated model and independent model).

Hypothesis 3: Religion or spirituality protects against cancer mortality (inadequate evidence for mediated and independent model).

Hypothesis 4: Deeply religious people are protected against death (consistent failures for both models).

Hypothesis 5: Religion or spirituality protects against disability (inadequate evidence for mediated model and consistent failure for independent model).

Hypothesis 6: Religion or spirituality slows the progression of cancer (consistent failures for both models).

Hypothesis 7: People who use religion to cope with difficulties live longer (inadequate evidence for both models).

Hypothesis 8: Religion or spirituality improves recovery from acute illness (consistent failures for both models). Religion or spirituality (negative religious coping) impedes recovery from acute illness (some evidence for both models).

Hypothesis 9: Praying improves physical recovery from acute illness (some evidence supporting both models).

Spirituality Intervention

The role of spiritual intervention has received increasing attention in the literature. On one hand, patients expect helping professionals to address their spiritual needs (Sinclair et al., 2006). On the other hand, different professional bodies started to give more attention to spiritual care. For example, the National Consensus Project for Quality Palliative Care regarded spiritual, existential, and religious concerns as required spiritual care (Domain 5). In addition, the White House Office of Faith-Based and Community Initiatives was established in the Bush administration. Theoretically, Lent (2004) argued that it is important to understand spiritual variables such as meaning in life so that client growth and rehabilitation can be promoted.

Under the assumption that spirituality influences health outcomes, spiritual intervention with an aim of treatment or restoration and improvement of quality of life has been developed. In a meta-analysis of 51 samples from 46 studies examining psychotherapies in which religious or spiritual (R/S) beliefs were incorporated, Worthington et al. (2011) drew several conclusions. First, compared with patients receiving secular psychotherapies, patients receiving R/S psychotherapies had better improvement in terms of both psychological and spiritual outcomes. Second, in contexts where spiritual outcomes are important, psychotherapies with R/S is a choice of treatment. Third, practitioners could consider offering psychotherapies with R/S to highly religious or spiritual patients.

Religious and spiritual approaches are also used in the treatment of substance abusers, particularly in the faith-based treatment programs (Neff, Shorkey, & Windsor, 2006). The possible role of spirituality in treatment and rehabilitation can be seen in the use of the 12 steps in treating substance abuse such as alcoholism (Alcoholics Anonymous, 1952):

1. We admitted we were powerless over alcohol—in that our lives had become unmanageable.
2. Came to believe that a power greater than ourselves could restore us to sanity.

3. Made a decision to turn our will and our lives over to the care of God as we understood Him.
4. Made a searching and fearless oral inventory of ourselves.
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and, when we were wrong, promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs.

Organizational Behavior

The importance of spirituality in the work place is highlighted by Markow and Klenke (2005). In a review of about 140 articles on spirituality in the workplace to understand the relationship between spirituality and work performance, Karakas (2010) drew three conclusions: (a) spirituality promotes well-being and quality of life in workers, (b) spirituality enables workers to have a vocational purpose and meaning, and (c) spirituality promotes interconnectedness and sense of community. On the other hand, four problems (danger of proselytism, issue of incompatibility, risk of using spirituality as a tool of manipulation, and legitimacy issue) and four suggestions (accommodation of spiritual requests, respect for diversity, encouragement of openness, and respect for whole person) are described.

Spirituality and Life Satisfaction

In an attempt to examine the strength of the relationship between spirituality and quality of life and the potential moderating variables, Sawatzky, Ratner, and Chiu (2005) carried out a meta-analysis based on an extensive review of the interdisciplinary literature. They found a moderate magnitude of the relationship and argued that the finding did not support the common assumption that spirituality is an overlapping concept under the umbrella of multidimensional quality of life.

Spirituality as a Concomitant of Quality of Life

There are theories suggesting that spirituality is part of quality of life. In the model of psychological well-being proposed by Ryff and Singer (1998), meaning, purpose, growth, and self-actualization are basic components of well-being, and psychological well-being includes self-acceptance, environmental mastery, positive relations with others, purpose in life, personal growth, and autonomy. In the Wellness Model proposed by Adams, Bezner, Drabbs, Zambarano, and Steinhardt (2000), emotional centeredness, intellectual stimulation, physical resilience, psychological optimism, social connectedness, and spiritual life purpose are basic dimensions of the model.

In many instruments of quality of life, spirituality is regarded as part of quality of life in the conceptual and measurement levels. For example, in the Function Assessment of Cancer Therapy, there are items assessing spiritual well-being. In the World Health Organization Quality of Life Assessment (WHOQOL), several domains are proposed, including physical, psychological, level of independence, social relationships, environment, and spirituality/religion/personal beliefs (The WHOQOL Group, 1998).

Conceptual, Methodological, and Practical Issues

There are several conceptual issues surrounding the construct of spirituality. The foremost limitation in the existing literature is that

spirituality has been defined in different ways. Obviously, how spirituality is conceived basically determines the direction of research for spirituality and quality of life. For example, with reference to spirituality in the Chinese culture, while “tao” (logos) is emphasized in Taoism, “Buddha” is the focus in Buddhism, and different deities (such as Wong Tai Sin, Che Kung, Tam Kung) and supernatural forces (e.g., fung-shui, qi) are intrinsic in various forms of popular religions. It would be interesting to study how spirituality in different forms of religion is related to quality of life.

The second conceptual problem is that there is a paucity of scientific models on the antecedents, concomitants, and consequences of spirituality. Obviously, scientific models are indispensable in guiding empirical research on spirituality and quality of life. There are several areas of conceptual gaps pertinent to the relationship between spirituality and quality of life. In the first place, the bidirectional influences between spirituality and quality of life (e.g., bidirectional influences between purpose in life and quality of life) are rarely examined in the literature. Logically speaking, it is possible that there are mutual influences in the domains of spirituality and quality of life. Second, adopting an ecological approach, further studies should be conducted to examine how individual factors (e.g., economic disadvantage), family factors (e.g., family beliefs, behavioral control versus psychological control), and social factors (e.g., endorsement of Chinese superstitious beliefs) may influence the relationship between spirituality and quality of life.

Methodologically, there are several limitations in current studies of spirituality and quality of life. The first limitation of the literature is that most of the measures of spirituality, including meaning of life, attitude toward death, religiosity, hope, and forgiveness, are quantitative in nature. Although quantitative measures have the advantages of objectivity and quantification, they lack flexibility and are unable to understand spirituality in depth. Furthermore, while post-positivistic approach

represents the dominant research paradigm in social science research, there are views pointing out its weaknesses and arguing for the use of qualitative methods. In fact, there are qualitative studies employing techniques such as drawing, open-ended questions and interviews to assess spirituality. As such, researchers should consider the question of whether quantitative, qualitative, and/or mixed approach should be used to assess spirituality and quality of life.

Finally, the literature review shows that most of the existing studies on spiritual well-being are cross-sectional in nature. Although cross-sectional studies (such as surveys of psychosocial correlates of religiosity and qualitative studies based on drawings and narratives) are useful to understand spirituality at a single time point, such designs are inadequate if the researchers wish to investigate the antecedents and consequences of spirituality (Shek, 2010) in the long run.

Cross-References

- ▶ [Meaning in Life](#)
- ▶ [Well-Being, Spiritual](#)

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Spirituality, Religiosity, and QOL

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Synonyms

[Religion](#); [Sacred and quality of life](#)

Definition

Spirituality is a set of actions or experiences chosen by an individual or community to connect to the sacred and the transcendent (Kale, 2004; Pargament, 1999). Emphasizing communal understanding and truth, religion is a system of

organized beliefs and practices that is oriented towards revealing the significance of the sacred (Emblen, 1992; Pargament, 1999). With a more personal frame of reference, religiosity is an individualized relationship with the divine, sacred, or transcendent (Peterson & Webb, 2006; Pollner, 1989).

Description

The constructs of religion, spirituality, and religiosity revolve around human interactions with the sacred. As explained by Zinnbauer, Pargament and Scott (1999), the sacred are those things, both tangible (e.g., religious icons, spiritual writings, pilgrimages) and intangible (e.g., concepts of God, divine, and the transcendent) that are set apart from the ordinary through attributions of holiness or worthiness for veneration and reverence. Broadly conceptualized, sacred “objects” are both signposts and, at times, the path on which religion/spirituality is played out. The division between the sacred realm and the ordinary offers the clearest boundary between similar concepts (connectedness, authenticity, meaning in life) and religion/spirituality (Pargament, 1999).

Research in QOL relating to religion, spirituality, and religiosity is subdivided into four main classifications: (1) religion, (2) spirituality, (3) religion/spirituality, and (4) religiosity (Peterson & Webb, 2006). The four subdivisions are deeply interrelated yet retain differentiating characteristics. For QOL research, clear delineation of the cognitive and social processes associated specifically with religion, spirituality, or religiosity allows for more incisive analysis related to objective QOL (standards of living) and subjective QOL (PWB).

Commensurate with its community origins and its foundation in the sacred and transcendent, religion emphasizes the interpretation of the sacred and organization of “believers.” QOL research in religion has primarily focused on denominational or religious affiliation studies that compare QOL between religious and nonreligious groups. Spirituality shares the

foundation of the sacred and transcendent. Communally and individually, spirituality encompasses the search for and discovery of the sacred (Pargament, 1999). Particularly in those settings where the objective modulates from the sacred to the transcendent, spirituality can be pursued outside of the religious context (e.g., New Age philosophies) or through a nonreligious belief system (e.g., Marxism [Liu, 2004], Humanism [Edwards, 2004]), (Peterson & Webb, 2006). However, forms of spirituality frequently are incorporated into religion as part of communal rites and rituals or individual devotions. QOL research on spirituality has focused primarily on health, mental well-being, and the impacts of attributes related to spirituality. With the conceptual overlap between religion and spirituality, another set of QOL studies, religion/spirituality research, have attempted to parse out the relative effects of religion and spirituality on various QOL measures. A fourth distinctive construct invaluable to QOL research was posited by Pollner (1989). Religiosity, a participative relationship with the divine, offers another lens for understanding the interaction between humans and the sacred with particular importance to understanding QOL at the microlevel. Through the application of the religion, spirituality, and religiosity constructs to QOL questions, members of academic and practitioner communities have advanced understanding of the continuous interplay between society and individuals in defining and determining well-being.

Religion and QOL

At its most fundamental level, religion may influence how QOL or well-being is defined, specifically at the cultural level. Ferris (2002) utilized the US General Social Survey Cumulative File (1972–1996) to build an understanding of particular religions' influence on longevity, as well as general happiness. Taking this macro-view allowed Ferris to conclude that the conception of "good life" in the USA rests heavily on Judeo-Christian ideas. At an axiological level, the culturally created and religiously influenced definition of "good life" impacts the assumptions that underlie the broader study of QOL.

Another emphasis of QOL research in the context of religion has been on the impact of religious affiliation and religiousness on health and mental well-being. In a cross-disciplinary meta-analysis of clinical studies, Koenig (2001) concluded that a multifaceted relationship exists between religion and health. While religious affiliations that prohibit certain types of medical care pose a threat to health, the remaining results suggest that religiousness is positively related to lower rates of blood pressure, cardiovascular disease, and mortality. Similarly, Hackney and Sanders (2003) found a positive correlation ($r = .10$) between mental adjustment (e.g., lower rates of depression, anxiety, guilt) and religiousness. Conversely, Mochon et al. (2010) suggested that subjectively measured mental health may be negatively impacted for those that are religiously affiliated but are experiencing a decline in commitment to their religion.

Religious freedom sits on the crux of an important dichotomy of QOL research regarding religion. When the religious expression/beliefs of one group come into conflict with that of another group, the well-being of the groups can become competitive inverses. Many people across the cultures of the world will not favor someone else's happiness if it directly contradicts their idea of God's will (Van Biema, 2005). Where freedom of religious expression is more broadly accepted such as in Europe, Lelkes and Clark (2004) reported that minority religious groups do not experience lower levels of well-being. While QOL research is limited in the area, it would be expected that a lower level of well-being would be reported especially by minority religious groups in cultural areas where freedom of religious expression is not accepted. Greater religious freedom enables plurality in religious expression. One possible consequence of greater plurality is religious fractionalization. Middlestadt and Middlestadt (2005) found evidence of a small negative relationship between religious fractionalization for countries and their ranking on the Human Development Index. Further research is needed to clarify the exact relationship between QOL and the continuum of possibilities for religious freedom.

Spirituality and QOL

The lower frequency of published QOL studies focused on spirituality reflects the relative resistance of spirituality as a construct to assessment by traditional research instruments (e.g., surveys, scales). In an objective QOL study, Sawatzky, Ratner and Chiu (2005) conducted an important meta-analysis of spirituality and health QOL for individuals. Based on over 3,000 published reports, their random effects model estimated that the correlation between spirituality and QOL had a moderate effect size ($r = 0.34$). The magnitude of this association suggests that spirituality is related to QOL, while remaining conceptually distinct from QOL.

From a subjective QOL perspective, psychologists have developed substantive understanding for spiritually related attributes such as gratitude, hope, forgiveness, and materialism (Peterson & Webb, 2006). In a study of adolescents, Sawatzky, Gadermann and Pesut (2009) found evidence that spiritual attributes such as purpose in life/meaning in life were significantly correlated to global QOL (overall life satisfaction). More recently, Ellison and Lee (2009) linked spiritual struggles to a decrease in psychological well-being. At the macro-level of countries, policy researchers and economists, such as Lelkes and Clark (2004), have found evidence that prayer, a spiritual activity, is positively correlated with individual life satisfaction.

Religion/Spirituality and QOL

Simultaneous treatment of religion and spirituality can offer considerable insight into meta-analyses of QOL. In addressing encompassing QOL topics such as happiness, Ahuvia (2004) simultaneously addressed both religion and spirituality as distinct constructs in the same study in order to contrast three theories about happiness. Similarly, researchers engaged in the National Study of College Students' Search for Meaning and Purpose at UCLA have given simultaneous treatment to religion and spirituality. These researchers were able to make comparisons between the effects of religion and spirituality in quality of life studies that suggested a correlation between spiritual struggles and

psychological distress. Alternatively, these researchers found evidence suggesting a slightly positive relationship between religious participation and general psychological health (Hofius, 2004).

Religiosity and QOL

While it is sometimes measured as part of religion and religiousness, religiosity offers a distinct and beneficial frame of reference for analysis of QOL issues. Religiosity is focused on belief in a personal relationship with the divine/transcendent and the actions that accompany such a belief including private or public prayers, recognition of a supportive, involved higher power, and church participation. In one of the earliest QOL studies to make such a distinction, Pollner (1989) discovered that this personal construct had a stronger correlation to global happiness, life satisfaction, and marital happiness than race, income, age, or marital status. Similarly, Kim (2003) confirmed the recurring research trend that religious individuals (those displaying religiosity) report a higher level of well-being than nonreligious people.

Several researchers have addressed the varying significance of this relationship at different life stages. While religiosity appears to be weakly related to personal well-being in Catalan young people (Casas, González, Figuer, & Malo, 2009), Tiliouine and Belgoumidi (2009) found a positive relationship between personal well-being and the meaning in life that is associated with religiosity in a Muslim university population. At the other end of the spectrum, the clearest positive relationship between religiosity and personal well-being can be found in the later stages of life (Cox & Hammonds, 1988).

From a health QOL standpoint, studies from the US National Institute of Health have shown a 25 % lower mortality rate for those who attend religious services at least weekly (Helliker, 2005). Certain aspects of religious participation have features that can be beneficial to health, such as meditation, a social network, and a set of values that discourage risky or unhealthy practices. Spiritual support (the idea that there is a God watching out for you)

and having a sense of purpose and meaning in life likely are important factors in religious persons being buffered from worry and its effects, such as depression, anxiety, and suicide (Paul, 2005).

Discussion

With the accumulated body of research on the interactive relationship of religion, spirituality, and religiosity on QOL, several important themes emerge to the forefront. Foremost, as a central part of both the cultural and personal identities and aspirations of people, the constructs of religion, spirituality, and religiosity need to be analyzed in light of their proven impact (both positive and negative) on QOL. Further research that clearly identifies the construct in question and adds to the existing body of knowledge would be especially meritorious in spirituality studies, religious freedom analyses, multicultural/non-western religion studies, and analyses of the impact of the constructs on defining and accurately measuring global QOL. Another important theme from the existing research is that the relationship between the constructs and QOL falls on a spectrum of interaction between those with positive experiences of religion, spirituality, and religiosity and those who do not. The interactions with QOL tend to be directly related to positive or negative experiences of the individual or group with respect to religion, spirituality, and religiosity.

In sum, QOL research suggests that those who are intrinsically motivated to pursue religion and spirituality by their own choice and for its own merits (rather than social approval or a material reward) report higher QOL. In this way, it appears that the accumulated wisdom from prior centuries about important aspects of human nature is being supported by today's research. Philosophers have long acknowledged that humans have a propensity for seeking the divine or transcendent unlike other creatures. From this same premise, French mathematician and philosopher Blaise Pascal (1669) observed that there was a God-shaped void in the heart of every man and that man's happiness would always depend on how this void was filled.

Cross-References

- ▶ Adolescents and Spirituality
- ▶ Health-Related Quality of Life
- ▶ Meaning in Life
- ▶ Personal Well-Being Index (PWI)
- ▶ Religion/Spiritual Fulfillment, Satisfaction with
- ▶ Spirituality
- ▶ Subjective Well-Being (SWB)

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Spontaneous Urban Practices

► Sharing Space in the Contemporary City

Sport(s)

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Definition

Many assumptions are made about the benefits of participating in sport without full consideration of the subjective experience and social context. As the process of approaching sport as well as engaging with it entails a broad range of physical, social, and psychological factors, attempts to incorporate well-being into the framework are more complex than generally considered.

Description

Sport, Young People, and Well-Being

Although attempts to generalize about well-being and ► [health](#) (both individually and collectively) are constrained by subjective interpretations (Vernon, 2008), when sport is brought into the equation, more often than not, it is incorporated as a positive view, where sport is a life-enhancing activity that contributes to well-being and to physical health (Bailey, 2005; Sallis & Owen, 1999), educational attainment (Bailey, et al., 2009), as well as reducing youth crime and disaffection (Nichols, 2007; Sandford, Armour, & Duncombe, 2008). Much of this focus is generated through broader rhetoric and, to an extent, deeply entrenched views among sport professionals and politicians alike of the health benefits of sport.

However, some aspects of sport, such as extreme sports and combat sports, might contribute to ► [individual well-being](#) while being hazardous to health. Similarly, at professional level, in the quest for achievement and success, the use of extreme regimes of training, performance-enhancing drugs (sanctioned or illegal), and modified diets are not necessarily healthy and may not

be regarded by participants as intrinsically positive or pleasurable (Heikkala, 1993; Pronger, 2002). For instance, the tennis player Andre Agassi's revelations in his autobiography about "hating" tennis are a case in point (Agassi, 2010). The subjective experience of "hating" something may be more tolerable if the outcome is considered worthwhile. Agassi's hate can be seen to be alleviated by the economic rewards, whereas an obese person may justify a diet or punishing exercise program in terms of the potential outcome of losing weight. However, this form of reasoning may be less persuasive or convincing for a child or an adult, for whom health is not necessarily considered problematic. Thus, well-being and health, which are often used continuously, are not always synonymous with each other.

There is also a further debate about the role of the state. In some instances, what the state considers to be good for individuals because it enhances their health may be perceived by such individuals to detract from their personal well-being – the smoking ban would be one such example. However, the debate is wider than the needs of the individual in contrast to the imposition of values from a paternalistic state because the concept of ► **public health**, the public good, and the well-being of society should also be considered. From this viewpoint, initiatives such as the smoking ban, while detracting from the well-being of individual smokers, can be seen as enhancing the health of society as a whole by, on the one hand, enhancing wider well-being by allowing nonsmokers to enjoy smoke-free environments but also, on the other hand, by reducing societal incidences of heart disease and lung cancer associated with smoking. There is often a tendency to develop this argument further in economic terms, such as the cost of treating such diseases to the NHS, or the loss of ► **productivity** in the workplace, but the negative impact on the well-being of friends, family, and colleagues of smokers who develop health problems is also an equally significant issue.

Given the above, it is evident that there is still room for more discussion on well-being, health, and sport, particularly when considered in terms

of adult discourses which have a direct impact upon the lives (and well-being) of children and young people who may not necessarily have a voice within these discussions and decision-making processes. It is often the case that in relation to the role of sport, there is a clear divide between those who cannot see compulsory provision as anything other than a force for good; those who are critical of sport, largely because of what they see as the evangelizing of many who are unequivocal about sport's positive benefits; and those who agree that sport may not be good for all but argue that it can be good for some. These ideas are explored further through the themes of gender, ► **pleasure**, and opportunities.

Gender, Sport, and Well-Being

In 2004, a review of research exploring girls' participation in sport and physical activities was conducted for the World Health Organization (WHO) (Bailey, Wellard, & Dismore, 2005). The report was an attempt to provide an overview of current research within the field and, at the same time, suggest possible ways in which girls could be encouraged and/or allowed to take a more active role in sport and physical activity.

The findings in this report were not necessarily remarkable for many of those professionals who deal with children's health and sport issues on a day-to-day basis – chiefly that the majority of young girls do in fact like sport and physical activities and would like to do more. However, what became more apparent was the way that girls were (and continue to be) excluded for a variety of often complex and competing factors. These included, among others, the influence of the family, friends, and physical education (PE) teachers, social perceptions of sport, as well as practical issues such as independent mobility.

The report provided a series of recommendations which promoted ways in which the various interested agencies, such as governments, schools, sport groups, and communities, could be more sensitive to girls' needs and interests. Much of this thinking was based on formulating ways in which activities could be made more "youth friendly" in the broader sense of the term where the specific needs of children and young

people could be addressed rather than maintaining simplistic gendered binaries.

In *Rethinking Gender and Youth Sport* (Wellard, 2007), a group of academics from a range of disciplines explore further the complexities of understanding gender within the context of youth sport and contribute to the discussion by considering gender in relation to broader theoretical issues such as bodies, space, policy, and well-being. In doing so, they assess the fruitfulness of considering gender on its own or, as a factor, read through children's bodies or children's physical activity.

For example, Waitt (2007) explored the theme of occupation or ownership of social space, in particular the significance of physical space as it is historically and socially constructed as gendered. Waitt does this by focusing upon gendered spaces "outside" the school or organized sport by using the example of surfing spaces in Australia. These spaces originally emerged as significant cultural spaces for young people away from regulated, structured sports. However, within these physical and social spaces, specific gendered identities are established and performed. Waitt's research highlights the ways in which gendered identities are shaped through and by local spaces as well as the physical activity.

In another example, Pickard (2007) used empirical research with young female ballet dancers to highlight the prevalence of pain and the socially constructed techniques employed by the dancers to negotiate and hide it from the audience. For Pickard, while the body is a central factor in the construction of identities, at a social level of understanding, the ballet body is constructed in a binary opposition to a (male) sporting body. However, like men who play sport, negotiating pain increasingly becomes a central focus in the dancers' everyday lives, although the ways the young dancers do this provide sharp contrast to, for example, male boxers or rugby players. Pickard's research, therefore, provides the opportunity to critically assess general assumptions about gender and active participation in physical activities.

Although the focus upon children's general well-being has generated discussion about girl's

physical activity, moves to address the disparities in girls' participation in sport have also contributed to less welcome debates. According to Connell (2008), contemporary educational thinking about boys' academic underachievement has reproduced a drastically simplified view of men, boys, and masculinity. These simplistic readings of masculinity have been constructed in opposition to femininity and, as a result, reemphasized hegemonic forms of masculine performance and the belief "that only men can truly understand masculinity. Men have it, and women do not" (Connell, 2008, p. 132). Within this discourse, sport has been promoted as an opportunity to address boy's underachievement as it is considered an area where men "naturally" excel, along with the perception that only "real" men appreciate the importance of sport, and with the associated elements of it, such as fighting and competition. Consequently, such messages conflict with broader appeals to encourage girls to engage in sports more actively.

The "boys as victims" discourse has also been fuelled by much of recent government policy in England aimed at the welfare of children which has, in turn, been prompted by a broader focus upon a "children as victims" discourse, as a reaction to high-profile cases of apparent failings in children's services to protect vulnerable children (Powell & Wellard, 2008). By concentrating upon this aspect of children's well-being, recent policy in England affecting children (e.g., see Department for Education & Skills, 2004; Department for Children, Schools & Families, 2007) has consequently adopted measures which, intentionally or not, construct children as potentially at risk from a range of threats. On the one hand, this interpretation of children's well-being can be viewed as a positive step toward protecting vulnerable groups and, while on the other hand, can equally restrict outlets for children to experience and learn about the wider world for themselves.

These conflicting understandings of what is "good" for children have had a direct impact upon the ways in which children are able to experience their bodies and explore spaces. Particularly within the context of sport and physical

activity, the messages about the positive effects are generally described within the context of physical health and the prevention of disease in later life. For example, The Children's Plan (2007) specifically identified the importance of introducing measures to address health and well-being, particularly in relation to reducing obesity. Consequently, much of the recent debate about children's well-being has been expressed in terms of "health" and the potential risk of obesity. Although well intentioned, concern is raised in that continued focus upon specific outcomes has assigned many other equally important aspects of a young person's development to the sidelines and has possibly impeded the quest for overall well-being that is considered a main objective.

Pleasure

One of the recommendations suggested in the 2004 WHO report, mentioned above, was the importance of developing ways in which physical activities for girls (and young people in general) could be enjoyable. Wellard (2012) explores the importance of fun, health, and social interaction in sport participation and in particular acknowledges pleasure in sport as more than just an intrinsic, subjective, highly individual experience. These ideas were developed in earlier research exploring the body and sport (Wellard, 2007, 2009) where themes relating to bodily pleasure, fun, and enjoyment as a factor in sporting participation constantly appeared in the narratives of the conversations with interviewees (both young and old). In this entry, the relevance of pleasure (in its many forms) as experienced through the body is explored in an attempt to generate ideas for further discussion relating to the impact of pleasure upon participation in sport. In particular, the suggestion is that young people need to have a range of experiences of sport in order to be able to make distinctions about what can be considered pleasurable for them. However, it is not about just providing the opportunity to "have a go" in order to comply with curriculum directives. It is about providing opportunities for young people to experience activities and make assessments about when, where, and how an activity is pleasurable.

The important point here is about recognizing the influence of pleasure for young people in their initial experiences of sport and subsequent formation of a sporting identity. Although, as adults, we may be aware of the benefits of participating in sport and physical activities, those benefits are not necessarily obvious for children. In particular, there is the risk of complacency among PE teachers as it is easy to forget that the activities they teach need to be experienced positively in the first place, or conditions need to be provided so that they can be experienced positively. It could also be argued that a focus upon outcomes such as tackling obesity or identifying talent will ultimately create a discourse where these values take precedence. Through time a restricted rhetoric of health, if constantly extolled by the teachers, could further alienate many individuals from their bodies and potential participation during the life course.

Opportunities

It is still apparent that young people do not always have the same opportunities and levels of provision. Research conducted by the Centre for Sport, Physical Education and Activity Research (SPEAR) highlights that participation in sport remains dependent upon a range of arbitrary and competing factors. Between 2010 and 2012, SPEAR was involved in evaluations of two high-profile national interventions aimed at increasing sport participation among young people (the Bank of Scotland and Lloyds TSB National School Sport Week and the Change 4 Life School Sport Clubs program).

The findings from the research suggest that these large-scale, funded initiatives were generally considered positive experiences, and, importantly, the children taking part enjoyed having the opportunity to try new or unusual sports, regardless of whether they said they liked sport to begin with. However, the research also revealed disparities between what adults and children want from such an event and contrasting interpretations of what a school sport week or a specific sport club could offer and how it could be integrated into the schools. In the case of the National School Sport Week, the research also revealed that primary

schools appeared more willing and flexible to incorporate a whole-school approach, whereas secondary schools tended to locate the event within a Physical Education department and focus more upon the competitive aspects. Consequently, the contrasting ways in which these initiatives were embraced within schools highlight that not all schools are sufficiently willing and/or able to deliver quality sport provision in ways which provide novel and creative opportunities for all children.

Conclusion

Finding common ground about young people's well-being in relation to more material concerns, such as poverty, is generally less problematic. However, in relation to sport, the terrain is much more difficult to negotiate. As indicated above, there are many assumptions made about the benefits of participating in sport without full consideration of the subjective experience and social context. For example, the continued belief about the impact of mega sporting events, such as the Olympics, is that they will inspire a surge in participation in sport. Research conducted by Weed et al. (2009) found that the evidence was less convincing. Indeed, in a systematic review of research conducted prior to London (2012), the evidence suggested that the Olympic Games were less likely to generate interest in those not interested in sport in the first place.

Bringing sport into the well-being "equation" necessitates not only greater consideration of the interpretation of well-being but also a reflexive consideration of how sport is understood by a range of stakeholders. Ultimately, at the heart of this debate is the need to acknowledge that, within the context of sport, well-being is constructed, prescribed, and experienced in a range of complex ways.

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Sporting Event Attendance

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Definition

Refers to attendance at live sporting events, that is, being physically present in stadia or other activity-supporting venues.

Description

Attending live sporting events can be conceptualized as social experiences, which contribute positively to the health and well-being of individuals (Wann, Martin, Grieve, & Gardner, 2008). “When social life becomes highly controlled and organized, people may become stuck in everyday routines to the point that we become emotionally constrained. This leads to a search for activities that offer tension-excitement and emotional arousal” (Coakley & Donnelly, 2009, p. 336). For many, sport satisfies this quest for excitement, and it is often used as a means to escape daily troubles and routines (Wann, 1995). Indeed, the excitement of witnessing a favored team defeat a despised rival has been found to be associated with ► [enjoyment](#) and ► [positive affect](#) (Raney, 2003). These positive outcomes support the notion that regular sport event attendance can be an effective coping strategy, through which people find fulfilment and commitment (Smith, 1988).

Sport event attendance can also foster feelings of social connectedness. For instance, Funk, Mahony, Nakazawa, and Hirakawa (2001) reported that sport events serve as ideal contexts for bonding with close family members and friends. Moreover, spectators can feel connected to (and acceptance within) a broader community of like-minded fans. Attending sport events allows some individuals to experience a ► [sense of belonging](#) and to express pride in their “place” (i.e., neighborhood, city, or nation) and/or their

team (Gladden & Funk, 2002). Wann et al. (2008) found social connections experienced at sporting events were related to improved state social psychological health (i.e., loneliness, collective ► [self-esteem](#), satisfaction, and ► [alienation](#)). According to the authors, “respondents reported significantly lower levels of state loneliness and significantly higher levels of state satisfaction when tested at the arena relative to when they were tested at their residence” (p. 233).

More recently, research has suggested that attending live sporting events might inspire audiences to increase their participation in sport or physical activity. Ramchandani and Coleman (2012), for example, surveyed spectators attending three major sport events in the UK. The authors found that almost two-thirds of respondents (aged 16 years and over) reported that their event experience inspired them to increase their participation in sport or physical activity. According to Ramchandani and Coleman, the main sources of the inspiration were linked directly to the athletes involved in the competition. Inspiration evoked by the performance of elite sport role models may have a positive influence on individuals’ health and well-being. For instance, Thrash, Elliot, Maruskin, and Cassidy (2010) found that being in an inspired psychological state promoted well-being in the form of positive affect and life satisfaction.

The majority of research examining relationships between attendance and well-being has been conducted within college, professional, and major sport event contexts. Future research would benefit from exploring the influence of smaller-scale (i.e., community-based) sport event attendance on individuals’ and communities’ quality of life and well-being.

Cross-References

- [Connections, Social](#)
- [Enjoyment](#)
- [Health](#)
- [Life Satisfaction](#)
- [Positive Affect](#)
- [Satisfaction](#)
- [Sense of Belonging](#)

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Sports Activities

- ▶ [Exercise](#)

Sports in Brazil

- ▶ [Brazil, Quality of Life](#)

Spouse Caregiving

- ▶ [Well-Being of Spouses of Persons with Mild Cognitive Impairment](#)

Spousal Concordance/Similarity

- ▶ [Marital Quality and Well-Being in Mid and Late Life](#)

Spousal Loss

- ▶ [Psychological Well-Being Among Older Bereaved Spouses](#)

Spousal Relationship Quality

- ▶ [Happy Spouses and Happy Parents](#)

Spousal Relationship, Quality of

- ▶ [Happy Spouses and Happy Parents](#)

Spousal Satisfaction

- ▶ [Relationship Satisfaction](#)

Spousal Support

- ▶ [Partner Support](#)

Spouse Abuse

- ▶ [Domestic Violence](#)

SPWB

- ▶ [Singapore, Quality of Life](#)

SQOL

- ▶ [Systemic Quality of Life Model \(SQOL\)](#)

SRES

- ▶ [Sex-Role Egalitarianism Scale](#)

SRS

- ▶ [Self-Rating Depression Scale \(SDS\)](#)

SSA: Similarity Structure Analysis

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Definition

SSA – *similarity structure analysis* (previously called *smallest space analysis*) – is a geometric technique for aiding comprehension of the spatial structure of correlation matrices or similarity coefficients matrices among variables. In this technique, the data are treated intrinsically in terms of inequalities, needing no explicit prespecified model.

This entry is dedicated to the memory of Professor Adi Raveh, who passed away in July 2012, before the completion of this enterprise

Description

Similarity structure analysis (SSA) was introduced and developed by Louis Guttman (1968) with the aim of overcoming the limitations of factor analysis regarding the possibility of the testing of hypotheses (Guttman 1954, 1958). Mathematically from the point of view of spatial analysis, Guttman regarded ▶ [factor analysis](#) to be “but a special case of *Smallest Space Analysis*” (Guttman 1967, p. 78; 1982, p. 491). Details regarding the differences between SSA and factor analysis are to be found *inter alia* in Guttman (1967, 1982), Schlesinger and Guttman (1969), and Cohen (2003).

SSA is essentially a geometric technique. For a symmetric input matrix, the analysis is called SSAI. SSAI treats each variable as a point in a Euclidean space in such a way that the higher the correlation between two variables, the closer they are in the space:

If $R_{ij} > R_{kl}$

then $d_{ij} \leq d_{kl}$

d_{ij} being the computed Euclidean distance between two points.

The space of smallest dimensionality is used that makes possible such an inverse relationship between all the pairs of observed correlations and the geometric distances. Only relative sizes of correlations and relative computed distances are of concern. Reference axes are *not* part of the general definition of SSA. The empirical data to be analyzed are not limited to coefficients of similarity but can also be dissimilarity coefficients, such as distances. In that case, the above monotonicity condition becomes: the smaller dissimilarity coefficient between variables, the closer their points are in the space:

If $D_{ij} < D_{kl}$

then $d_{ij} \leq d_{kl}$

Treating the data in terms of inequalities with no need for an explicit prespecified model enables a direct visual representation of the variables to be analyzed in terms of content regions rather than on coordinate systems (Guttman 1968, 1977; Lingoes 1968; Borg and Lingoes 1987).

Lingoes was the first to program the SSA and Guttman's additional nonmetric techniques (Lingoes 1973). The latest computer version can be found in Hudap – Hebrew University Data Analysis Package (Amar and Toledano 2001). Some of the new mathematical aspects appear at the end of this entry.

For convenience, SSA will be demonstrated next using empirical data from a study on ► [quality of life](#).

SSA1 in Practice

The data analyzed come from the “quality of life” study conducted by the Survey Research Center of the University of Michigan in the summer of 1971, on a national US sample of 2,164 respondents.

Input Data

The respondents were asked 15 questions concerning their extent of satisfaction with several life domains such as family, work, residence, and social.

In [Table 1](#) below, the interrelationships (Pearson coefficients) between the 15 satisfaction variables are presented.

Output Results

The SSA1 technique was processed on the matrix of [Table 1](#).

The best-fitting two-dimensional space is shown in [Fig. 1](#). Each item appears as a point in the space. Two points tend to be closer together as the correlation between the two items involved increases. This can be easily checked due to the direct visual representation of the items.

For example, the coefficient between item 10 (standard of living) and item 11 (savings and investments) is 0.59 which is the highest coefficient in [Table 1](#), while items 9 (health) and 2 (neighborhood) are not at all correlated (coefficient 0.00). Accordingly, in [Fig. 1](#), items 10 and 11 are the closest in the space, while items 2 and 9 are the farthest apart.

Dimensionality

A space representing the variables can be of a specific number of dimensions: one, two, three, or more. The SSA1 program is designed to find a space with the smallest number of dimensions that best presents the input coefficients as distances between variables. For any symmetric matrix of n variables, the representation of these variables is mathematically always possible in a space of $n-2$ dimensions (Guttman 1967, p.78). For both technical and substantive reasons, it is desirable to fit a space of the smallest dimensionality possible (far from $n-2$). The smaller the dimensionality relative to n , the greater the stability of the computed solution.

Moreover, the smallest possible dimensionality by itself is an indication of empirical lawfulness and allows a more revealing correspondence between the empirical spread of the points and the substantive aspects of the data.

Goodness of Fit

The goodness of fit between the input matrix and the output solution is expressed technically by what is called the *coefficient of alienation* varying between 0 and +1. Perfect fit is represented by an alienation coefficient of zero. The worst possible fit is designated by the value 1. Intermediate values of the coefficient represent intermediate degrees of goodness of fit.

The alienation coefficient expresses the extent to which some distances between pairs of points (representing variables) in the two-dimensional space do not adhere to the rule regarding the monotone relationship between input coefficients and output distances.

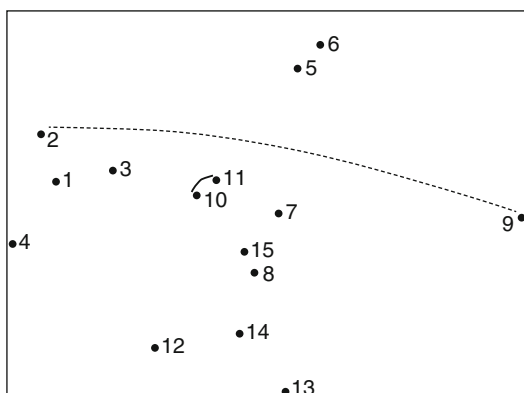
For empirical data finding, a perfect fit in a space as small as [Fig. 1](#) is not anticipated. The coefficient of alienation representing [Table 1](#) in two dimensions ([Fig. 1](#)) is 0.14 which is a rather good fit.

SSA: Similarity Structure Analysis, Table 1 Interrelationships^a (Pearson coefficients)^b among 15 variables of satisfaction with life in the United States

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
City as place to live	1	100	54	44	33	19	14	22	22	05	33	25	24	14	24	28
► Neighborhood	2	54	100	49	28	18	14	21	19	00	32	23	19	13	19	23
Housing	3	44	49	100	29	23	19	26	27	06	45	29	23	21	23	30
Life in the USA	4	33	28	29	100	12	15	23	23	06	24	19	21	13	21	24
Amount of education	5	19	18	23	12	100	54	25	26	18	32	28	16	09	18	28
Useful education	6	14	14	19	15	54	100	24	23	17	24	20	17	12	18	24
Job	7	22	21	26	23	25	24	100	33	13	35	27	25	25	27	34
Spending of spare time	8	22	19	27	23	26	23	33	100	21	37	32	40	30	40	50
► Health	9	05	00	06	06	18	17	13	21	100	17	17	09	12	14	26
Standard of living	10	33	32	45	24	32	24	35	37	17	100	59	25	25	32	45
Savings and investments	11	25	23	29	19	28	20	27	32	17	59	100	24	23	25	36
Friendships	12	24	19	23	21	16	17	25	40	09	25	24	100	21	31	32
Marriage	13	14	13	21	13	09	12	25	30	12	25	23	21	100	48	38
Family life	14	24	19	23	21	18	18	27	40	14	32	25	31	48	100	50
Life in general	15	28	23	30	24	28	24	34	50	26	45	36	32	38	50	100

^aThe matrix of Table 1 was analyzed by Shlomit Levy (1976), by permission from A. Campbell and W. Rodgers of the Survey Research Center of the University of Michigan

^bDecimal point omitted



SSA: Similarity Structure Analysis, Fig. 1 Two-dimensional SSA configuration of the 15 well-being items

Correspondence between SSA Configuration and Content

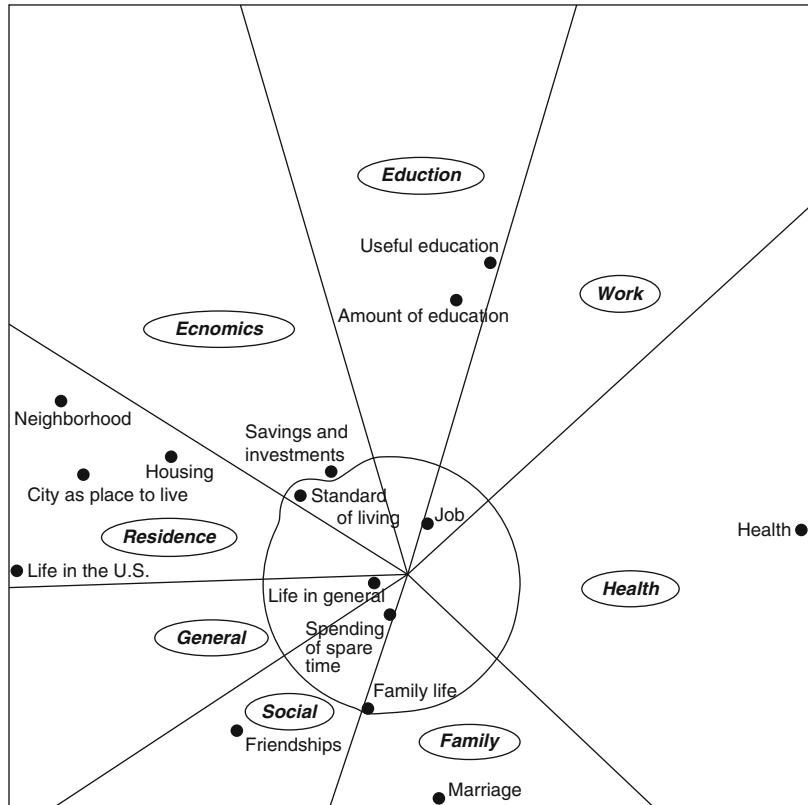
The alienation coefficient by itself, like any such coefficient, is inadequate for theory construction. The crucial issue is whether there is a systematic relationship between the statistical distribution and the content of the variables. The small dimensionality of SSA helps visualize such a relationship.

Lawfulness regarding sizes of correlations has been established largely in terms of content regions in the SSA space. The regionality concept is coordinate free; regions are to be defined by content considerations. Regions are indicated by – and usually share – boundary points; they are usually not “clusters” that are discernible by “empty space” around them. Regions are determined for a space that in principle has points everywhere such as in Fig. 1. This means that some variables in one region may correlate less with other variables of the same region than they do with variables from other regions. This enables detection of lawfulness in data that may have been unobserved or misinterpreted. Attaining more and more refined regions leads to more and more refined restrictions on sizes of correlations.

Returning to the well-being example, the fifteen variables can be classified into eight domains: education, economics, residence, social, family, health, work, and life in general. Inspection of the spread of points in Fig. 1 above shows a clear relationship to the classification of the items by their domains as portrayed in Fig. 2 below. The eight life domains correspond to wedge-like regions in the SSA space emanating

SSA: Similarity Structure Analysis, Fig. 2

The Radex structure of the interrelationships (SSA) among fifteen variables of satisfaction with life domains (the outer circle contains “resources” for well-being and the inner circle relates to “state” of well-being)



from a common origin and radiating outward, each in its own direction. This circular ordering of well-being life domains repeats itself across localities and populations (Bilsky 2003; Campbell et al. 1976; Cohen 2000; Levy 1976, 1990; Levy and Sabbagh 2008).

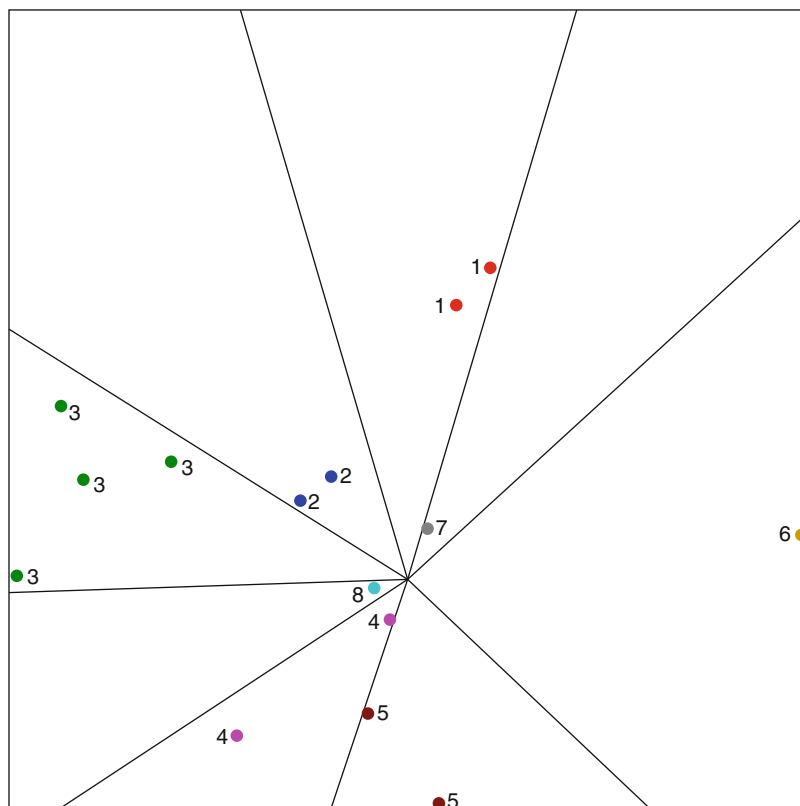
Any research content is usually classified in more than one way. Hence, in addition to the classification according to life domains, a further distinction can be made between variables relating to (a) the self’s state of well-being (e.g., life in general, family life, standard of living) and (b) the self’s well-being regarding the possession of resources (e.g., amount of education, savings, residence conditions). Each way of classification is called a *facet*. It turns out that the second facet corresponds to modulating the distance from the origin of the SSA, which is the item representing overall life satisfaction (no.15). The items relating to the state of well-being are located in the inner circle, while in the outer circle are the items regarding the possession of resources for

well-being (Fig. 2). Since both directions are contained within a two-dimensional space, they have a circular ordering among themselves.

Having two facets correspond to the polarizing and modulating directions of an SSA space is a form of circular structure called a Radex (Guttman 1954).

The lawfulness linking the content of observations with their empirical structure is a theoretical leap. Indeed, without methodology or technique, it is impossible to construct theory. The above presentation demonstrates the contribution of SSA to the development of the theory of well-being in a cumulative fashion (Guttman and Levy 1982), or as Campbell and his colleagues put it when summarizing their use of SSA in well-being research: “The radiation of the map... from a central core... seems so basic to the structure of human life that it is hard to imagine that it would not be characteristic of any segment of the population, or for that matter, populations” (Campbell et al. 1976, p. 72).

SSA: Similarity Structure Analysis, Fig. 3 Facet diagram of the eight domains on the 15 variables presented in Table 1



SSA with Facets

The purpose of analyzing empirical data such as correlation matrices is usually to find some empirical lawfulness with respect to the content of the variables.

Guttman suggested an algorithm for a computer program entitled Faceted Smallest Space Analysis “which requires substantive facet input along with usual similarity (or dissimilarity) coefficients, and for which the loss function involves both technical and substantive goodness-of-fit to regional hypotheses” (Guttman 1977, p. 107). Until now, the faceted smallest space analysis that Guttman envisaged did not materialize. The present *SSA1* program does not take account of content. Indeed, **all** existing programs of a similar nature have no content input. However, there is an option in the *SSA1* program to superimpose elements of content facets for each variable and produce facet diagrams (Amar 2001).

For example, this option facilitates viewing regional correspondence between the empirical configuration of the well-being variables and their classification according to the eight life domains (Fig. 3).

Analysis of an Asymmetric Matrix

SSA2

SSA1 described above is for symmetric matrices. An appropriate technique for analyzing a square-asymmetric matrix is *SSA2*, from the Guttman-Lingoes series (Lingoes 1973). In this technique, each variable is represented as a point in a Euclidean space, in such a manner that, for any three variables, the two most dissimilar will be farthest apart. Namely, distances are produced within rows or within columns.

SSA2 has two process options and therefore two different outputs: one for rows, the other for columns.

Missing data	$\mathbf{R} = \{r_{ij}\}$
\mathbf{R}^T	Missing data

SSA: Similarity Structure Analysis, Fig. 4 Schematic presentation of a square-asymmetric data matrix as a sub-matrix of a symmetric matrix

SSA2 requires the following monotonicity conditions:

Row option: within each row i $r_{ij} < r_{ik} \Leftrightarrow d_{ij} > d_{ik}$ for all couples (j, k)

Column option: within each column j $r_{ij} < r_{mj} \Leftrightarrow d_{ij} > d_{mj}$ for all couples (i, m)

where r_{ij} is the similarity coefficient between variables i and j and d_{ij} is the Euclidean distance.

This formulation raises both theoretical and algorithmic questions. To solve these problems, Guttman introduced the *WSSAI* technique (*Weighted SSAI*) for symmetric matrices, in the mid-1980s.

WSSA1

Using the missing cell feature of the *WSSAI* method, *SSA2* can be thought of as a special case of *WSSAI*. By assigning the weight of zero for “missing” information, the asymmetric matrix can be regarded as a sub-matrix of a larger symmetric matrix (Fig. 4).

In Fig. 4, \mathbf{R} is the square-asymmetric matrix to be analyzed, and \mathbf{R}^T is the transpose matrix of \mathbf{R} . Each row in \mathbf{R} becomes a column in \mathbf{R}^T . The missing data, namely, the main diagonal

sub-matrices, are assigned zero weight. With such an assignation, the missing cells are included in the processing by employing the “bypass” feature. However, though *WSSAI* does not consider at all any input values for the missing cells, the output distance d_{ij} of a missing cell is computed according to the known relevant information (Amar and Toledano 2001).

Thus it is possible to treat any nonsymmetric matrix via *WSSAI* technique, having the distances produced simultaneously for rows and columns in the same space.

Among other uses, this has facilitated the development of a new theoretical approach to sociometric issues (Levy and Amar 2002) involving square-asymmetric matrices. The same holds for rectangular matrices (Guttman and Levy 1987).

Some Aspects of the Mathematical Solution of the Method

Although the method is in general applied on correlations (similarities), as stated above, for convenience and without loss of generality, the mathematical development will be done from dissimilarities.

Statement of the Problem

Given a symmetric matrix of dissimilarity coefficients $\{D_{ij}\}$, D_{ij} being the coefficient between variables V_i and V_j , we want to represent the variables ($V_k; k = 1, \dots, n$) as points in an m -dimensional Euclidean space such that the following monotonicity condition is fulfilled “as well as possible”:

$$D_{ij} < D_{kl} \Leftrightarrow d_{ij} < d_{kl} \tag{1}$$

for each quadruplet (i, j, k, l) , d_{ij} being the computed Euclidean distance between points representing V_i and V_j , in the m -dimensional space:

$$d_{ij} = \sqrt{\sum_{a=1}^m (x_{ia} - x_{ja})^2} \tag{2}$$

The monotonicity condition is fulfilled as well as possible for dimensionality m thought to be the smallest.

The solution is noted:

$$x = x_{ia} = 1, 2, \dots, n; \quad a = 1, 2, \dots, m$$

The Determination of a Loss Function

The strategy chosen for solving the problem is to define a loss function to be optimized through an iterative process beginning with an initial approximate solution.

The monotonicity condition (1) can be formulated by the following inequality:

$$(D_{ij} - D_{kl})(d_{ij} - d_{kl}) > 0 \quad (3)$$

The quantity $(D_{ij} < D_{kl})(d_{ij} < d_{kl})$ is the contribution of the specific quadruplet (i, j, k, l) . The total contribution of all quadruplets is the following summation:

$$\sum_{i=1}^n \sum_{j=1}^n \sum_{k=1}^n \sum_{l=1}^n (D_{ij} - D_{kl})(d_{ij} - d_{kl}) \quad (4)$$

Using the triangle inequality property, we can find an upper bound of (4):

$$\left| \sum_{i=1}^n \sum_{j=1}^n \sum_{k=1}^n \sum_{l=1}^n (D_{ij} - D_{kl})(d_{ij} - d_{kl}) \right| \leq \sum_{i=1}^n \sum_{j=1}^n \sum_{k=1}^n \sum_{l=1}^n |D_{ij} - D_{kl}| |d_{ij} - d_{kl}|$$

Thanks to this inequality, a natural loss function for solving our problem can be

$$\phi = \frac{\sum_{i=1}^n \sum_{j=1}^n \sum_{k=1}^n \sum_{l=1}^n w_{ij} w_{kl} (D_{ij} - D_{kl})(d_{ij} - d_{kl})}{\sum_{i=1}^n \sum_{j=1}^n \sum_{k=1}^n \sum_{l=1}^n w_{ij} w_{kl} |D_{ij} - D_{kl}| |d_{ij} - d_{kl}|} \quad (5)$$

where w_{ij} are weights assigned to the data in order to allow treatment of missing information as explained later in this paragraph.

(5) is a normalized function bounded by value 1, whose maximization leads to the desired solution.

Unfortunately, this function is hard to handle from a mathematical point of view, apart from the huge number of computations which are required. In order to bypass these difficulties, Guttman (1968) found another strategy which is more or less equivalent to function (5).

The Actual WSSA1 Algorithm

An alternative loss function to (5) is defined by

$$\varphi = \frac{\sum_{i=1}^n \sum_{j=1}^n w_{ij} (D_{ij} - d_{ij})^2}{\sum_{i=1}^n \sum_{j=1}^n w_{ij} D_{ij}^2} \quad (6)$$

where

$$w_{ij} = \begin{cases} 0 & \text{if } D_{ij} \text{ is missing or } i = j \\ 1 & \text{otherwise} \end{cases}$$

The coefficients w_{ij} are weights assigned to the input data D_{ij} . In particular, these weights allow a good treatment of missing information, that is, if D_{ij} is unknown then $w_{ij} = 0$. The diagonal of the input matrix is not considered in the process; thus $w_{ii} = 0$.

As defined in (6), the minimization of loss function φ is in fact a “least squares” process, and there is no clear link between φ and the monotonicity condition (1) which is the main purpose of the method. However, if we “look at” D_{ij} as being images of a suitable function R called “rank image transformation,” we can solve (1) through minimization of (6). Therefore, it would be more correct to define φ as follows:

$$\varphi = \frac{\sum_{i=1}^n \sum_{j=1}^n w_{ij} (D_{ij} - d_{ij})^2}{\sum_{i=1}^n \sum_{j=1}^n w_{ij} D_{ij}} \quad (7)$$

The minimization of φ is performed by an iterative process, namely, the steepest descent procedure. The process starts with a good initial approximation. After a small number of iterations (first phase), the D_{ij} are obtained by the R function which replaces the D_{ij} by the computed values of the d_{ij} , but in the order of the D_{ij} (second phase). These two phases are repeated until the quantity $\kappa = \sqrt{\{\varphi\}}$ reaches its optimal value.

κ is called *coefficient of alienation*.

Cross-References

- ▶ [Facet Theory](#)
- ▶ [Factor Analysis](#)
- ▶ [Monotonicity Coefficients](#)
- ▶ [Structural Hypotheses](#)

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SSI

- ▶ [Sustainable Society Index, Tool for Measuring Well-Being](#)

SSN

► [Social State of the Netherlands](#)

SSWB

► [Singapore, Quality of Life](#)

St. George's Respiratory Questionnaire

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Synonyms

[SGRQ](#); [SGRQ-C](#); [SGRQ-I](#)

Definition

The St George's Respiratory Questionnaire is a health-related quality of life questionnaire specific for patients with chronic respiratory conditions.

Description

The St George's Respiratory Questionnaire (SGRQ) is a standardized self-administered disease-specific questionnaire developed by Jones et al. (Jones, Quirk, & Baveystock, 1991; Jones, Quirk, Baveystock, & Littlejohns, 1992) to measure impaired health and perceived well-being in patients with airways disease. It was designed to allow comparative measurements of health between patient populations and to quantify changes in health following therapy.

Since its publication in 1991, the SGRQ has become one of the most widely used instruments for assessing health-related quality of life in patients with chronic obstructive pulmonary disease (COPD) and other chronic respiratory conditions. It has been translated into many languages (Barr et al., 2000; Ferrer et al., 1996; Gallefoss, Bakke, & Kjasgaard, 1999) and has been used extensively in descriptive (Ketelaars et al., 1996; Okubadejo, Jones, & Wedzicha, 1996) and evaluative studies of therapeutic interventions such as bronchodilator agents (Jones & Bosh, 1997), oxygen therapy (Okubadejo, Paul, Jones, & Wedzicha, 1996), and respiratory rehabilitation (Ketelaars, Abu-Saad, Schlosser, Mostert, & Wouters, 1997).

Measurement Model

A principal-component analysis supported that SGRQ is composed by three domains (Jones et al., 1992): symptoms, activity, and impacts. The "symptoms" domain is concerned with the degree of symptomatology, including the frequency and severity of cough, sputum, wheezing, and breathlessness; the "activity" domain is concerned with activities that cause or are limited by breathlessness; and the "impacts" domain covers a range of aspects concerned with social functioning and psychological disturbances resulting from airways disease, such as employment, control of health, stigmatization, or the need for medication and its side effects.

The items vary in form between polytomous (i.e., Likert-type scale) and dichotomous (i.e., "true/false"). The items are not time related except for the symptoms component, in which patients are asked to recall symptoms over a one-year reporting period, which may be too long for reliable and accurate patient recall. This long recall period has been modified to 1 or 3 months to allow responsiveness in longitudinal studies (Barr et al., 2000).

Each item has an empirically derived weight (Quirk, Baveystock, Wilson, & Jones, 1991), which provides an estimate of the distress associated with the symptom or state described. They were obtained from patients with asthma recruited in six countries: England, Finland, the

Netherlands, Italy, Thailand, and the United States. These weights were shown to be applicable to a wide range of patients with asthma or COPD as they were minimally influenced by demographic and disease-related factors. In addition to a score for each domain, an overall score is calculated. SGRQ scores range from zero, indicating no impairment of quality of life to 100 (worst possible quality of life).

Metric Properties

During its more than two decades of existence a large body of evidence has been generated concerning the reliability, validity (Jones, 2001), and responsiveness (Jones, Mahler, Gale, Owen, & Kramer, 2011; Lacasse, Goldstein, Lasserson, & Martin, 2006) of the SGRQ. Furthermore, face to face studies (Hajiro et al., 1998; Harper et al., 1997; Rutten-van Molken, Roos, & Van Noord, 1999; Singh, Sodergren, Hyland, Williams, & Morgan, 2001) showed good responsiveness and discriminating capacity for the SGRQ compared to other respiratory disease-specific questionnaires such as the Chronic Respiratory Questionnaire, the Airways Questionnaire 20, and the Breathing Problems Questionnaire.

Interpretation Strategies

A minimal important difference of four points has been proposed (Jones et al., 1991) based on different methods of estimation (Jones, 2005). Furthermore, published reference norms for SGRQ scores (Ferrer et al., 2002), both general population- and healthy group-based norms, are available to facilitate its interpretation.

New Disease-Specific Versions

The original SGRQ was developed for use in airways disease, mainly asthma and COPD. Two new versions have been derived from the original SGRQ, one specifically for COPD (SGRQ-C) and the other specifically for idiopathic pulmonary fibrosis (SGRQ-I). Items' composition of each version is shown in the table. The major modifications included removing the recall period from the symptom domain items, removing weaker items and refining item

St. George's Respiratory Questionnaire, Table 1 Number of items contained in the different versions of the St George's Respiratory Questionnaire

Domain	SGRQ (Jones et al., 1991)	SGRQ-C (Meguro et al., 2007)	SGRQ-I (Yorke et al., 2010)
Symptoms	8 items	7 items	6 items
Activity	16 items	13 items	10 items
Impact	26 items	20 items	18 items
Total	50 items	40 items	34 items

Abbreviations

SGRQ: St George's respiratory questionnaire

SGRQ-C: Chronic obstructive pulmonary disease-specific version of the SGRQ

SGRQ-I: Idiopathic pulmonary fibrosis-specific version of the SGRQ

response categories by using a Rasch analysis, and developing of a new scoring algorithm which can compute scores directly comparable to those from the original to enable direct comparison between studies using different versions as shown in Table 1.

Because the SGRQ is widely used in patients with COPD but is less commonly applied in patients with asthma, a COPD-specific version of the questionnaire (SGRQ-C) (Meguro, Barley, Spencer, & Jones, 2007) with 40 items was produced in 2007. Ten items from the original SGRQ were removed due to their misfit with the Rasch model (n = 8), lack of response (n = 1) and disordered responses (n = 1). Agreement between the new SGRQ-C scores and the original scores was very high (ICC = 0.99). Correlations with other measures of disease were very similar to those obtained with the original SGRQ, and new and original scores were also similar for treatment effects.

The SGRQ was often applied to assess health-related quality of life in patients with idiopathic pulmonary fibrosis (IPF) because there was no quality of life instruments originally developed for IPF patients. In spite of original SGRQ appears to possess acceptable validity and reliability for use in these patients (Chang, Curtis, Patrick, & Raghu, 1999; Swigris et al., 2010; Tzanakis et al., 2005), it is inevitable that some items have weaker measurement properties than others when applied to patient populations other

than the one for which it was developed. For this reason, an IPF-specific version with 34 items (Yorke, Jones, & Swigris, 2010) was developed (the SGRQ-I). Six items were removed due to missing responses and 10 because of misfit to the Rasch model. Internal reliability for each SGRQ-I component was comparable to the original SGRQ, and construct validity assessment also showed similar correlations with different outcome measure (e.g., forced vital capacity, 6-min walk distance and patient-reported questionnaires).

Cross-References

- ▶ [Disease-Specific Questionnaire](#)
- ▶ [Minimal Important Difference](#)
- ▶ [Reliability](#)

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Stability-Despite-Loss Paradox

- ▶ [Life Satisfaction in the Oldest-Old](#)

Stable and Unitary Self

- ▶ [Independent/Interdependent Self](#)

Stages of Family Development

- ▶ [Family Life Cycle Stages](#)

Stages of the Family Life Cycle

- ▶ [Family Life Cycle Stages](#)

Stakeholders' Perspective

- ▶ [Perspectives of Social Agents](#)

Standard Deviation(s)

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Definition

The standard deviation is probably the most commonly used measure of the variation around an average value for data that use either an interval or a ratio level of measurement. Although when used in inferential statistical testing, its properties assume that the data set has a normal distribution, it is widely used for distributions that are non-normal in character.

Put simply, the standard deviation is a measure of the average variation in a data set around its arithmetic mean. It is derived as the square root of the average squared difference between the value of each observation and the arithmetic mean value of the frequency distribution of which it is a part.

Thus, if you have ten numbers

2, 4, 6, 7, 9, 11, 13, 14, 16, and 18,
the arithmetic mean is,

$$[(2 + 4 + 6 + 7 + 9 + 11 + 13 + 14 + 16 + 18)/10] \\ = 100/10 = 10.$$

The standard deviation is then derived as

$$\sqrt{\sum [(x_i - 10)^2]/n},$$

where the x_i are the individual values, and n is the total number of values (10).

This gives

$$\sqrt{[(2 - 10)^2 + (4 - 10)^2 \dots + (18 - 10)^2]/10},$$

which is

$$\sqrt{[64 + 36 + 16 + 9 + 1 + 1 + 9 + 16 + 36 + 64]/10} \\ = \sqrt{252/10} = \sqrt{25.2} = 5.01.$$

Thus, the mean of the distribution is 10 and the standard deviation is 5.01.

If the distribution of the data for which the mean and standard deviation are calculated is normal or nearly so (i.e., the distribution has a characteristic symmetrical bell shape), then the range of values around that mean can be expressed using the standard deviation in a large number of ways. For example, in a normal distribution, 68.26 % (or just over two-thirds) of all values lie within one standard deviation of the mean and, because the distribution is symmetrical, 34.13 % of them are larger than the mean and 34.13 % are smaller. In our example, therefore, 68.26 % lie within the range 4.99 and 15.01 – half of them between 4.99 and 10.00 and the other half between 10.00 and 15.01. Similarly, 95.46 % lie within two standard deviations of the mean and 99.73 % within three standard deviations.

Because the shape of the normal curve is well defined, the standard deviation can be used to identify any component of the variation around the mean. For example, 38.30 % of all values lie within 0.5 standard deviations of the mean and 15.86 % within 0.2 standard deviations. Alternatively, 25 % lie within 0.312 standard deviations, 50 % within 0.675, and 75 % within 1.151 standard deviations. In statistical testing, the 95 % level (1.96 standard deviations) is commonly deployed to identify differences that are unlikely to occur by chance because of their rarity within the normal distribution; such a value would occur in fewer than 1 random samples in 20 taken from a normal distribution.

A statistic used in comparative studies is the *coefficient of variation (CV)*, derived as the standard deviation divided by the mean – which in the example above is $(5.01/10) = 0.501$. Expressed as a percentage of the mean, this can give a clear indication of relative variability. For example, if two places have mean July temperatures of 22 °C and 27 °C, but the first has a standard deviation of 3° and the other of 8°, then their respective CVs are 13.6 and 29.6; July temperatures at the second place are twice as variable as those at the first.

Recommended Reading

Rogerson, P. A. (2010). *Statistical methods for geography: A student's guide* (3rd ed.). London: Sage.

Standard Error

► Sampling Error

Standard Error of Measurement

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Definition

The standard error of measurement represents a way to quantify measurement error which is related to reliability. It provides an estimate of the dispersion of repeated measures of a person or object using the same instrument around the “true” value.

Description

All measurements are associated with a certain amount of error. Some of this error is due to random factors (Di, 2005). Random factors affect the reproducibility or reliability of a measure. The amount of random error is quantified in the form of standard error of measurement, which is inversely related to the degree of reliability of a measure and directly related to its variability across individuals or objects quantified in the form of standard deviation (Viswanathan, 2005). The relationship of the standard error of measurement (SEM) with the standard deviation (SD) and reliability of a measure (r_{xx}) is described by the following formula:

$$SEM = SD\sqrt{(1 - r_{xx})}$$

The higher the level of reliability, the smaller the standard error of measurement. If an instrument is perfectly reliable, i.e., it has a reliability coefficient (r_{xx}) of 1, the standard error of measurement would be 0.

The standard error of measurement is often used to estimate the range of values within which the “true” value of the measured characteristic for a person or object is likely to fall. Given that random errors of measurement are assumed to be normally distributed around the “true” value, an observed value ± 1 SEM can be viewed as 68 % likely to capture one’s “true” value. An observed value ± 2 SEM can be viewed as approximately 95 % likely of including the “true” value.

The above definition of standard error of measurement assumes that it is constant across levels of a measured characteristic, which is often an unrealistic supposition. In fact, the magnitude of the measurement error may depend on the actual level of the attribute we wish to measure (Feldt, Steffen, & Gupta, 1985). This is particularly true when using questionnaire-based instruments (scales) whereby extreme scores on a scale are associated with larger errors than middle-range scores. This type of standard error of measurement is called conditional standard error of measurement (Livingston, 1982). It is conditional on the observed score. Various definitions and methods for the computation of conditional error of measurements have been proposed (Feldt et al. 1985). Some of the most popular methods are those derived from Item Response Theory, which produce an estimate of standard error of measurement for each possible score on an instrument (Kolen, Zeng, & Hanson, 1996).

Cross-References

- ▶ [Item Response Theory](#)
- ▶ [Measurement Error](#)
- ▶ [Reliability](#)

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Standard Errors

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Synonyms

[Sampling error](#)

Definition

The standard error represents the population standard deviation, or its estimate derived from a sample, of the sampling distribution of a statistic.

Description

In any research setting, it is important to obtain findings that can be generalized to the target population. As most studies are conducted on finite groups of subjects rather than an entire population, it is important to evaluate the extent to which a sample statistic, such as the mean, proportion, or ▶ [regression coefficient](#), is an accurate representation of the population parameter of interest, the latter representing the statistic that would be obtained if we were to assess the entire population. Standard errors serve this purpose. They are measures of the uncertainty in a

sample statistic and reminders that the statistic derived from a study sample is unlikely to correspond exactly to the population value (Altman, Machen, & Bryant, 2000; p.25). Namely, the estimates of the same population parameter obtained from multiple samples drawn from a specific population in identical circumstances will almost certainly differ. These different estimates follow a specific sampling distribution (e.g., normal, Poisson, or binomial), and the standard error represents the variability of such sampling distribution. Thus, the standard error is the standard deviation of the sample statistics and represents the degree by which the latter deviate from the population parameter. In other words, it indicates how accurately a sample statistic can represent the population parameter. A small standard error indicates that the sample statistics distribute closely around the population parameter and, thus, are accurate estimates of the population parameter. Standard errors depend on the variability of a sample statistic as well as the ► [sample size](#). The larger the variability, the larger the standard error. The larger the sample size, the smaller the standard error (Hassani, Ghodsi, & Howell, 2010).

Standard errors have two main applications. Firstly, they are used in the context of hypothesis or statistical testing (Carlin & Doyle, 2000). By dividing a sample statistic by its standard error, one can evaluate whether the population parameter estimated by the sample statistic is zero or different from zero. This ratio is typically compared to a normal distribution (see Wald test) or a *t*-distribution (see *t*-test) adopting a specific significance level. If the ratio is associated with a *p*-value smaller or equal to the significance level, one rejects the ► [null hypothesis](#) stating that the population parameter is significantly different from zero.

Secondly, standard errors are also used to compute confidence intervals, representing the precision of a sample statistic. Confidence intervals provide a plausible range of values for the population parameter that are supported by the data from a given sample. Since the sampling distribution of a variety of summary statistics

(for samples >30) is normal, we can obtain confidence intervals by multiplying the standard error by specific multiples taken from the standard normal distribution (standard deviates) and then adding them to the sample estimate. The standard deviates depend on the level of “confidence” required in the interval, termed confidence level (Carlin & Doyle, 2000). The confidence level denotes how frequently the observed interval would include the population parameter if we were to draw multiple samples of the same size and compute the confidence interval for each of them. The conventional level chosen is 95 % and the associated standard deviate is 1.96, since ± 1.96 define the central 95 % of the standard normal distribution (Altman et al., 2000; p.26). Thus, if one obtains a sample statistic (e.g., mean) of 10 and a standard error of 0.5, the 95 % confidence intervals would be $10 \pm (1.96 \cdot 0.5)$, that is, 9.02–10.98. The calculation of confidence intervals for sample statistics following a sampling distribution other than the normal (e.g., *t*-distribution) may use the same procedure with the appropriate multipliers derived from the sampling distribution.

Cross-References

- [Confidence Interval\(s\)](#)
- [Hypothesis Testing](#)
- [Null Hypothesis](#)
- [Regression Coefficient](#)
- [Sample Size](#)
- [Standard Deviation\(s\)](#)

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Standard Eurobarometer

► Eurobarometer

Standard Scores

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Synonyms

Normal scores; Z-values

Definition

A standard score indicates how many standard deviations a datum is above or below the population/sample mean. It is derived by subtracting the population/sample mean from an individual raw score and then dividing the difference by the population/sample standard deviation (Moore, 2009). This conversion process is called standardizing or normalizing, though “normalizing” is a broader term and it refers to rendering a variable scale invariant (OECD/JRC, 2008).

The standard score is:

$$z = \frac{x - \mu}{\sigma}$$

where:

- x is a raw score to be standardized.
- μ is the population mean.
- σ is the population standard deviation.

The population standard deviation is:

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (x_i - \mu)^2}, \quad \text{where } \mu = \frac{1}{N} \sum_{i=1}^N x_i.$$

When the population parameters (population mean, population standard deviation) are not

known but only a sample set is available, then standard scores are calculated using the sample mean and the sample standard deviation. The sample standard deviation is:

$$s = \sqrt{\frac{1}{N-1} \sum_{i=1}^N (x_i - \mu)^2}$$

The quantity z is negative when the raw score is below the mean, positive when above.

Description

Standard scores are also called **z-values**, **z-scores** because the normal distribution is also known as the “Z distribution.” They are frequently used to compare a variable to a standard normal distribution (with $\mu = 0$ and $\sigma = 1$). For example, a standard score of 0.5 indicates that the value for that case is half a standard deviation above the mean, while a score of -2 indicates that a case has a value two standard deviations lower than the mean.

With a population that is normally distributed: 68.2 % of the values lie within one standard deviation from the mean (Fig. 1).

95.4 % of the values lie within two standard deviations from the mean.

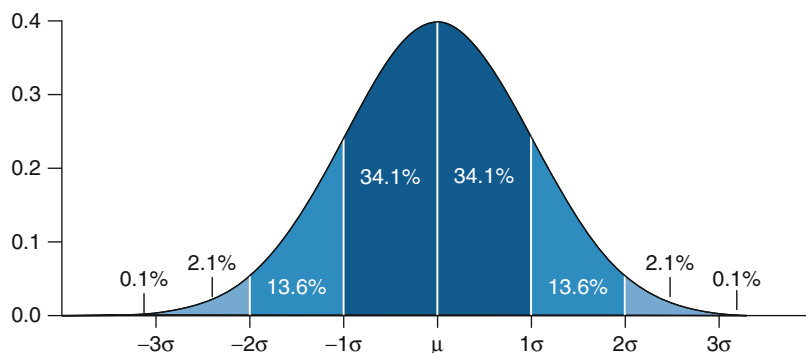
99.8 % of the values lie within three standard deviations from the mean.

It is important to note that a z-score transformation changes the central location of the distribution and the average variability of the distribution. It does not change the skewness or kurtosis.

Discussion

In general, standard scores can be defined without assumptions of normality and are often used to compare observations from different distributions, to make sure all variables contribute evenly to a scale when items are added together (provided that all bivariate correlations are similar), or to make it easier to interpret results of a regression or other analysis.

Standard Scores,
Fig. 1 Normal distribution



Illustrative Example

Suppose a country is being assessed on two well-being indicators, one indicator measuring the proportion of non-undernourished people in the total population and another indicator measuring the proportion of people with sustainable access to an improved water source. The country scores 70 (of 100) in the food-related indicator and 80 (also of 100) in the water-related indicator. Intuitively, it might seem that the country performs better on the water-related indicator. But what if it is easier to score higher in the water-related indicator? Or what if countries in the water-related indicator varied less or more than countries in the food-related indicator? In such situations, it is difficult to compare the scores. But if one knows the mean and standard deviations of the two distributions, then one could compare these scores by comparing their z-scores. Suppose that the mean score in the food-related indicator was 55, the standard deviation was 20, the mean score in the water-related indicator was 70, and the standard deviation was 15. The country's z-score on the food-related indicator is $(70 - 55)/20 = 0.75$ and on the water-related indicator is $(80 - 70)/15 = 0.67$. So, using standard scores, the country performs better on the food-related indicator because its standardized score is more standard deviations above the food-related mean than the water-related mean. In this example, the distributions are different (different means and standard deviations), but the unit of measurement is the same (% of 100). Using standard scores, it is also possible to compare scores from different distributions where measurement is based on

a different scale. For example, one could compare two scores from two different indicators of well-being, even if the scores are expressed in different units (e.g., one as percentage and the other on years). All one needs to know are the means and standard deviations of the corresponding distributions.

For communicating or other purposes, it may be appealing to standardize a variable to a given mean (e.g., $\mu_{\text{new}} = 50$) and standard deviation (e.g., $\sigma_{\text{new}} = 10$).

In that case, the formula becomes:

$$\text{Standardised score} = \left(\frac{x - \mu}{\sigma} \right) * \sigma_{\text{new}} + \mu_{\text{new}}$$

Cross-References

- ▶ [Mean Differences](#)
- ▶ [Univariate Normal Distribution](#)

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Standardization

- ▶ [Z-Scores](#)

Standardization of International Happiness Scale

- ▶ [International Happiness Scale Interval Study](#)

Standardized Regression Coefficient

- ▶ [Beta Weights](#)

State Appropriations and Institutional Quality

- ▶ [Institutional Quality and State Budget Cuts](#)

State of Highest Happiness

- ▶ [Peak Experiences vs. Everyday Feelings](#)

State of the Child

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Definition

State of the Child reports aim to consider the status of children through the measurement and monitoring of the welfare and ▶ [well-being](#) of children. They may be academic publications or reports published by governments, Non-governmental organizations (NGOs), and other organizations (Ben-Arieh, 2006) and range from a consideration of all, or of particular groups of children at the local, national, and international level.

Description

Reports attempting to measure and monitor the well-being of children have increased in frequency over the last 25 years. Ben-Arieh (2000) underlines the importance of this through explaining that historically little data has been collected on the status of children across the globe. He argues that a separate body of research on child-specific social indicators is important as children's well-being may not be captured by household indicators or inferred from the status of adults. The United Nations Convention on the Rights of the Child (UNCRC) (United Nations, 1989), with its focus on children's rights and agency, has played a role in galvanizing interest in measuring and monitoring the status of children (Ben-Arieh, 2006). Interest in the field has tended to center around the high-profile United Nations Children's Fund (UNICEF) publication "The State of the World's Children report," which has been published annually since 1979 (Bellamy, 1996–1999; Grant & Adamson, 1979–1995; UNICEF 2000–2011). Importantly, the growth of this field runs alongside increasing interest in "accountability based public policy," (Ben-Arieh, 2008: 37) which should be based on accurate data on the status of children and the impact of programs targeted at them.

The field is, however, still developing. Ben-Arieh (2006) conducted a comprehensive review of all State of the Child reports published between 1950 and 2005, building on a similar exercise by Ben-Arieh and Goerge (2001) to identify shifts within the field (HYPLINK: <http://multinational-indicators.chapinhall.org/>). He found that reports on this topic overwhelmingly originate from North America and other Western nations and that 80 % were one-off reports that were not part of a series. Importantly, between 2000 and March 2005, there were twice as many reports as in the whole of the 1950s, underlining the rapid expansion of the field in recent years.

Alongside this growth has been a shift in the focus toward a more holistic understanding of children's well-being (Ben-Arieh, 2006; Ben-Arieh & Goerge, 2001; Hauser, Brown, &

Prosser, 1997). Ben-Arieh (2006: 800) identifies three major shifts: (1) away from a focus on basic needs and survival, such as child and infant mortality rates or school enrolment levels, toward a more general focus on children's well-being, which is arguably much better at measuring children's quality of life; (2) from a focus on negative to positive indicators with the inclusion of new "domains" of well-being which mark a shift away from a focus on deficits in children's lives, which are not always indicative of welfare or quality of life; and (3) from well-becoming to well-being, which focuses on the achievement of well-being during childhood rather than successful transition to adulthood. These shifts mean that the field increasingly encompasses new indicators and considers children's perspectives rather than the traditional adult-focused approach (Ben-Arieh, 2008). Ben-Arieh (2006) suggests that in light of these shifts evident across existing State of the Child reports and the increasing consideration of subjective assessments of children's status, future work will be more likely to include children's perspectives on their lived experience, making them active participants in research that concerns them.

However, it is important to use and analyze the content of these reports critically. Considering the evolution of UNICEF's State of the World's Children reports, it is evident that while these reports are good at discriminating between poor and rich countries, they have been of limited use in distinguishing between wealthier nations (Ansell, Barker, & Smith, 2007). UNICEF (2007) attempted to address this through adopting a broader understanding of well-being for children in Organisation for Economic Co-operation and Development (OECD) countries. They calculate indices based on six dimensions of children's well-being outlined in the UNCRC: material well-being, health and safety, education, peer and family relationships, behaviors and risks, and subjective assessments of well-being (in Ansell et al., 2007: 1, see also Ben-Arieh, 2008). However, this omits from consideration some dimensions of children's welfare deemed important in the UNCRC, such as play and leisure (Ansell et al., 2007: 2). Ansell et al. (ibid) suggest

that indicators used in the report, such as that for material well-being, are based upon measures that may not be the most effective for each indicator. They note that very few of the indicators used relate to "average" children's living conditions, but instead focus on "children who fail to meet a particular standard," arguing that this encourages the generation of binary distinctions between "acceptable and unacceptable lives" (ibid: 4). In addition, they suggest general caution since "the use of statistical indicators inevitably diminishes through abstraction the detail of children's lives" (ibid: 2). Much of this is bound up with the challenges of creating an all-encompassing index of child well-being (Ben-Arieh, 2008), but the normative representations of childhood must nonetheless be borne in mind in reviewing State of the Child reports.

Cross-References

- ▶ [Basic Needs](#)
- ▶ [Child Well-being](#)
- ▶ [Children's Rights](#)
- ▶ [Quality of Life](#)
- ▶ [Subjective Well-being](#)
- ▶ [Welfare](#)

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State of the Lake Report

- ▶ [Lake Erie Quality Index](#)

State Space Modeling

- ▶ [System Dynamics Modeling](#)

State-Corporate Crime and Public Opinion

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Description

Individual ▶ [quality of life](#) and community ▶ [quality of life](#) are affected when states and corporations act together to commit “state-corporate ▶ [crime](#)” behavior by cooperating economic and political entities that violates international law and is socially injurious (Michalowski & Kramer, 2006, p. 13). Many different kinds of state-corporate crimes have been documented. Although state and corporate deviance and power abuse have always been challenged, and sometimes limited, by

social movements, ideological conditioning leads many individuals to ignore or support state-corporate crime. The ability of state and corporate rulers to generate public support for their criminality by legitimating it reduces quality of life by contributing to massive and widespread harms that materially benefit few.

Our focus here is on an important example of state-corporate crime in the United States: twenty-first-century illegal military action. This is a state-corporate crime with immediate and long-term life and death implications for those at home and abroad. Three recent US national security actions violate legal principles or laws: the ▶ [war on terror](#) (Boggs, 2003, p. 224), the 2001 invasion and war in Afghanistan (Martinot, 2003, p. 112), and the 2003 invasion and war in Iraq (Kramer & Michalowski, 2006, p. 210). Despite serious political, moral, and legal concerns among many in the USA, these actions have had broad initial domestic support. In November 2001, even among Americans saying war was never justified, 55 % supported the war on terror (whose focus was then attacking Afghanistan). In April 2003, 75 % approved of US policy in Iraq. Despite lower support overall for the Iraq war than the Afghanistan war and growing distaste for the war on terror in recent years, there is continued mass domestic approval of US military power and aggression. For example, in 2010 56 % considered maintaining superior US military power worldwide very important, and 55 % supported using troops to ensure the US oil supply. These facts indicate that the ideological use of ▶ [victimization](#) helps legitimate the state-corporate crime of aggressive war.

Structural forces and cultural ideologies promote militarism and war. We start from the truism that bullies often subjectively rationalize ▶ [bullying](#) by perceived victimization. This raises the question: Does victimization language in the mainstream news media help state and corporate actors legitimate wars of aggression? Scholars have pointed to this process, arguing that public support for large-scale violence can be partly based on real or imagined victimization or on redefining (one’s “own”) state criminal aggression as defensive. Perceived in-group

victimization is part of the ideology of military aggression; elite individuals and organizations use the idea of “our side” being attacked to lead the public to view “our side’s” subsequent aggression as respectable, even glorified.

Ideology, a crucial aspect of this legitimation process, has to do with ways that meaning sustains relations of domination. Ideology consists of symbolic communication produced and transmitted by both state and media individuals and organizations. Ideology sustains the domination of military-industrial-media complex interests by justifying state and corporate authority and war making. For our example here, by “media” we mean mainstream national US news media. By legitimation is the successful efforts of elites to convince nonelites that a political and economic authority is valid and deserving of compliance. Finally, by ► [public opinion](#) we mean culturally dominant ideas and/or aggregate individual ► [values](#), beliefs, preferences, and emotions as measured (however problematically) by standard surveys.

War Legitimation Inside and Outside Criminology

The following section briefly views some contributions from criminology and other disciplines, arranging authors’ claims in roughly descending order of breadth of coverage from macro social to micro social.

Kauzlarich, Mullins, and Matthews’ urge examining links between class, power, and ideology in order to better understand how ideology works as a general criminogenic force (2003, pp. 242–243). This involves examining the source of state crime in elite power structures, which in turn means engaging in cultural analysis of how elite-generated ideologies create crime. The “structural connection” whereby members of dominant groups control institutions allows for the power of a dominant ideology (Kauzlarich et al., 2003, p. 243): “Popular opinion can be influenced, created, or swayed by elite dominance of institutions. . . which could lead to citizens seeing clearly criminal behavior as acceptable. . .” (Kauzlarich et al., 2003, p. 244). On a more microsocial level, Kauzlarich and

Matthews elsewhere urge criminologists to consider the motivational dimension, including socialization and social meaning and “how actors internalize larger forces and pressures” (Kauzlarich & Matthews, 2006, p. 245).

Kramer and Michalowski argue that large social forces (e.g., profit maximization, power maintenance) lead to state-corporate crime partly by permeating society. Kramer and Michalowski examine the US invasion of Iraq as a state-corporate crime. They acknowledge the importance of ideology as part of the etiology of state-corporate crime, noting that the US invasion of Iraq resulted from a history and ideology of imperial designs. Kramer and Michalowski argue that in addition to motive and opportunity, the invasion of Iraq also required a failure of social control, including the UN and world public opinion being unable to stop the invasion. Also under the category of failure of social control, Kramer and Michalowski point to two major reasons the Bush administration was able to preserve public support for its Iraq policy: an effective public relations campaign and the “. . . failure of the media in the United States to perform its critical role as ‘watchdog’ . . .” (Kramer & Michalowski, 2006, pp. 211–212). Kramer and Michalowski point out the importance of neutralization: elites may ideologically neutralize injurious US action, such as criminality in Iraq, by defining it as rightful retaliation. Kramer and Michalowski conclude that leading up to the Iraq invasion, the media illustrated the Chomsky and Herman propaganda model, in which media in capitalistic society conform ideologically to the economic and political interests of the upper class.

Criminologists point out that individuals subjectively “neutralize” their criminality, for example, by denying that they actually caused harm or that there was a victim. Neutralization has been used to examine the Nazi regime and the Bush administration’s national security and military policy. Kappeler and Kappeler, in an account focusing on ideology, identify rhetorical themes in post-September 2001 political discourse on terrorism (2004). Two of these themes, reification of civilization and heroes and villains, imply in-group victimization.

Reification of civilization depicts a particular threat as greater than any other, endangering society itself and invoking barbarians at the gates. The second theme, heroes and villains, constructs two opposing camps, the first being law-abiding people or victims and the second being those who are evil, criminal, and destructive.

The State, Corporate Media, and Public Opinion

How and why does the state engage in the ideological work to make war palatable to much of the public, and what is the role of the media in this process? The largest and most politically important social structure that promotes war-supporting ideology is the symbiotic relation between business and the state. This may be even truer of recent politics. Partly because their discipline tends to focus on crimes of commission, criminologists have tended to assume externality and separation to be the normal relationship between state and business. In fact, the structural compatibility between state and corporations, however contradictory, does not consist of an external, mutually antagonistic relation (Tombs & Whyte, 2009, p. 109); it is more unified than not. Regardless of the complexity and contradictions of political and corporate interests, business has more policy-making power than any other interest. The intertwining of state and business may be tighter in crisis times. For example, as Whyte argues, the 2003 invasion of Iraq was a moment of remarkable solidity between state and corporate institutions.

The question remains: what effect do state and corporate attempts to legitimate aggressive war have on public opinion? Public opinion, communication, and politics are closely related, and people's opinions are influenced by their ► [social interactions](#) and by the media, in ways both informational and normative. What about the role of victimization? A contributor to the public impression of in-group innocence is denial that its own state commits aggressions. As Zacharias suggests, the social silence within the USA about its foreign policy is integral to the smooth conduct of its foreign policy (2003, p. 126).

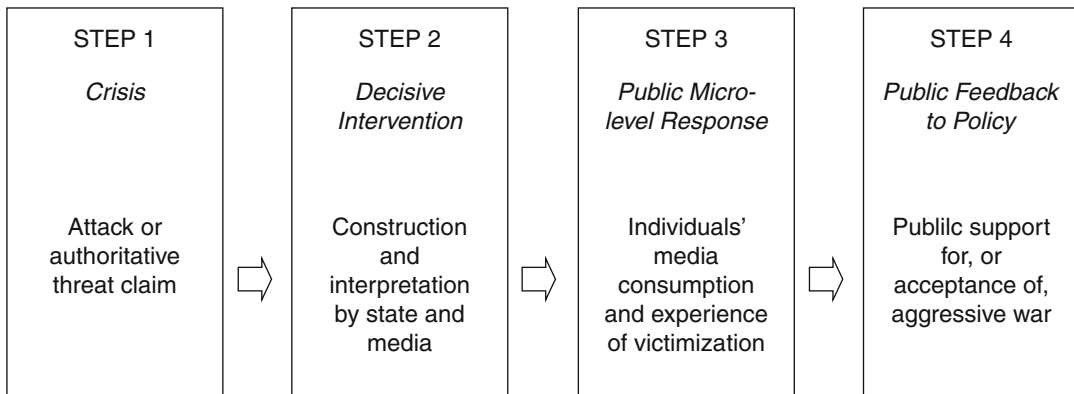
War Legitimation in Normal Times

During normal (noncrisis) times, there is an ongoing society-wide ideological process in which state and corporate elites use the media to promote narratives and ideas meant to legitimate belligerence, aggression, and war. This process includes implied or stated claims of potential or actual in-group victimization. This works at least in part on the logic that "they [did/could have] hurt us, therefore it [was/could be] correct to hurt them." This normalization of war serves to gratify people and organizations about their participation in, and suffering from, past wars and the preparation for new ones. However, these micro- and meso-level social aspects are not the origin of this process. Normalization of war grows out of macrosocial hierarchical and oppressive social relations. Macrolevel political-economic arrangements induce state and corporate actors to defend and expand their interests. One way they do this is by promoting narratives, symbols, and cultural ► [norms](#) that favor coercion, ► [violence](#), and war.

War Legitimation in Crises

In national security crises, the legitimation of war is intensified. The existence of war legitimation during normal times means that, at the point that a crisis arrives or is constructed, it is easier for elites to justify aggressive actions. This includes state and corporate elite attempts to legitimate specific immediate actions – a particular crisis is constructed as requiring a specific coercive or military response. Yet the basic process is the same: victimization is used as a moral legitimator of state-corporate aggression.

In a case such as the September 2001 attacks in the USA, there obviously was extensive actual victimization, that is, many Americans died. However, the attack's context and meaning, constructed by state and media actors, cognitively and normatively increased popular support for aggressive war. This was presumably using the logic that "they hurt us, therefore we must hurt them." Drawing on Croft (2006), we diagram a simple model of war legitimation during a crisis in [Fig. 1](#).



State-Corporate Crime and Public Opinion, Fig. 1 Schematic model of crisis legitimation process

One way to measure the incidence of terror victimization language in the media is to count articles mentioning ► terrorism and in-group suffering, resulting in a terrorism victimization index (TVI) (Klein & Lavery, 2011). The following uses this method and bivariate correlations, calculating the Pearson R-square correlation coefficient for each possible combination of variables. To measure victimization concern, we use two survey measures: “How worried are you that you or someone in your family will become a victim of terrorism: very worried, somewhat worried, not too worried, or not worried at all?” (Morales, 2009) and “How worried are you that there will soon be another terrorist attack in the United States: very worried, somewhat worried, not too worried, or not at all worried?” (Pew Research Center, 2006, p. 5).

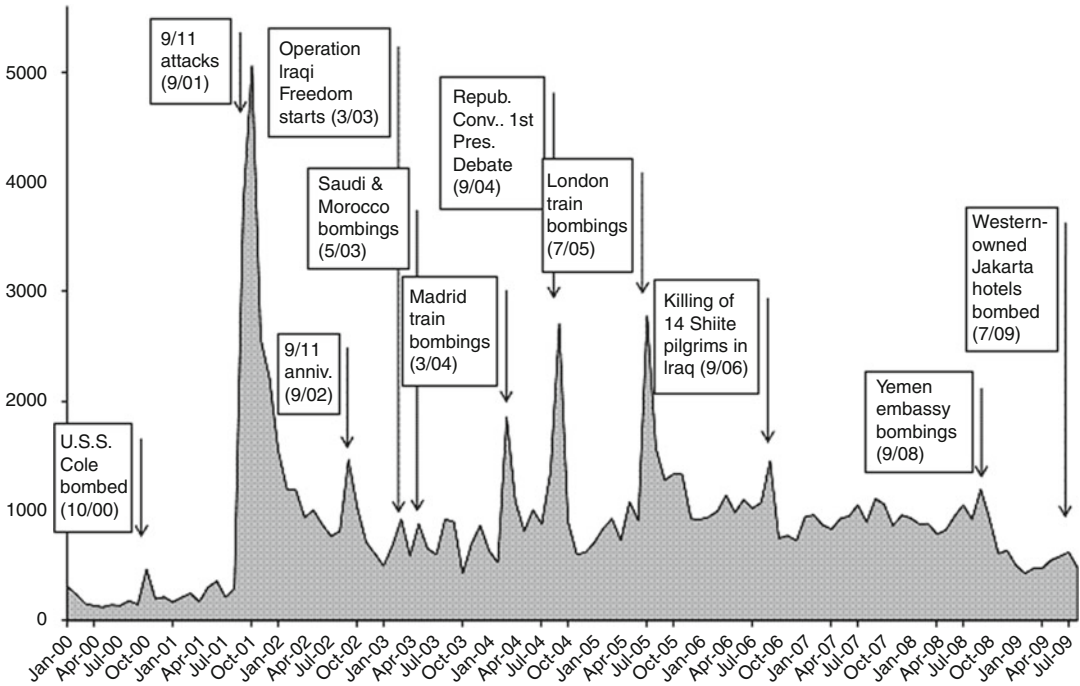
We use support for Bush’s handling of the war on terrorism as a proxy for supporting a hawkish and criminogenic stance: “Do you approve or disapprove of the way George W. Bush is handling the campaign against terrorism?” (Gallup, Inc., 2009). To create our measure of support for the war in Afghanistan, we combine two survey series. The first asks: “Thinking now about U.S. military action in Afghanistan that began in October 2001, do you think the United States made a mistake in sending military forces to Afghanistan, or not?” (Gallup, Inc., 2009). We use the percent who answered “no” to this

question as an indicator of hawkish support for aggressive war. A second question asks, “Do you approve or disapprove of U.S. military action in Afghanistan?” (Gallup, Inc., 2009). We use the percent who answered “approve” to indicate support for aggressive war. Our measure of support for the war in Iraq uses the percent who answered “favor” to the following question: “Do you favor or oppose the U.S. war in Iraq?” which offered the major responses of “favor” and “oppose” (CNN/Opinion Research Corporation, 2009).

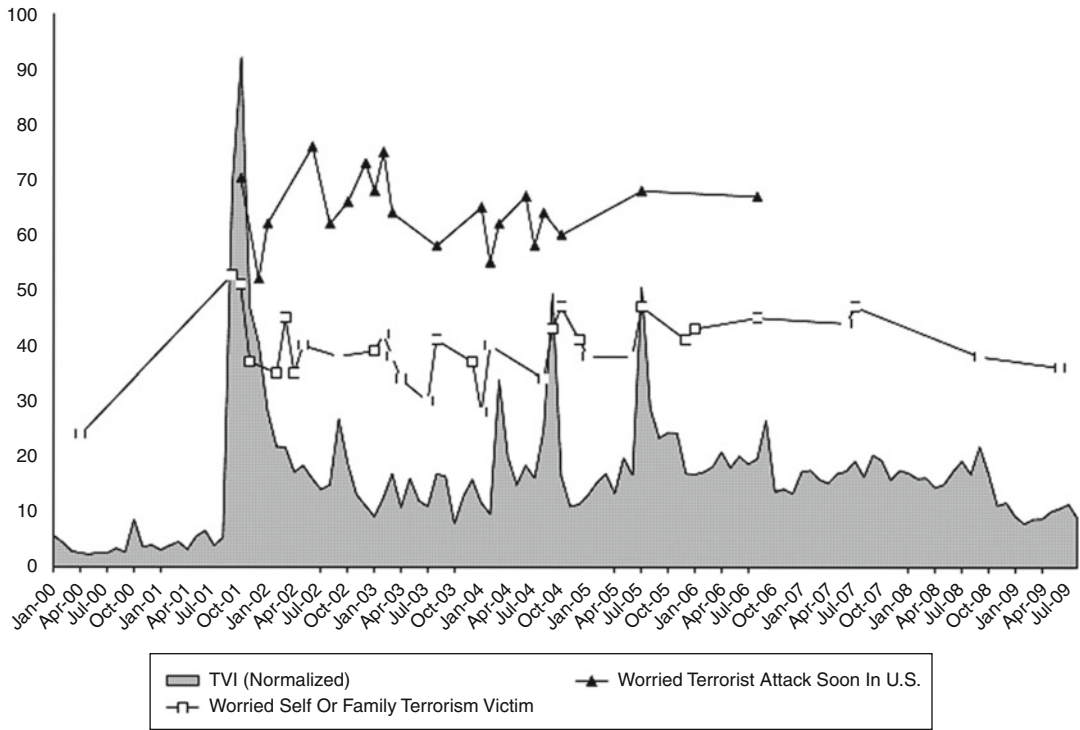
Figure 2 offers a visual comparison of our index with major terrorism-related political events, externally validating the TVI from January 2000 through August 2009.

Turning to the TVI and media relationship (Fig. 3), statistically, personal worry has a weak relationship with the TVI: the Pearson R square between the two is 0.36, significant at $p = .01$. Figure 3 also shows worry about the USA being attacked. Surprisingly there is no statistical relationship between the TVI and national-level victimization worry. The Pearson R square is 0.003 and is not statistically significant.

Figure 4 shows the TVI and support for Bush’s antiterrorism campaign. However, the R square indicates a very weak relationship, at 0.10, significant at $p = .05$. Also shown in Fig. 4 is the percent approving of, or not viewing as a mistake, the war in Afghanistan.

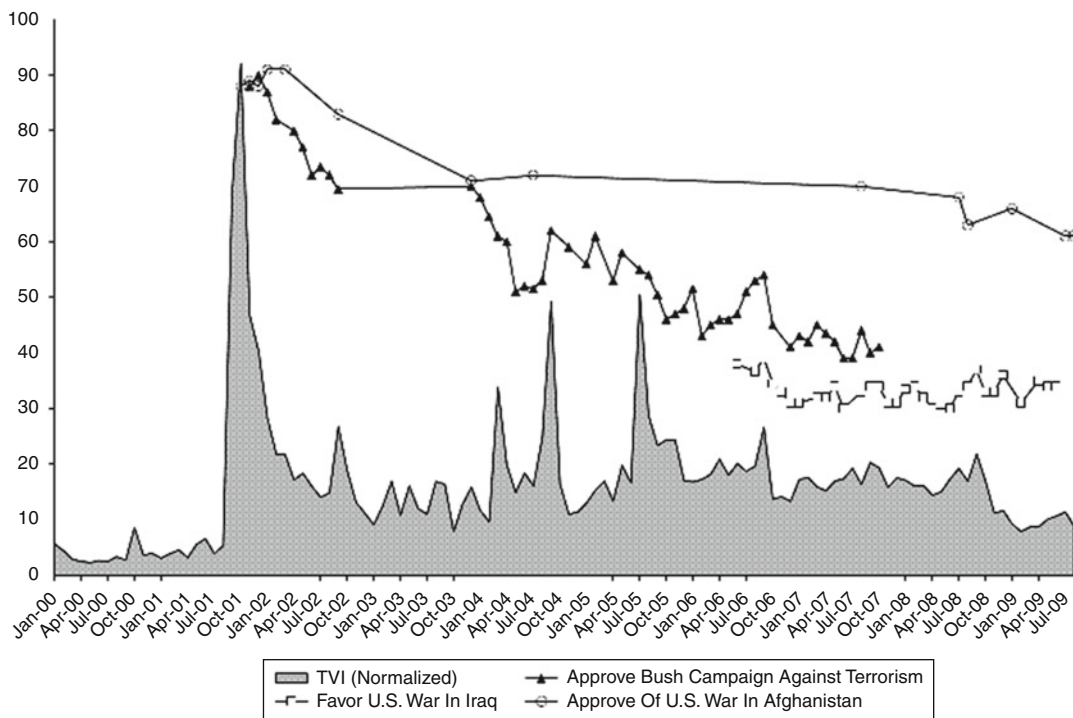


State-Corporate Crime and Public Opinion, Fig. 2 Terrorism victimization index



TVI (Normalized)
 Worried Terrorist Attack Soon In U.S.
 Worried Self Or Family Terrorism Victim

State-Corporate Crime and Public Opinion, Fig. 3 TVI and terrorism worry



State-Corporate Crime and Public Opinion, Fig. 4 TVI and war-on-terrorism support

A relationship is indicated by its moderate R-square value of 0.42, significant at $p = .05$. The R square for the relationship between the TVI and support for the US war in Iraq is very low, at 0.14, and not statistically significant.

Personal worry about being a terrorism victim seems to be partly driven by news media content. However, this does not hold for worry about victimization of the USA. The TVI has a moderate relationship with approval of the war in Afghanistan, but no relationship with approval of the Iraq war. This is surely to do with differing opinions about the two military adventures and the limitations of state-corporate legitimization of war. Further research should explore these relationships historically and with a multivariate statistical approach.

Cross-References

► [Mass Media and Quality of Life](#)

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State-Trait Anxiety Inventory

- ▶ [Spielberger State-Trait Anxiety Inventory](#)

Static and Dynamic Efficiency

- ▶ [Economic Efficiency](#)

Statistical Experimental Design

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Definition

The purpose of statistical experimental design is to map an appropriate statistical technique onto an ▶ [experimental design](#).

Description

Researchers interested in examining what factors or variables contribute to ▶ [quality of life](#) must make important decisions regarding the type of ▶ [methodology](#) to use in their research efforts. For researchers attempting to delineate causal relationships or make causal inferences between variables, the proper methodology to employ is known as the experimental design. The key strength of the experimental design, when properly carried out, is that it allows researchers to infer that the independent variable *caused* any observed changes in the dependent variable under conditions in which the influence of all other possible variables (known as extraneous or confound variables) are either experimentally controlled (e.g., in ▶ [analysis of variance](#) designs) or statistically controlled (e.g., in ▶ [multiple regression](#) designs).

There are two important considerations that must be taken into account when deciding on which statistical technique to use for an experimental design. The first consideration researchers must make is to decide on the number of dependent variables they will measure. If the decision is to measure only one dependent variable, then univariate statistical analysis is conducted on the data. This can be as simple as conducting a *t*-test when there are only two levels of one independent variable being manipulated, or as complex as conducting a multifactorial analysis

of variance, with appropriate follow-up tests, when there are two or more independent variables being manipulated. If the decision is to measure two or more dependent variables at the same time, then ► [multivariate statistical analysis](#) is conducted on the data. There are many multivariate statistical analyses available, allowing for a wide variety of research questions to be addressed. A number of these analyses are described in this encyclopedia (e.g., ► [factor analysis](#), multiple logistic regression, multiple regression, path analysis, principle component analysis, structural equation modeling, and time series analysis).

The second consideration researchers must make, which is particularly important when using univariate statistical analysis, is to decide whether to use a strictly between-subjects design, a strictly within-subjects (or repeated-measures) design, or a mixed-model design. In a strictly between-subjects design, each participant receives only one treatment level in a single factor design or contributes a score to only one cell in a multifactorial design. In a strictly within-subjects design, each participant receives all the treatment levels in a single factor design or contributes a score to all the cells in a multifactorial design. Mixed-model designs are used when there is at least one between-subjects factor and at least one within-subjects factor in a multifactorial design. Thus, participants contribute a score to some, but not all, cells in this type of multifactorial design.

It is an important skill to know when to use either a between-subjects design or a within-subjects design to address a research question. The knowledge behind this skill is twofold (it is important to stress that the two following considerations are not orthogonal to each other). First, *methodological* considerations need to be taken into account. For example, if receiving one treatment level will influence responding in a different treatment level, then only a between-subjects design is appropriate. Second, *statistical* considerations need to be taken into account. For example, if possible, within-subjects designs are preferable to between-subjects designs. This is because variability attributable to the differences between the participants is removed from the

error term of a within-subjects analysis of variance, but would remain in the error term of a between-subjects analysis of variance. The expectation is that by removing variability attributable to the participants from the error term in a within-subjects design, a more powerful analysis will occur, thus increasing the likelihood of obtaining a significant result if the independent variable (or variables) under consideration truly exerts a detectable effect. The above examples help illustrate the intimate link between statistical technique and experimental research design in the realm of univariate statistical analysis. Examples could also be given for the realm of multivariate statistical analysis. The key point to be made is that decisions regarding statistical techniques and experimental designs to be used are made jointly, such that when the experimental design to be used is decided upon, so is the statistical technique.

There are a multitude of excellent textbooks available for researchers to use for statistical experimental design. Examples for univariate statistical analysis include Keppel and Wickens (2004) and Maxwell and Delaney (2004), and examples for multivariate statistical analysis include Tabachnick and Fidell (2007) and Johnson and Wichern (2008). There are also textbooks that focus on one particular type of statistical analysis, such as Keith (2006) which focuses on multiple regression analysis, and Kline (2010) which focuses on structural equation modeling. A relatively recent development is the proliferation of textbooks available dedicated to teaching how to use statistical software, such as Green and Salkind (2011) and Stern (2010) for SPSS.

Cross-References

- [Analysis of Variance](#)
- [Experimental Design](#)
- [Factor Analysis](#)
- [Methodology](#)
- [Multiple Regression](#)
- [Multivariate Statistical Analysis](#)
- [Principal Component Analysis](#)
- [Quality of Life](#)

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Statistics: Rules for Rounding

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Definition

Rounding a statistic is presenting it with the number of significant digits and/or decimal places that is in agreement with its precision.

Description

Context and Objective

The way how statistics and other numerical findings are presented in publications with a documentary function should reflect their precision. The more precise a number is, the larger the number of significant digits that is justified. In this way, there is a difference between the three rounded numbers 5, 5.0, and 5.00, which numbers

have one, two, and three *significant digits*, respectively. The number of *decimal places* is zero, one, and two, respectively.

The Dutch Standardization Institute has defined rules for this rounding procedure (Nederlands Normalisatie Instituut, 1967). The basic underlying principle is that the effect of rounding should always be less than 1 % of the standard error of the observation or parameter estimate.

The most relevant current rounding rules are summarized in this lemma, with special reference to statistics for happiness of nations. The rules concern what is called the “rounding interval.” This *rounding interval* is denoted in this lemma as “*a*”; it is defined as the smallest possible positive difference between two rounded values for the same statistic as reported in a study report. If a set of average happiness values is reported in two decimal places, the rounding interval $a = 0.01$.

Six Basic Rules for Rounding

1. Rounding numbers should be done only *after* all computations have been *completed*.
2. Admissible values for the rounding interval are all integer (positive and negative) powers of 10 only. In other words, they all belong to the series { ..., 0.001, 0.01, 0.1, 1, 10, 100, 1,000, ... }.
3. For the rounding interval *a*, the maximum value should be selected from the above series that *does not exceed half the standard error* of the observation or of the statistic. So $a \leq \frac{1}{2}(\text{standard error}) < 10a$.

Example: if some statistic has a standard error of 0.062, then the value $a = 0.01$ has to be selected, since $0.01 \leq 0.031 < 0.1$.

4. If more than one decimal is to be dropped, rounding is done in one single step.
5. Numbers are rounded to the nearest rounded value. If the choice is not unambiguous, the last digit after rounding should be *even*. So for $a = 0.01$:

- 4.663 → 4.66
- 3.187 → 3.19
- 5.325 → 5.32
- 5.335 → 5.34

6. To point estimates and the corresponding confidence limits, the same rounding interval is applied.

Statistics: Rules for Rounding, Table 1 Rounding intervals for statistics in QoL research reporting

Statistic	Standard error	$a =$	While
Average values	s/\sqrt{N}	0.1	$N \leq 25 s^2$
		0.01	$25 s^2 < N \leq 2,500 s^2$
Standard deviation (s)	$s/\sqrt{2 N}$	0.1	$df \leq 12.5 s^2$
		0.01	$12.5 s^2 < df \leq 1,250 s^2$
Percentage (%)	$\sqrt{(\% \times (100 - \%)/N)}$	1	$N \leq 0.25 \times \% \times (100 - \%)$
		0.1	$N \leq 25 \times \% \times (100 - \%)$
		0.01	$N \leq 2,500 \times \% \times (100 - \%)$
Correlation coeff. (r)	$\approx 1/\sqrt{(n-1)}$ $\approx 1/\sqrt{n}$	0.1	$n \leq 25$
		0.01	$25 < n \leq 2,500$

A consequence of the first above rule is that rounded numbers do not always follow the arithmetic rules for exact numbers. If, e.g., $18.3 + 54.3 + 27.4 = 100.0$ and $a = 1$, then after rounding $18 + 54 + 27 = 100$ and not 99! In such situations, some people seek to “adjust” one or more numbers, e.g., by rounding up 27.4 to 28, but this optical “solution” is essentially incorrect and should be avoided under all circumstances.

Rounding Interval Values in QoL Research Reporting

Rounding interval values for average values and standard deviations are summarized in Table 1.

Symbols:

a = rounding interval

s = estimated standard deviation between individual QoL ratings

df = degrees of freedom of estimated standard deviation

n = number of pairs in a correlational analysis

N = sample size

Some Practical Rules of Thumb for Happiness in Nations

For practical use in studies on happiness in nations, the following rules of thumb are recommended. They are only approximately in agreement with the above rules and are based on a number of *assumptions*:

- Average values are reported on the basis of a $[0, 10]$ continuum, a discrete $\{0, 10\}$, or $\{1, 10\}$ scale.
- Standard deviations are of the order of magnitude of $s = 2$ on that scale.
- Sample sizes N : $100 \leq N \leq 5,000$
- For the percentage of, e.g., unhappy people: $10 \% \leq \% \leq 90 \%$.

These *rules of thumb* are:

- Average happiness values
- Confidence limits for the mean happiness value
- Standard deviations
- Correlation coefficients

are all reported in **two decimal places**.

Percentages of, e.g., unhappy people are reported as **integers** if $N < 600$ and rounded to **one decimal place** otherwise. Percentages < 10 are always rounded to **two significant digits**.

Publications and Other Presentations

The above rules have been formulated to be applied in scientific publications which have a *documentary function*.

In visual presentations in which findings, ideas, or other messages have to be addressed to an audience, rounding using larger rounding intervals is an attractive and also admissible option. A rule of thumb is that in such situations the use of more than two significant digits is dissuaded, so generally speaking 7.3 is to be preferred over 7.32 unless the second decimal place is essential in this context.

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Status Seeking

- [Consumption Externalities](#)

Stereotypes Among Older Workers

- ▶ [Workplace Discrimination Among Older American Workers](#)

Sterility

- ▶ [Human Infertility](#)

STI(S)

- ▶ [Sexually Transmitted Infection\(s\)](#)

Stiglitz Report

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Definition

This refers to a report commissioned shortly after taking office by President Nicolas Sarkozy of France. President Sarkozy was dissatisfied with official statistics. He commissioned three famous economists – Stiglitz, Sarkozy, and Fitoussi – to suggest improvements.

The Commission reported in September 2009.

Description

The Report recommended that Governmental measures of societal progress (or regress) needed to focus more broadly on *well-being*, rather than narrowly on economic production. Well-being

should be viewed as multidimensional. Eight dimensions were considered important: material living standards, health, education, personal activities including paid work, political voice (governance), social connections and relationships, environmental quality and sustainability, and physical and economic security (Stiglitz, Sen, & Fitoussi, 2009, pp. 14–15).

It was recommended that measures of economic performance should generally be provided at the household level, because it is that level which best captures economic well-being. Measures of income and consumption, wealth and indebtedness should be used. Household production (as well as firm production) should be measured and included in satellite accounts appended to national income accounts. More attention should be paid to distributional issues – issues of inequality – rather than relying primarily on aggregate or average measures like gross domestic product (GDP) and changes in GDP per capita.

From the standpoint of quality of life research, the most interesting recommendation was Recommendation 10 which began with the statement that, “Measures of both objective and subjective well-being provide key information about people’s quality of life. Statistical offices should incorporate questions to capture people’s life evaluations, hedonic experiences and priorities in their own survey” (Stiglitz et al., 2009, p. 16). It went on to say that, “research has shown that it is possible to collect meaningful and reliable data on subjective as well as objective well-being”. At the same time, the Commission opined that measures of individual well-being should not be based solely on subjective measures, but should also be based on assessment of people’s capabilities and functionings. Clearly, in this regard, the Commission accepted the views of Amartya Sen (1999), who has long believed that, “What really matters are the capabilities of people, that is, the extent of their opportunity set and of their freedom to choose among this set, the life they value” (Stiglitz et al., p. 15).

Quality of life researchers were also particularly interested in and heartened by the recommendations relating to environmental

sustainability. The Report stated that, “Sustainability assessment requires a well-identified dashboard of indicators” to measure changes in various “stocks”; stocks relating to natural resources and to human, social, and physical capital (Stiglitz et al., 2009, p. 17). It went on to say that there was a need for official statistical agencies to develop and routinely collect measures which indicate “our proximity to dangerous levels of environmental damage,” such as are associated with climate change or depletion of fishing stocks.

At least in broad terms, the Report was endorsed by both President Sarkozy and Chancellor Merkel of Germany. These two leaders issued a joint communiqué after their 12th French-German Ministerial Council meeting in February 2010, asking their statistical offices and scientific communities to implement the recommendations.

This initiative is probably the closest national leaders have come to endorsing the view pressed by quality of life researchers that subjective indicators of well-being should be used by governments to assess social progress or regress (see, for example, Layard, 2009). Bhutan remains the exception in holding out improvements in Gross National Happiness as an official national goal (Centre for Bhutan Studies, 2008).

Cross-References

- ▶ [Capabilities](#)
- ▶ [Social Indicators](#)

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Stigmatization

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Definition

Stigmatization is the process whereby a mark or attribute – culturally understood as devalued and discrediting – is recognized in, or applied to, an individual or group of individuals by another more powerful group of individuals. This stigmatizing mark works to differentiate and separate marked individuals (“them”) from unmarked individuals (“us”) because of the associated judgment that persons so marked are tainted and lesser. Rooted in normative judgments, stigmatization reduces the individual from a complex whole and “usual” person (Goffman, 1963, p. 3) to this single tainted and discounted trait. Effected through interaction, stigmatization involves a combination of negative stereotyped beliefs, prejudiced attitudes, and discriminatory behavior toward marked individuals. It takes place at both the interpersonal and broader systemic levels. Persistent and pervasive, it affects many if not all aspects of an individual’s life and results in significantly reduced life chances (from Goffman, 1963; Hinshaw & Stier, 2008; Link & Phelan, 2001; Pescosolido, Martin, Lang, & Olafsdottir, 2008; Yang et al., 2007).

Description

A number of different components must be present for stigmatization to be said to have occurred. The first is that an individual or group is marked, that is, recognized or perceived to have the offending and discrediting attribute or characteristic. **Stigma** can take different forms. Erving Goffman (1963, p. 4), whose seminal work *Stigma: Notes on the Management of Spoiled Identity* attracted considerable attention

to this concept, articulated three types of stigma still in use:

- (a) “Abominations of the body” which refer to body/mind differences that deviate from the norm.
- (b) “Blemishes of individual character” which are culturally determined, undesirable, or “unnatural” beliefs, values, attitudes, and ways of being in the world.
- (c) “Tribal stigma of race, nation and religion” which can be transmitted intergenerationally and which tend to affect or “contaminate” all members of a family or community. Also included here are stigma related, for example, to socioeconomic class.

Stigmatization also depends upon the interaction between the mark and **negative stereotypes** about it. These cultural beliefs and cognitive labels act as a type of “shorthand” about stigmatized persons that serves to characterize members of stigmatized and devalued groups in “blanket terms.” While they may, or may once, have contained a kernel of truth, these stereotypes have become pejorative, demeaning, and tend, unfairly, to lead to overly rigid and limited characterizations of group members (Hinshaw & Stier, 2008).

Prejudice is the attitudinal component, the negative affect directed toward stigmatized individuals resulting from the belief that negative stereotypes are real (Hinshaw & Stier, 2008). Initially regarded as separate concepts, “prejudice” and “stigma” are currently understood to overlap and are increasingly used interchangeably. Phelan et al. propose using “stigma” to refer to the broader process of stigmatization and “prejudice” to refer to the attitudinal components of this process (2008, p. 365).

Discrimination is the frequent outcome of prejudiced attitudes (Hinshaw & Stier, 2008). As the behavioral components of stigmatization, Link and Phelan (2001) note that **discriminatory behaviors** perpetrated against stigmatized persons include shaming, degrading, and devaluing persons assigned a stigmatized status; avoiding, excluding, or treating badly those who are stigmatized; curtailing their rights and life opportunities; and affording them only limited and

negative social contacts. The authors articulate three mechanisms for achieving discriminatory outcomes: (a) individual discrimination or specific acts of discrimination directed toward an individual; (b) structural discrimination or accumulated institutional practices that work to disadvantage a stigmatized group even in the absence of individual prejudice or discrimination, such as institutional racism and institutional ableism; and (c) discrimination that operates through the stigmatized person’s beliefs and behavior (i.e., self- or internalized stigmatization).

Increasingly, stigmatization is understood “in a broader framework of **power** and domination and as central to reproducing structures of hegemony and control” (Yang et al., 2007, p. 1527, boldface added). People are regularly confronted with other people whose appearance, behavior, or situation is “different” from their own – sometimes radically so – and might be regarded as undesirable, deviant, or even threatening. *All* groups of people negatively evaluate other groups, and in a complex world, there may always be processes of “us” and “them” at work (Pescosolido et al., 2008). But, these processes do not always lead to stigmatization. It takes social, economic, political, and cultural power to stigmatize, and only those with this power can bring about real consequences for those they stigmatize (Hinshaw & Stier, 2008; Link & Phelan, 2001). For this reason, stigmatization is further understood as a means of social control (Dijker & Koomen, 2006).

Two other important components of stigmatization need mention. **Social exclusion** is a common outcome of stigmatization and has deleterious effects on one’s life chances (Hinshaw & Stier, 2008). Similarly, assigning a devalued attribute or characteristic to an individual or group leads to their **devaluation** as a person, often to the point of calling into question their very humanness (Goffman, 1963; Link & Phelan, 2001).

The definition of stigmatization varies across space and time. This variability results, in part, because of different ways of measuring stigmatization, because researchers draw from different

research traditions and use different methods and analyses, and because they focus on different, but often *singular*, processes or factors as being at the root of stigmatization (Link & Phelan, 2001). Similarly, researchers tend to focus only on a micro (psychological and sociocultural level or individual factors) *or* a meso (social network or organization level factors) *or* a macro (social, national, international, and transnational factors) level of analysis, but do not consider the multiple influences involved (Pescosolido et al., 2008).

Definitions and understandings shift, too, as a function of one's locus of attention – whether one theorizes stigma as a social construction, as deriving from psychological mechanisms, or as some combination of both. Erving Goffman, a sociologist, understood stigma as a normative construct, “the situation of the individual who is disqualified from full social acceptance” (1963: preface). Like other **sociological and anthropological approaches**, he focused on the dominant beliefs, values, and practices shared by members of social groups, societies, or cultures and how these result in definitions of “normal” and “deviant.” Stigmatization “lies in the “rules” which guide behavior at particular points in time and place by defining it as acceptable, customary, “normal,” or “expected” (Pescosolido et al., 2008, p. 432). Embedded in the “language of relationship” (Goffman, 1963, p. 3), processes of **social construction** are central. Stigmatization is constructed in social interaction when an individual's actual social identity (i.e., the attributes she/he can be proved to possess) does not meet society's normative expectations of the attributes they should possess (Yang et al., 2007). The objectively present “deviant” features and behaviors are not the cause of stigmatization but, rather, the result of definitional processes and attempts at socially controlling difference (Dijker & Koomen, 2006). (See also Crocker, Major, & Steele, 1998; Elliott, Ziegler, Altman, & Scott, 1982; Jones et al., 1984).

Social psychology approaches study the processes “that occur in the head” of individuals, the **psychological phenomenon** associated with how people respond to **socially defined** devalued

attributes (i.e., features and behaviors), and the processes that lead to stigmatization (Dijker & Koomen, 2006, p. 298; Yang et al., 2007). All societies are marked by ingroups and outgroups: ingroups are those “in which the individual is embedded through the institutions of family, neighborhood, or other social entities providing protection and care. There exists a strong proclivity for individuals to identify with their associated ingroups and reject outgroups” (Hinshaw & Stier, 2008, p. 373). The mechanisms that facilitate this include both socially constructed ideas as to what is “normal” and what is “deviant” and related cognitive processes “that accentuate the individual identities and positive traits of ingroup members and portray outgroup members homogeneously and negatively” (Hinshaw & Stier, 2008, p. 373).

Kurzban and Leary suggest “negative evaluations are an inevitable part of social life,” but yet, in and of themselves, do not constitute stigmatization (2001, p. 188). Given the apparent intractability of particular targets of stigmatization (e.g., people with mental illness and/or intellectual disabilities), they question whether there is an underlying, biologically driven propensity for stigmatization of some groups. **Evolutionary psychology** is an approach that challenges the perceived relativism of sociological, social-psychological, and anthropological approaches. It assumes humans are endowed with particular **psychological mechanisms** designed by natural selection that, in our evolutionary past, have proven to be adaptive and fitness promoting and continue to evolve and to determine both thought and behavior in different environments (Dijker & Koomen, 2006; Kurzban & Leary, 2001). The process of stigmatization revolves around the exclusion of particular individuals from certain types of social interactions as a means of solving “specific problems associated with sociality.” It works to confer “survival advantage in the constant dynamic between the need for social contact and the reciprocal need for judicious judgments related to avoiding exploitation or disease” (Kurzban & Leary, 2001, p.187).

More recently, recognition is granted that each of these conceptualizations captures important

aspects of the process of stigmatization. Similarly, there has been a move to incorporate not only forces located within the individual but, in attending to questions of power, to address the myriad societal forces involved in stigmatization (see, e.g., Link & Phelan, 2001, Yang et al., 2007). The role of the media in stigmatization has also been recognized (see, e.g., Devereux, Haynes, & Power, 2011; Haller, 2010; Hinshaw & Stier, 2008; Pescosolido et al., 2008).

Interest in stigmatization spans and extends beyond clinical and social psychology, disability studies, public health, sociology, social work, political science, anthropology, social geography, services research, and related fields. Wide-ranging and disparate groups of individuals, characteristics, and circumstances have been stigmatized, including (but not limited to) disability, HIV/AIDS, lesbian, gay, bisexual, transgendered, or queer, mental illness, female gender, criminality, unemployment, receipt of welfare, stepparents, foster parents, adoption, child welfare status, child sexual abuse, debtors, mothers who are lesbian, obesity, minority racial status, ethnicity, religion, exotic dancing, and people with particular health concerns (e.g., psoriasis, epilepsy, leprosy, cancer, urinary incontinence, chronic illness). Even places, in particular, the places where poor people live, have been targeted (Devereux et al., 2011).

The foregoing list demonstrates that a single individual may have membership in any number or combination of stigmatized categories. The amplification, layering, or intersectionality of stigma experiences may have particular and variable impacts on stigmatized persons (Collins, Von Unger, & Armbrister, 2008; Pescosolido et al., 2008). In addition, stigma would seem “to exist as a matter of degree” (Link & Phelan, 2001, p. 377) such that some groups are more stigmatized than others. Responses to, and by, the stigmatized differ across individuals, different situations, historical epochs, and cultural landscapes. The variability of experience and degree of stigmatization is a function of the prominence of the labeling of human differences, the number of stereotypes linked to the label, the strength of the connection between labels and

undesirable attributes, the degree of separation between “us” and “them,” and the extent of discrimination (Link & Phelan, 2001). Hinshaw and Stier (2008) argue that persons labeled mentally ill or intellectually impaired experience more universal, transhistorical, and intractable stigmatization that has not abated despite increased knowledge and awareness: it has actually increased. Similarly, Pescosolido et al. observe that “it is only the manner in which racial prejudice is expressed that has changed, not the existence of racist ideologies per se” (2008, p. 437).

An understanding of stigmatization is important in light of the potential for stigmatization to negatively impact one’s life:

(S)tigma sometimes represents a very persistent predicament in the lives of persons affected by it. . . .because there are so many stigmatized circumstances and because stigmatizing processes can affect multiple domains of people’s lives, stigmatization probably has a dramatic bearing on the distribution of life chances in such areas as earnings, housing, criminal involvement, health, and life itself. (Link & Phelan, 2001, p. 363).

Link and Phelan (2001) also link stigmatization to access to medical care; to social, economic, and political exclusion; and to experiences of violence. Attempts to mask one’s stigmatized status – to “pass” – may take a personal toll and/or prevent access to supports. Pescosolido et al. (2008) note the pervasive negative effects on quality of life for stigmatized persons, including decreased well-being, compromised access to legal and human rights, discrimination in multiple environs, poorer health and life outcomes, and a shortened life span. Social and personal disruption (Hinshaw & Stier, 2008) is another potential consequence. For individuals living with mental impairments, the negative impact of stigmatization outweighs any effects of the impairment itself (Hinshaw & Stier, 2008). In essence, stigmatization compromises the “human right to dignity” (Bayer, 2008, p. 463).

Stigmatization is a complex process that likely pervades many aspects of an individual’s life and affects multiple outcomes. Limitations in

research – for example, focusing on stigma associated with one circumstance (e.g., disability, AIDS) and one outcome (e.g., earnings, health, self-esteem) at a time – suggest the impact of stigmatization on life chances is likely to be underestimated (Link & Phelan, 2001).

Hinshaw and Stier (2008) point to existing research identifying **self-stigmatization** (increasingly referred to as internalized stigma) as a probable outcome of being stigmatized. Self-stigmatization is the notion that being stigmatized by others produces feelings of demoralization, lowered self-worth, and stigmatization of the self. More recent research asserts that self-stigmatization may not be a foregone conclusion as the self-esteem of many members of stigmatized groups may be fully as high as that of stigmatizing groups (Major & O'Brien, 2005; Wendell, 1996). There is, however, likely to be variability within and between stigmatized groups. Speaking of people with mental disorders, Hinshaw and Stier (2008) cite factors related both to the impairment and societal reactions that might make self-stigmatization more likely. Link and Phelan (2001) articulate how stigmatization and “‘John Henryism’ – the tendency for some African Americans to work extremely hard and with great pressure to disprove the stereotype of laziness and inability” (p. 379) – may culminate in self-stigmatization, ill health, and a poor quality of life.

Link and Phelan (2001) speak to a related notion, that is, focusing on the impacts of stigma on people’s lives can lead to their construction as helpless victims. Consequent to this construction, stigmatized “victims” may be driven to mask and hide that which has marked them (Bayer, 2008). Dispelling this stereotype of “victim,” some research demonstrates the ways stigmatized persons can and do resist, challenge, or dodge stigmatizing processes: gay pride and disability pride being two examples (Collins et al., 2008; Wendell, 1996). Yet, while recognition of resistance is necessary, the very fact of this resistance indicates “there *is* something out there to avoid and that there *are* powerful constraining forces at work” (Link & Phelan, 2001, p. 378). Resistance exists, but it cannot fully overcome constraint stemming from the power of one group over

another. As Link and Phelan note, “(t)he amount of stigma people experience will be profoundly shaped by the relative power of the stigmatized and the stigmatizer” (p. 378).

How can stigmatization be prevented or eradicated? For meaningful, lasting change to occur, change efforts must be multifaceted and occur at the micro, meso, and macro levels (Goffman, 1963; Link & Phelan, 2001). Strategies need to include top-down efforts in the form of altered laws, social policies, and action toward structural change and legal, economic, and material parity for stigmatized groups. Majority group members and stigmatized group members must come to hold relatively equal power and status. Change also requires strategies initiated from the bottom-up consisting of meaningful efforts to change fundamental attitudes, acceptance, and empathy across *all* members of society (Dijker & Koomen, 2006; Hinshaw & Stier, 2008; Pescosolido et al., 2008). Social and political resistance to change remains strong (Bayer, 2008), but without such concerted tactics, “the likelihood is that reform will be piecemeal and even counterproductive” (Hinshaw & Stier, 2008, p. 382).

Link and Phelan (2001) contend that change actions tend to occur in very limited ways. Typically, change is directed at a particular behavior of a particular stigmatizing group: for example, the hiring practices of a particular organization are targeted to increasing employment chances for a particular stigmatized group. This effort is generally combined with attempts to change the beliefs and attitudes of the stigmatizing group. This approach is insufficient as it leaves the broader context untouched. The authors reinforce the necessity of multifaceted (i.e., addressing the many mechanisms at play) and multilevel (i.e., addressing individual *and* structural discrimination) change efforts that simultaneously “address the fundamental cause of stigma - it must change the deeply held attitudes and beliefs of powerful groups that lead to labeling, stereotyping, setting apart, devaluing and discriminating, or it must change circumstances to limit the power of such groups to make their cognitions the dominant ones” (p. 381).

Complicating the question of change, Bayer (2008) proffers that we may, in some instances,

have an ethical obligation to stigmatize certain groups in the interest of public health (e.g., stigmatize smokers to reduce health effects of smoking on smokers and nonsmokers alike). However, this perspective is not without its critics (see, e.g., Burris, 2008).

Cross-References

- ▶ [Prejudice](#)
- ▶ [Social Exclusion](#)

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S-Time-Distance

- ▶ [Inter-temporal Aspect of Well-Being](#)

Stimulus-Centered Scale

- ▶ [Categorical Judgement Scales](#)

Stochastic Differential Equation Modeling

- ▶ [Continuous Time Analysis](#)

Storytelling

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Synonyms

[Narrative](#); [Narratives](#)

Definition

Storytelling is an intervention and a tool for communication, an activity and a process of telling a story in which the storyteller interprets and connects different periods from his or her course of life. Storytelling is used within health care to promote well-being and quality of life. Storytelling may be performed as a spoken or written story of connected events, but also as dramas, pictures, or dances.

Description

Storytelling has an important role within human culture. People from all over the world usually tell stories in relation to their values, traditions, experiences, and actions. One way in which people can reflect on how they compose their lives is by creating narratives, that is, a spoken or written story of connected events or a process of storytelling. This approach can give important knowledge about how people form their lives and what they experience as essential and meaningful. People tell stories regarding various events, which are often related to their quality of life. Telling and sharing stories with others can strengthen one's identity and promote problem solving, which in turn supports well-being and quality of life.

Storytelling is an activity in which the storyteller interprets and connects different periods from the past, the present, and the future into a life story. Storytelling is not only about the storyteller, but also about his or her relations to others and about values and experiences of meaning on life. A life story has an expected structure with a beginning, a middle, and an end, which are meaningfully interwoven through a plot (a theme or a point of the story). Storytelling not only produces a story, it also relates to meaning, that is, it is a way to describe and explain to oneself and others why one acts in a specific way in a specific situation. By creating a life story, people define themselves and who they want to be, as well as their experiences from relating to the environment. It is a way of making life experiences

meaningful (Atkinson, 1998; Riessman, 1993) which in turn may help the individual to enhance well-being and quality of life. A life story can be presented in the form of facts, metaphors, or expressive creativity (Atkinson, 1998; Polkinghorne, 1996). The point is not whether the storytellers bring out the truth about different events, but rather that they, through the narrative, interpret their experiences of reality (Riessman, 1993).

Storytelling is used as an intervention and a tool for communication in various health-care settings, such as nursing, psychology, social sciences, and occupational therapy. A therapist who uses storytelling as an intervention will focus on the client's experiences of his or her disability and its impact on everyday life. By using a narrative approach, like storytelling, the therapist may show the client a possibility to reinterpret previous experiences and reconstruct his or her life story. The client gets an opportunity to interweave the split ends of time and connect and reconstruct various events and time periods so that coherence is established, and greater self-knowledge, a stronger self-image, and better quality of life are gained. Therapists may use storytelling as a tool for assessment, treatment, or education of clients, for example, to encourage them to follow health-care information and make lifestyle changes.

There are various methods where storytelling is useful for focusing on a client's entire life, for example, case histories with a focus on clinical problems found in a client's daily life (e.g., Freud's history of Dora); life charts, that is, linear diagrams indicating key events throughout a client's course of life; life histories, that is, the story of a client's life from birth to the present time; and life stories in which the client is telling a story about some parts of his or her life (Frank, 1996).

Storytelling may be used in the shape of occupational life stories, which is when a person talks about his or her life with a focus on everyday occupations, including not only work, but all activities performed during the 24-h day. Life stories have been used as a method for qualitative research in order to understand the meaning clients make of their occupations in everyday life

(e.g., Alsaker & Josephsson, 2003) as well as how occupations in everyday life change over time (e.g., Jonsson, Josephsson, & Kielhofner, 2001). Storytelling has also been useful when evaluating what an intervention in psychosocial occupational therapy meant for the clients in a long-term perspective (e.g., Eklund, Rottpeter, & Vikström, 2003). Occupational life stories are useful because, in a life course perspective, they reveal knowledge about performed occupations, the meaning attached to everyday life experiences, and interactions with others.

When used as an intervention method, a life story interview can serve as a tool for gaining knowledge of a client's general capacity to handle his or her daily life (e.g., Kielhofner et al., 2008). Storytelling may also be used as a treatment tool, encouraging clients to tell their life story, in the past and at present, in order to create images of the client's possible future life and to act toward creating those possibilities. Clark, Larsson, and Richardson (1996) developed a method for treatment by using occupational life stories, including occupational storytelling and occupational story making, in which the client and therapist collaborate. Clark demonstrated how the client Penny, who had survived a stroke, connected her former occupational life with her evolving new life, recovered and became an actor in her own life, which highly affected her quality of life. Story making is related to a prospective treatment story, in which the therapist encourages and guides the client to imagine and act toward a desirable future and better well-being. Inspired by Clark et al. (1996), a method called the Tree Theme Method[®] has been developed. The method implies that the client paints trees representing certain periods in life. The paintings are used as a starting point for the client to tell his or her life story with a focus on everyday occupations (occupational storytelling) and shaping plans for their future (occupational story making) in order to enhance well-being (Gunnarsson, Jansson, & Eklund, 2006).

Storytelling may be useful to promote life quality with clients of various ages and contexts. Besides the examples above, therapists can use

storytelling with individuals as well as with families with traumatic stress disorders to communicate and cope with traumas (Kiser, Baumgardner, & Dorado, 2010). Storytelling may also support clients with dementia to communicate and interact with others, leading to enhanced quality of life (Holm, Lepp, & Ringsberg, 2005), or clients with cancer, who found that listening to others' stories gave them hope and helped them to cope with everyday life (Chelf, Deshler, Hillman, & Durazo-Arizu, 2000).

Cross-References

- ▶ [Changes in Quality of Life](#)
- ▶ [Data Collection Methods](#)
- ▶ [Everyday Life Experience](#)
- ▶ [Health Promotion](#)
- ▶ [Human Development](#)
- ▶ [Identity Change](#)
- ▶ [Life Course Transitions](#)
- ▶ [Life Events](#)
- ▶ [Meaning in Life](#)
- ▶ [Painting](#)
- ▶ [Qualitative Methods](#)
- ▶ [Quality of Life \(QOL\)](#)
- ▶ [Satisfaction with Life as a Whole](#)
- ▶ [Self-acceptance](#)
- ▶ [Well-being Therapy](#)

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Strategic Environmental Assessment

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Synonyms

[Environmental assessment](#)

Definition

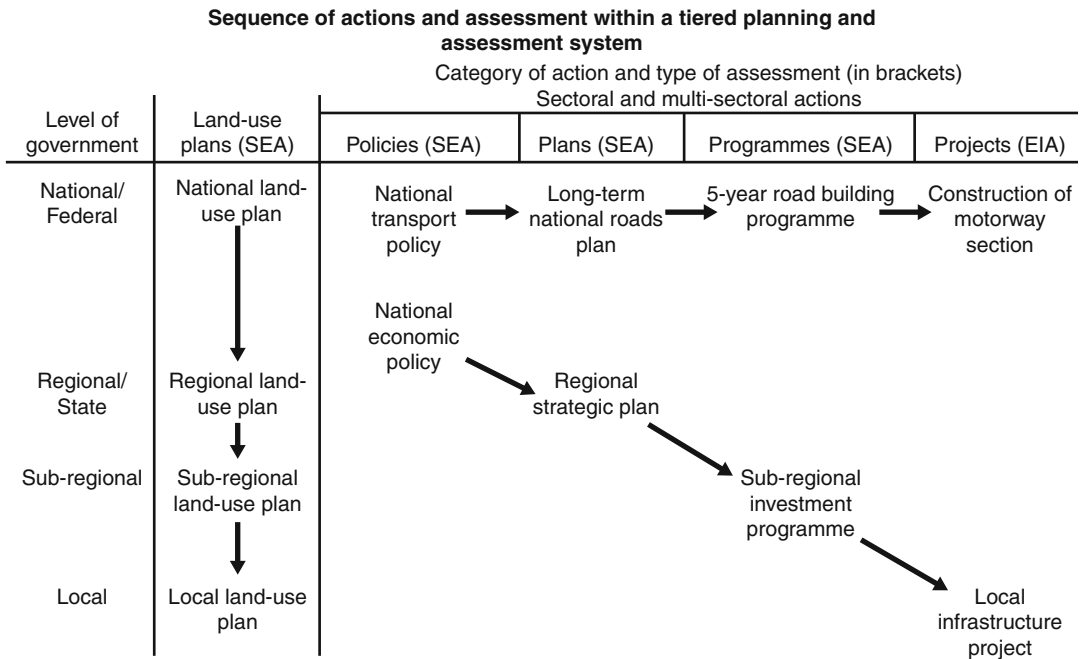
Strategic environmental assessment (SEA) refers to the process of integrating environmental

considerations into the formulation of policies, programs, or plans and evaluating their potential environmental impacts, prior to their approval and implementation.

Description

In response to the developing agenda of ► [sustainable development](#) and ► [sustainability](#), it was clear that the logic in applying ex ante assessment to evaluate the potential environmental impacts of projects – ► [environmental impact assessment](#) (EIA) – applied equally to the potential impacts arising from the enactment of policies, plans, and programs (PPPs). There is a need to evaluate the environmental consequences at levels above projects as these levels guide subsequent development and provide both a framework and often constraints. Indeed, the forerunner of much of the legislation on EIA and SEA – the US National Environmental Policy Act of 1969 (Council on Environmental Quality [CEQ], 2011) – referred to “actions” and therefore made no distinction between different levels of intervention with the environment; therefore, the application of an ex ante process of evaluating potential environmental impacts was always understood to be all encompassing. The development of SEA as a formal process began in the early 1990s, with its international implementation in 2001 (Dalal-Clayton & Sadler, 2005).

SEA also developed in response to some of the shortcomings of EIA, and the two processes can be very similar in terms of approach and broad concepts. However, the EIA process focuses on projects, and therefore can generally only react to development proposals rather than anticipating them, and therefore can do little to steer development to particular areas or away from sensitive sites. At the project stage, it is more difficult – or even too late – to consider both more strategic approaches to achieving objectives, and wider effects through cumulative, synergistic, and long-range or delayed impacts, from several projects, or one project’s subcomponents or ancillary developments.



Strategic Environmental Assessment, Fig. 1 Sequence of actions and assessments within a tiered planning and assessment system

There are also intrinsic advantages in undertaking SEA, in terms of bringing environmental considerations into the remit of activities of non-environmental organizations, facilitating wider consultation, and providing for analysis of the impacts of policies which may not be implemented through PPPs. SEA also has advantages for the broader process of assessment of overall effects through the consideration of alternatives often ignored or not feasible in project EIA, in assisting to determine appropriate sites for projects subsequently subject to EIA, and formulating standard/generic mitigation measures for later projects. An early assessment of potential environmental impacts might allow certain impacts to be specifically left to project EIA, or conversely may render some project EIAs redundant if impacts are assessed adequately at the PPP level.

The key characteristic that should drive SEA is that it is “strategic” in nature – in terms of its spatial boundaries, data requirements, outputs, and those responsible for its implementation. Therefore, the process and the decisions involved

should be concerned with an overview and setting a vision, with the focus on issues that are important for future decisions or actions. It is about thinking “strategically,” not about details, i.e., from the military background of the word, “a position determined as important in a plan of campaign” (Oxford English Dictionary 2011).

These potential links between SEA and EIA lead to the concept of tiering, where impacts are addressed at the most suitable point in the environmental assessment process – either strategic or project – and the tiered assessments can draw on an assessment made at a higher level as well as provide a framework for subsequent assessments. This tiered approach is shown in Fig. 1.

However, for assessments to be tiered, it is clear that the underlying policies, plans, programmes, and projects also need to be tiered. In practice, this has proved often not to be the case, and together with difficulties encountered due to different types of organizations holding responsibility at different levels (at strategic levels, the public sector tends to take the lead, while private developers tend to be responsible

for projects, although the USA is a notable exception), and the lack of suitable institutional structures and governance frameworks, tiering has yet to deliver a more holistic and focused approach to impact assessment.

SEA is applied to a range of sectoral PPPs likely to involve environmental effects covering inter alia agriculture, energy, fisheries, forestry, industry, ► [land use](#), spatial planning, telecommunications, tourism, ► [transport](#), waste management, and water management (Fischer, 2002; Jones et al., 2005).

The approach to SEA (Therivel, 2004) generally requires the existence of a “competent body” to develop the PPP and ultimately approve its implementation, production of an environmental report on the assessment and its findings, and consultation with statutory organizations and other relevant stakeholders including the public. The process often also draws on EIA-related stages such as screening, scoping, and ► [monitoring](#) (Morrison-Saunders & Arts, 2004), to establish which PPPs SEA is applied to, its coverage, and ongoing effectiveness. The assessment itself tends to focus on primarily biophysical elements (e.g., biodiversity, fauna, flora, soil, water, air, climatic factors, cultural heritage, landscape), but increasingly social aspects as well (e.g., population, human health). This is particularly the case where SEA is combined with other related processes such as sustainability appraisal or integrated assessment (Marsden, 2008).

The tools used in undertaking SEA include geographic information systems (GIS), expert panels, and system modeling and depending on the rationale adopted for the SEA, utilize baseline information, objectives and indicators, and targets to shape underlying policies towards a more environmentally sensitive position.

As well as being implemented by national and regional jurisdictions worldwide, SEA is also applied by various organizations, including funding banks, such as the World Bank (Ahmed, Mercier, & Vermeem, 2005), Asian Development Bank, and other organizations such as the European Commission (EC, 2001, 2009) and

► [United Nations Economic Commission for Europe \(UNECE\)](#).

Despite the increasing development of SEA as a useful tool and widespread research into its diversity of practice and methodological approaches (Sadler et al., 2011; Schmidt, João, & Albrecht, 2005), there is ongoing debate about what constitutes SEA and its theoretical basis. While it is agreed that its ultimate aim is to contribute to improvement of the environment and to wider sustainability, its rationale and how this is achieved are still evolving. For example, “SEA is best described as an evolving family of tools” (World Bank, 2005, p. 1), and “SEA is understood to be a generic process or approach that encompasses a family of instruments, which may have different names and features but are functionally related by common aim of integrating environmental considerations into the higher levels of decision-making” (Sadler et al., 2011).

Discussions center around the development of SEA as a process grounded in project level impact assessment (EIA), now operating in a climate of wider thinking in terms of sustainability, and debates on governance and decision-making contexts (Bina, 2007; Caratti, Dalkmann, & Jiliberto, 2004; Partidario & Clark, 2000). Thus, the literature has reflected a development of conceptual thinking and frameworks that moved from a focus on impacts to the decision-making process itself, to the current focus on dialogue and negotiation. However, practice has remained rooted in the “impact assessment” approach, partly driven by the legislation in place and also the need to connect theoreticians and practitioners. This has resulted in practice struggling to utilize methods that “predict” impacts at a strategic level and in a decision-making context that is at odds with such an approach.

Cross-References

- [Environmental Impact Assessment](#)
- [Geographic Information Systems \(GIS\)](#)
- [Land Use](#)
- [Monitoring](#)

- ▶ [Spatial Planning \(Europe\)](#)
- ▶ [Sustainability](#)
- ▶ [Sustainable Development](#)
- ▶ [Transport](#)

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Stratification in Survey Research

- ▶ [Survey Research](#)

Stratospheric Ozone

- ▶ [Ozone](#)

Street and Social Networks

- ▶ [Connectivity \(Street Patterns and Social Networks\)](#)

Street Waste Pickers in Pretoria, South Africa

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Synonyms

[Garbage pickers in Pretoria, South Africa](#); [Reclaimers of waste](#); [Recyclers of street waste](#); [Scavengers](#); [Waste pickers](#); [Waste scavengers](#)

Definition

Waste pickers are small-scale, self-employed agents, characteristically encountered in the

urban informal sector (Hayami, Dikshit, & Mishra, 2006: 42). It is an easy activity to engage in, as there are no barriers to entry and no qualification, permit, or permission is required (Hayami et al., 2006:43; Theron, 2010). Waste pickers constitute the bottom tier of the urban informal sector (Hayami et al., 2006) and are variously referred to in the literature as *reclaimers*, *waste pickers*, *garbage pickers*, *recyclers*, *scavengers*, and *waste salvagers* (Chvatal, 2010; Schenck & Blaauw, 2011; Samson, 2010b). The term *street waste pickers* in this entry refer to people who collect waste on the streets with trolleys.

Description

Introduction

► **Urban areas** in developing countries share several universal features such as high and rising levels of urban ► **unemployment** (Rogerson, 1996). Many of the urban unemployed have no other alternative but to venture into the informal economy. Here they survive through various legal and illegal economic activities. The urban areas of South Africa and its capital, Pretoria, are no exception. Street waste pickers, pushing their trolleys, are an everyday sight in Pretoria.

Street waste pickers are generally either ignored or looked down on because of the work they do, which is perceived as dirty. Nevertheless, "...remarkably little is known about the reclaimers in South African cities and scant attention is being paid to them" Samson (2010b:1). This entry is based on the findings of the first empirical study of street waste pickers in Pretoria in 2010 (Schenck & Blaauw, 2011).

A large amount has been written about waste pickers working and living on dumpsites or landfill sites in South Africa but very little about street waste pickers (Chvatal, 2010; Samson, 2010a). Waste pickers operate in the context of a formal waste management cycle. Waste pickers can make a living only if there are people who generate waste. Another dimension that sustains the informal waste management system is the existence of buyers or buy-back centers and recycling

companies. Gerdes and Gunsilius (2010) report that several studies have shown that these informal recycling activities have positive effects on the environment, reduce the costs of waste management systems, and provide income opportunities for large numbers of poor people.

Discussion

Initial observations suggested that there were between 150 and 200 street waste pickers active within the Pretoria city limits in 2010. The street waste pickers move from one location to another frequently, and a significant number enter and leave this informal economic activity in a given time period.

The street waste pickers in Pretoria were almost exclusively male and of African descent. The few female street waste pickers interviewed in Pretoria were either in a relationship with men or were office workers who took waste paper to the buy-back centers to earn additional income (Schenck & Blaauw, 2011). Most street waste pickers in Pretoria were between the ages of 41 and 50 with the oldest 60 years of age (Schenck & Blaauw, 2011). It seems as if waste picking is more physically appropriate and manageable to older people than other informal activities such as day labor work which requires standing long hours next to the road as well as hard physical labor (Schenck & Blaauw, 2011).

One would expect the waste pickers to include people who spoke Sepedi and isiNdebele, as these are the languages spoken by the people who traditionally live close to Pretoria. This proved correct as more than 60 % of the waste pickers interviewed by (Schenck & Blaauw, 2011) speak one of these two languages. The small number of Setswana-speaking people was surprising, as this language is spoken by another group which traditionally lives close to Pretoria. Only a few were born in the province of Gauteng. The vast majority were born in Limpopo. A smaller portion was born in Mpumalanga and KwaZulu-Natal, respectively. This correlates well with the languages spoken by these people. Surprisingly, Schenck and Blaauw (2011) did not pick up any foreigners in their study in Pretoria. Increasing numbers of foreigners are engaged in

Street Waste Pickers in Pretoria, South Africa, Table 1 The highest level of schooling completed by street waste pickers in Pretoria, 2010

Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Gr 9	Gr 10	Gr 11	Gr 12
13 %	15 %	18 %	17 %	13 %	10 %	8 %	2 %	3 %	1 %

Source: Schenck and Blaauw (2011)

**Street Waste Pickers in Pretoria, South Africa, Fig. 1** Some street waste pickers with their modified trolleys (Source: Schenck and Blaauw (2011))

many other informal activities in South Africa, such as day labouring.

The overwhelming majority of the waste pickers would prefer full-time employment, but employment opportunities for people above 40 years of age were very scarce if they had no work experience in the formal economy. Although most of the waste pickers in the Pretoria study had previously had a full-time job, these were mainly temporary, short-term menial jobs as farm workers, petrol attendants, and assistants to builders and painters, and so on. Their predicament was compounded by their low levels of schooling (Schenck & Blaauw, 2011).

Table 1 shows the highest school grade completed by the respondents in the study by Schenck and Blaauw (2011).

The very low level of ► **schooling** of the waste pickers in Pretoria probably constituted one of the main reasons for their inability to obtain full-time employment. This has a definite impact on their overall ► **quality of life**. ► **Poverty or lack of money** was cited as the main reason for not completing school. Some could not afford school uniforms, and others were living on farms and

could not reach a school, or the school they attended offered only primary school education. *Had to look after the cattle and being a herd boy* were also mentioned as reasons by waste pickers originating from rural areas (Schenck & Blaauw, 2011).

The majority of the Pretoria waste pickers appeared to have entered waste picking fairly recently. These findings correspond with those of studies conducted in other parts of the country. After entering the *business* of collecting waste on the street, a waste picker's first action would be to obtain a trolley as soon as possible (Schenck & Blaauw, 2011). The picker would find a friend willing to share a trolley or would use boxes until he or she was in a position to buy, make, or steal a trolley. Waste pickers would often carry these boxes on their heads until they could afford a trolley (also see McLean, 2000). Some admitted to having stolen a trolley from a supermarket parking area. Figure 1 illustrates some of the modifications made to their trolleys by the street waste pickers.

What the waste pickers collect is determined by what they can sell and/or use. The buy-back

centers buy paper, cardboard boxes, plastic bottles, and/or scrap metal. On waste collection days, the waste pickers search through dustbins and remove *valuable* items such as these before the dustbins are emptied by the municipality. The waste pickers also collect *valuables* for themselves, such as clothing, food, and electronic devices such as cell phones for personal use, to sell and to *give away as gifts* (Schenck & Blaauw, 2011; McLean, 2000:18). The goods collected by the street waste pickers were sold at fixed prices as determined by the buy-back centers.

The typical street waste picker had a fixed daily routine, beginning early in the morning, mostly between 06:00 and 08:00. Collected goods are delivered any time between 10:00 and 15:00. Some continued collecting until 18:00. After delivering what they had collected, most respondents would rest, eat, drink, and socialize. Some began working again later to collect for the following day's delivery (Schenck & Blaauw, 2011).

Apart from the long hours worked by the street waste pickers, the majority (up to two thirds) of them sleep on the streets of South Africa's administrative capital. In fact, according to Schenck and Blaauw (2011), only 4 % of the respondents in their study slept at home. The rest slept elsewhere: this included backyard rooms, in the veld or under bushes, backyard shacks, men's hostels in the townships, and deserted houses. Sleeping on the streets is very risky, and the waste pickers frequently sleep in groups to reduce the risk of becoming victims of crime.

Living on the street means little access to amenities such as water, toilets, and washing facilities, and this seems to be one of the most significant difficulties experienced by the street waste pickers in Pretoria. Filling stations, shops, and streams provide water and toilet facilities. Here they wash themselves and their clothes. Some of the buy-back centers made some facilities available for the waste pickers (Schenck & Blaauw, 2011).

The street waste pickers either cooked for themselves where they slept on the street or in the veld or bought food at the shops. Some also regularly received food from churches. Dustbins

put out by homes and restaurants were also a source of food (Schenck & Blaauw, 2011).

The daily lives of the street waste pickers in Pretoria are not dissimilar to other economic activities in the informal economy. Street waste pickers themselves described their working conditions as harsh as they are exposed to the elements. The trolleys are heavy to push over long distances (Schenck & Blaauw, 2011). The most significant danger they faced was being run over by cars at intersections and the fear of cuts and other injuries. Surprisingly, the Pretoria waste pickers did not cite crime as one of their greatest concerns.

The relationships between street waste pickers and their families, buy-back centers, other waste pickers, and the ► **community** are another important factor in determining the quality of life in this informal economy activity. The nature of the relationships is complex owing to the distance from their families on the one hand and the relatively *close* interaction with the other three groups on the other.

Unlike street waste pickers in other developing countries, those in Pretoria have little or no physical contact with and support from their families. Hayami et al. (2006:48) found that almost all the waste pickers in Delhi received family support, whereas in Pretoria the large majority of the street waste pickers operated at a distance from their families, with only 4 % sleeping at home (Schenck & Blaauw, 2011). There exists a clear sense of disconnectedness between the waste pickers and their families. This unfortunate state of affairs is also confirmed when one observes the low frequency with which street waste pickers visited their families.

Eight out of every ten street waste pickers in Pretoria saw their families only twice a year or less, not surprising considering that more than half of the families of the street waste pickers live in the North West Province. Given the distances involved, it is understandable that if the waste pickers do not earn enough, they are not able to visit their families regularly. As a result, family ties could be weakened or severed altogether (Schenck & Blaauw, 2011). This has obvious negative implications for the quality of life

that the street waste pickers can lead. It emerged that mostly they earn so little that they are unlikely to be able to contribute to the support of their families. This unfortunate state of affairs is even more evident when one considers that although on average four people are dependent on the income of each waste picker, only around one in ten of the street waste pickers in Pretoria was able to send or take money home daily, weekly, or even monthly in 2010 (Schenck & Blaauw, 2011).

The income earned by the street waste pickers not only was low but also varied significantly (Schenck & Blaauw, 2011). In 2010, the average lowest nominal income per day earned by street waste pickers was R19.15, and the average highest nominal income was R96.78 per day, almost five times as much. However, the highest daily income was the exception rather than the rule. The average weekly income earned by street waste pickers, in the week before Schenck and Blaauw (2011) interviewed them, was R156.35. Irrespective of the poverty line used, it is quite clear that the average street waste picker in Pretoria would find it very difficult to support four people on an average monthly income of R620, particularly e.g. in the event of ill health, no income is earned. This illustrates the vulnerability of the waste pickers and the conditions of extreme poverty in which they lived as noted by McLean (2000).

The disconnectedness of the street waste pickers in Pretoria from their families was mirrored in their relationships with other waste pickers or coworkers. Although they indicated that they might share a trolley on starting out as a waste picker, only 4 % of the waste pickers interviewed by Schenck and Blaauw (2011) reported that they worked collaboratively in collecting waste, assisting one another financially, and sharing food or a place to sleep. It would appear that despite sleeping in groups for security and safety reasons, each one worked individually.

Most of the collectors in Pretoria reported being treated well by the buy-back centers, indicative of the realization by these centers that the collectors are an asset to them. Some

waste pickers reported being exploited, but most indicated a fairly good relationship of interdependence (Schenck & Blaauw, 2011). The public's perceptions of the waste pickers were among the important themes that emerged during the study of Schenck and Blaauw (2011). The waste pickers in Pretoria described the public's response toward them as *scornful to indifferent to sympathetic* and *they give us food and money*. Interactions with the police and metro police in Pretoria were not indicated as problematic, and the waste pickers appeared in the main to be left alone to do their *job* (Schenck & Blaauw, 2011).

Summary of Key Characteristics of Street Waste Pickers in Pretoria

The typical street waste picker in Pretoria is between the ages of 40 and 49, male, black, and mostly unskilled; has a low level of education; and exists outside the formal employment sector. The typical street waste picker earned around R50 per day in 2010 in Pretoria. It is therefore evident that waste pickers do not earn enough to support a family, but engage in this activity in order to survive and sustain themselves. It is very difficult to support his dependents. It does little to strengthen family ties, as his family live in a remote rural area.

Most waste pickers were observed as working independently, but they stayed together at night, sleeping in groups on the streets of the city as a measure of protection against criminal activities. They are forced to make use of the goodwill of the buy-back centers and filling stations for basic facilities such as water and toilets, and if these are not available, open spaces and natural resources are used. As most of the street waste pickers are from the rural areas, they sleep and live on the streets and in the bushes and along the rivers. They sleep and cook on the pavements, as they have no other facilities.

If local government, recycling companies, and Non-governmental organizations (NGOs) were to consider acknowledging the waste pickers as a valuable link in the waste management chain, they could contribute to a solution by collaborating to improve the quality of life of these people,

to the benefit of both the waste pickers themselves and the general public. This could take the form of the provision of basic amenities such as water for consumption, personal hygiene and washing clothes, toilets, and shelters. These people are valuable members of the community because of the contribution they make to the urban informal economy of the country, and therefore, they deserve more attention from policy makers in South Africa.

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Streetscape

- [Built Environment](#)

Strengths of Character

- [Character Strengths](#)

Strengths Use

- [Strengths-Based Approaches](#)

Strengths-Based Approaches

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Synonyms

[Character strengths](#); [Strengths use](#); [Strengths-based virtues](#)

Definition

Strengths-based approaches to quality of life are focused on the relationship between strengths and quality of life outcomes, including subjective well-being, psychological well-being, eudaimonic well-being, and work engagement. Strengths-based approaches are premised on the theory and evidence that having and using strengths is associated with, and predictive of, increased quality of life across a number of quality of life markers, including well-being, self-esteem, self-efficacy, work engagement, and reduced stress.

Description

Strengths-based approaches to quality of life were given particular focus following the advent of positive psychology. Outside of positive psychology, however, strengths-based approaches

have been used in social work since at least the 1980s and in career development since at least the 1950s. For example, Haldane (1947) described a method for enabling people to select the careers that were best for them through matching their career to using their strengths, with attendant implications for overall quality of life. Saleebey (2006) identified and collated a range of strengths-based approaches in social work practice, where the focus was on improving broad quality of life outcomes for social work clients.

The advent of positive psychology, however, led to a more sustained and systematic focus on strengths-based approaches and their implications for quality of life. Within positive psychology, strengths are defined as individual characteristics that share a number of defining features, including the sense of energy that comes from using them, the yearning to use them, the experience of authenticity and flow when using them, and the sense that when we are using a strength, we are realizing the best within us, all characteristics that are traced back to the theoretical exposition of ► [eudaimonia](#) as described by the ancient Greek philosopher Aristotle (Govindji & Linley, 2007; Linley, 2008; Peterson & Seligman, 2004).

There are two broad strengths-based approaches that have emerged from positive psychology. The first is the VIA classification of strengths (Peterson & Seligman, 2004), which describes 24 ► [character strengths](#) organized under six overarching virtues. The second is the conceptualization of strengths use as a generic concept [4], which has been used to investigate associations with a range of broad quality of life outcomes.

Extensive empirical research has been conducted with both of these approaches to strengths and their relations with quality of life outcomes. The seminal paper showing relations between the VIA strengths and ► [life satisfaction](#) (Park, Peterson, & Seligman, 2004) showed that the strengths most consistently and robustly associated with life satisfaction were the strengths of hope, zest, love, ► [gratitude](#), and curiosity. Associations between all 24 strengths

and life satisfaction were positive. In a further study (Peterson, Ruch, Beermann, Park, & Seligman, 2007), zest, hope, and love were again consistently and robustly associated with life satisfaction and a pleasure orientation to ► [happiness](#). Examining associations between character strengths and happiness in children, Park and Peterson (2006) found that hope, zest, and love were again the strongest associations, providing consistent evidence that these three character strengths are reliably and robustly associated with happiness and life satisfaction.

Experimental work (Seligman, Steen, Park, & Peterson, 2005) demonstrated that using one's character strengths in new and different ways led to statistically significant increases in happiness relative to a placebo control at 1 month, 3 months, and 6 months. Further, the same intervention demonstrated statistically significant decreases in depressive symptoms, relative to a placebo control group, at posttest, 1 week, 1 month, 3 months, and 6 months. This finding was replicated by Seligman, Rashid, and Parks (2006), who demonstrated that using strengths in new and different ways led to decreased symptoms of depression in groups with mild-to-moderate levels of depressive symptoms and higher remission rates among patients with major depressive disorder.

In a quasi-experimental study examining character strengths development interventions with a large sample of adolescents aged 12–14 years, Proctor, Tsukayama, Wood, Maltby, Fox Eades, and Linley (in press) found that the character strengths development interventions led to significantly increased life satisfaction both over a 6-month time period and relative to a no-intervention comparison group.

Examining the question of generic strengths use, as distinct from the associations between particular strengths and well-being, Govindji and Linley (2007) showed that strengths use was significantly associated with ► [subjective well-being](#), psychological well-being, ► [self-esteem](#), and ► [self-efficacy](#), all of which are broad quality of life indicators. Proctor, Linley,

and Maltby (2011) extended this, showing that strengths use was associated with subjective well-being, self-esteem, and self-efficacy in an adolescent population.

In longitudinal studies, Linley, Nielsen, Wood, Gillett, and Biswas-Diener (2010) showed that strengths use was associated with goal attainment, need satisfaction, and well-being over 3 months, while Wood, Linley, Maltby, Kashdan, and Hurling (2011) showed that strengths use predicted higher levels of vitality, self-esteem, and ▶ [positive affect](#) and lower levels of ▶ [stress](#), at both three and six months, while Minhas (2010) showed that developing realized or unrealized strengths led to increased life satisfaction, psychological well-being, and work engagement over a 4-week period.

Discussion

Strengths-based approaches have been shown to have consistent, robust, and reliable associations with well-being, specifically, and other quality of life outcomes more broadly. Strengths-based approaches have been subject to challenge and critique in relation to strengths-based development leading to strengths being overplayed and impacting negatively on performance (Kaiser, 2009), as well as how they might be (mis)used in organizations (Warren, 2010). Nonetheless, the evidence is both clear and consistent that strengths-based approaches to well-being show reliable and robust associations with higher levels of specific well-being outcomes (Govindji & Linley, 2007; Linley et al., 2010; Minhas, 2010; Park et al., 2004; Park & Peterson, 2006; Peterson, Ruch, Beermann, Park, Seligman, 2007; Proctor et al., 2011; Proctor, Maltby, & Linley, 2011; Seligman et al., 2005; Wood et al., 2011) and broader quality of life outcomes, including lower stress (Wood et al., 2011) and higher self-esteem (Govindji & Linley, 2007; Minhas, 2010; Proctor et al., 2011), self-efficacy (Govindji & Linley, 2007; Proctor et al., 2011), and vitality (Govindji & Linley, 2007; Wood et al., 2011). In summary, there is substantial and consistent evidence that both having and using strengths leads to enhanced quality of life outcomes.

Cross-References

- ▶ [Eudaimonia](#)
- ▶ [Gratitude](#)
- ▶ [Happiness](#)
- ▶ [Life Satisfaction](#)
- ▶ [Positive Affect](#)
- ▶ [Self-Efficacy](#)
- ▶ [Self-Esteem](#)
- ▶ [Stress](#)
- ▶ [Subjective Well-Being](#)

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Strengths-Based Virtues

► Strengths-Based Approaches

Stress

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Definition

There is no definition of stress that everyone agrees on.

Description

Stress is a term used in the social and natural sciences. The word originally came from physics and meant tension and pressure, i.e., the application of sufficient force to an object to distort it.

Stress has increased in adults in recent decades, but at the same time, stress levels have also escalated in children, teenagers, college students, and the elderly. A search in the Social Sciences Citation Index databases revealed an increase in the number of studies on this topic published over the last decade: from 3,924 works in the year 2001 to 7,401 in 2010. In this decade, 20,186 articles in the PsycINFO database have the word “stress” in the title. In some specific areas, such as work, stress has a large impact. A third of all US workers report high levels of stress (National Institute for Occupational Safety and Health, NIOSH 2009). In Europe, a recent European survey showed that 22.3 % of workers suffer from stress.

However, there is still no definition of stress that everyone agrees on. One of the main reasons for this lack of agreement lies in the large number of disciplines involved in stress research, including biology, medicine, psychology, sociology, and epidemiology. The lack of consensus on what exactly constitutes stress is also apparent from the wide variety of phenomena that are examined and lumped together as stress research.

However, despite the disagreement about its exact definition, most researchers do seem to agree that the term stress is used in three quite different ways: as a stimulus, a response, and an interaction between the person and the environment (Rice, 1992). Thus, first, stress may refer to a *stimulus*, an external load or demand, in other words, an event or situation that affects the individual and is potentially harmful. This type of theory focuses on external stimuli. When speaking of stress as an external stimulus, it is appropriate to talk of stressors to refer to these external demands. The concept of stressor is similar to the notion of force in engineering (any force or pressure exerted upon an object). Occupational stress, for instance, has been well researched and has been described as being the negative environmental factors, or stressors, associated with a particular job (Cooper & Marshall, 1978).

Second, stress may refer to a psychological or physiological *response*. In this sense, stress could be the internal mental state of tension or arousal, as well as the physiological response of the

organism to some kind of external threat. Walter Cannon probably introduced this conception of stress to the scientific community in 1932. Cannon contributed the idea of homeostasis, that is, the tendency of an organism to maintain a stable internal environment. The organism tends to “resist” and tries to maintain a balance when it is confronted with stress (Rice, 1992). In this biological approach, Selye (1982) saw stress as “the nonspecific (that is, common) result of any demand upon the body, be the effect mental or somatic” (p. 7). The organism attempts to defend itself by means of a complex of physiological reactions, which Selye called the general adaptation syndrome (GAS). He described three stages of adaptation. *Initial brief alarm reaction* is the first stage: when the stressor is identified or realized, the body’s stress response is a state of alarm. Some stress situations are resolved in this phase. *Stage of resistance* is the second stage. If stress continues because of factors beyond the organism’s control or because the first reaction did not remove the emergency, the body will call up full-scale mobilization. This is the period of optimum adaptation, and the organism has activated the most appropriate systems for overcoming the specific threat posed by the stressor. If the stressor is severe or drawn out, the final stage, exhaustion, is reached. Resistance breaks down altogether, and negative consequences appear shortly thereafter.

This notion of a universal stress response may be criticized. Not all stress phenomena are nonspecific: some are only triggered if the stimulus requires specific demands to be met. In other words, stress systems may respond to variable degrees, depending on the nature of the stressor. Different types of psychological and physiological reactions may occur, according to the nature and interpretation of the stimulus and the emotion that is experienced (Mason, 1971; Lazarus, 1993).

Finally, there is a conceptualization of stress as *interaction*. In this case, the concept of stress considers the interaction between the person and the environment and the cognitive processes that affect the relationship between the stressor and the reaction.

Two general stress models that employ this conceptualization of stress are Lazarus and Folkman’s (1984) and Hobfoll’s (1989). The first define stress as a particular relationship between the individual and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being. Hobfoll bases his conceptualization of stress on a model of conservation of resources—people possess resources they value and wish to protect or conserve. Individuals actively search to gain and maintain resources, and stress occurs in response to the actual loss, threat of loss, or lack of gain of these resources. A situation is regarded as stressful when a potential loss or an actual loss of resources is experienced or when an anticipated gain in resources following an investment is not accomplished.

Lazarus developed the cognitive transactional model of stress (Lazarus, 1974; Lazarus & Folkman, 1984), which emphasizes that the people actively perceive and react to stressors and there are considerable individual variations in this experience. Psychological variables mediate the relation between stressful events and bodily reactions. The occurrence of an event alone is not sufficient to induce stress, and the cognitive interpretation of the event is necessary. This conceptualization of stress takes into account the cognitive, evaluative, and motivational processes. This suggests that most external stimuli cannot be defined as stressful in any absolute sense. The same stressor may produce different responses in different individuals and in different situations. Lazarus and Folkman distinguished three types of cognitive appraisal: primary appraisal (gives the initial evaluation about the type of situation), secondary appraisal (refers to the perception of opportunities for action and coping with stressful situations), and reappraisal (changes in appraisal based on new information from the environment or based on cognitive coping processes).

Lazarus and Folkman (1984) posited that people appraise stressful situations as either potentially threatening or potentially promoting mastery, personal growth, or future gains. These authors used the labels “threats” and

“challenges.” The outcome of this initial appraisal process influences emotions, which in turn have an effect on how a person copes with stressors. Challenge stressors, because they are appraised as having the potential to promote personal gain or growth, trigger positive emotions and an active or problem-solving style of coping (e.g., increasing effort). Threatening or hindering stressors, because they are appraised as having the potential to harm personal growth or gain, trigger negative emotions and a passive or emotional style of coping (e.g., withdrawing from the situation and rationalizing).

In this sense, stress may have different implications for the well-being and performance of individuals. Recent research has shown that not all individuals experience harmful effects from demands and that demands can also lead to healthy, positive outcomes (Nelson & Simmons, 2003). Researchers have begun to demonstrate that individuals can have both positive and negative responses to demands, and it is these positive and negative responses that have different effects on health. If an individual appraises a demand as threatening or harmful, he or she experiences a negative stress response (distress) related to adverse health outcomes and is consequently negative and dysfunctional (depression, anxiety, anger, fear, etc.). Conversely, if an individual appraises a demand as positive or preserving well-being, he or she experiences a positive stress response (eustress) characterized by hope, meaningfulness, positive affect, and so on.

Past research has focused predominantly on negative outcomes, which is not surprising given the impact of stress on health, well-being, and work-related performance. It has only recently been acknowledged that positive emotions can arise in stressful situations as a result of effective coping (Folkman & Moskowitz, 2004). Current research has shifted toward a positive emphasis. The positive psychology movement proposes that instead of focusing on human pathology, the attention of research should also be directed toward positive health, growth, and well-being (Seligman & Csikszentmihalyi, 2000).

Discussion

Stress is a significant problem throughout the industrialized world. The prevalence of stress is increasing and the negative consequences of stress for individual health, well-being, and performance are growing. There is no definition of stress that everyone agrees on: What is stressful for one person may be pleasurable or have little effect on others, and people react to stress differently. Most people’s definition of stress tends to focus on the negative effects it produces. However, stress is a complex process of interaction between a person and the environment that must be analyzed.

Cross-References

- ▶ [Anxiety](#)
- ▶ [Burnout](#)
- ▶ [Distress](#)
- ▶ [Eustress](#)
- ▶ [Health](#)
- ▶ [Occupational Health](#)
- ▶ [Positive Psychology](#)
- ▶ [Stress Reactivity](#)
- ▶ [Stressful Life Events](#)
- ▶ [Well-being at Work](#)
- ▶ [Work Stress](#)

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Stress or Depression Indicators

- ▶ [Subjective Indicators of Well-Being](#)

Stress Process

- ▶ [Stress Reactivity](#)

Stress Reactivity

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Synonyms

[Effects of stress](#); [Response to stress](#); [Stress process](#)

Definition

▶ **Stress** reactivity subsumes a variety of responses to stressors that occur on different levels of functioning: the psychological, in particular affective and cognitive reactivity; the physiological, in particular responses of the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic-adrenal-medullary (SAM) axis; and the behavioral, in particular coping strategies, changes in health behaviors such as drinking, as well as facial and bodily expressions. These responses continuously interact and in part have regulatory functions. Therefore, to distinguish between stress reactivity and regulation conceptually and empirically, precision is required.

Description

One can be exposed to stressors of various kinds, for example, physical threats such as cutting one’s finger accidentally, subjectively perturbing internal events such as sad memories, or external events such as failing an exam. Such exposures do not have one-dimensional consequences, but rather the responses can be thought of as eliciting a cascade of consequences that are multifaceted and that interact with one another. To acknowledge the complex and dynamic nature of stress responses, reacting to stressors also has been referred to as stress process. Reactions occur on different levels of functioning, the psychological, the physiological, and the behavioral. Different models exist of how the different components of stress reactivity interact: for example, the transactional model (Lazarus & Folkman, 1984), Cohen’s heuristic model of the stress process (Cohen, Kessler, & Gordon, 1995), or the model of allostasis and allostatic load (McEwen, 1998). The first of these models emphasizes psychological aspects of stress reactivity (i.e., appraisal, subjective emotions, and coping). The second is concerned with the mediating function of appraisal and emotions between stressors and physiological responses. Research following the third model focuses on the physiology and

neurobiology of stress and ► **adaptation**, with particular interest being placed on the relation between physiological stress responses and ► **health**. These different perspectives on stress come with a focus on different timescales. Whereas appraisal, emotions, and coping, but also cardiovascular and hormonal reactivity occur within seconds, minutes, and hours after stressor exposure, it takes days or weeks to develop transitory physical symptoms in relation to stress and months or years before stress-related changes in health can be observed.

In general, stress reactivity is seen to serve adaptive functions when one is confronted with challenging, threatening, or loss experiences, including ► **stressful life events** and daily hassles (consider also the distinction between ► **distress** and ► **eustress**). Thus, allostasis, defined as achieving stability through change (McEwen, 1998), is a common phenomenon that protects the body and promotes adaptation by responding to stress. Yet, reactivity to stress may have damaging effects on physical and mental health. These occur if responses occur too often or persist for too long but also in the case of underreactivity of allostatic systems, that is, if mediators of stress and adaptation, in particular catecholamines and glucocorticoids, are not turned on when needed, not turned off when stress is over, or if they do not adapt in the case of repeated exposure. The effects of frequent and sustained elevation and of dysregulation of allostatic processes on the body and the brain are referred to as allostatic load (McEwen, 1998, 2007). Thus, stress reactivity is functional, but under certain circumstances it can be detrimental.

Psychological and Behavioral Stress Responses

On the psychological level, stressor exposure is accompanied by immediate cognitive appraisal of whether an encounter is a challenge, a threat, or a loss. Subsequent appraisals are concerned with coping options: whether strategies can be applied successfully and goals can be accomplished and how a strategy can be used given concurrent demands and constraints (Lazarus & Folkman, 1984). Appraisals are followed by and

interact with emotional responses that signal deviations of actual from desired states and initiate coping processes. The emotional responses are subject to regulatory efforts and change according to reappraisals and coping success (Cohen et al., 1995; Folkman & Moskowitz, 2004). Coping – the thoughts and behaviors used to manage the demands of stressful situations – includes, for example, attempts to regulate emotions (e.g., suppression), to change appraisals (e.g., cognitive reappraisal), to moderate the circumstances of stress (e.g., planful problem solving), or to withdraw from the stressful encounter (e.g., distraction). Some behaviors following stress exposure are maladaptive. For example, some people react to stress with increases in smoking or alcohol consumption, whereas others change their diet (over- or undereating, switching to food low in nutrients). Such changes in health behaviors are one path via which stress affects health. Given the accumulating knowledge on the ameliorating effects of relaxation techniques, ► **physical activity**, and sleeping hygiene in times of stress (e.g., Salmon, 2001), it is conceivable that individuals could increasingly engage in these behaviors in reaction to stressors to reduce effects of stress (e.g., ► **negative affect**).

How fast a stressor episode terminates partly depends on the successful tailoring of coping efforts to situational demands. Moreover, cognitive reactivity plays a role in the duration of stress episodes. Brosschot, Gerin, and Thayer (2006) proposed the preservative cognition hypothesis, according to which worry and other types of prolonged concern with stressors mediate between stressor occurrence and impairments of health via the prolonged physiological activation associated with preservative cognition.

Physiological Stress Responses

Emotional and cognitive reactions to stress mediate between stressors and physiological stress responses that are functional in the sense of supporting a “fight or flight” response, an evolutionary but also allegorical description of stress reactivity. For example, vegetative functions (e.g., reproduction) are inhibited by

physiological stress responses, whereas focused attention is facilitated and oxygenation and nutrition of the organs are increased (Chrousos, 2009). The SAM axis is one biological system highly responsive to stress (Ulrich-Lai & Herman, 2009). It is part of the sympathetic nervous system and initiates an increase in the production of the catecholamines epinephrine and norepinephrine. This system reacts in close proximity to stress exposure and its effects are facilitated through adrenoreceptors in multiple organs. Blood supply to the brain and muscles is increased as a consequence of SAM axis activity and its effects on cardiac output via increases in heart rate and blood pressure. Changes in appearance (e.g., blushing, eye appearance, acoustic properties of vocalizations) also occur partly as a consequence of SAM axis activity, serving a signal function in social environments (Levenson, 2003). The HPA axis is the second biological system particularly sensitive to stress. It includes the sequenced release of corticotropin-releasing hormone (CRH) from the hypothalamus, the secretion of adrenocorticotropin (ACTH) hormone from the pituitary, and the release of glucocorticoids (GC, cortisol in humans) from the adrenal cortex. HPA axis activity also mobilizes energy, among other paths by elevating blood glucose levels through the release of GC and via increasing sympathetic activity through mediating effects of CRH and GC on catecholamines (McEwen, 2007; Sapolsky, Romero, & Munck, 2000). In addition, HPA axis activity affects the central nervous system, most importantly, memory functions involving the hippocampus. The HPA axis also helps to rein stress responses, for example, by inhibitory effects of GC on the hypothalamus. The SAM and HPA axes are interrelated; they interact with additional physiological responses to stress (e.g., changes in parasympathetic activity), and both have consequences on immune functioning (e.g., on cytokines and lymphocytes, Segerstrom & Miller, 2004).

More recently, more attention has been paid to brain circuits involved in affective and cognitive processing of stressful stimuli (Chrousos, 2009;

Ganzel, Morris, & Wethington, 2010; McEwen, 2007; Ulrich-Lai & Herman, 2009). Roughly speaking, the perception of, attention to, and evaluation of a stressor are primarily associated with activation of prefrontal regions (e.g., the medial, ventromedial, and orbitofrontal PFC) and the hippocampus. Affective reactions and regulation involve, among others, the amygdala, basal ganglia, anterior cingulate cortex, and insula. Numerous feedback mechanisms exist between these regions and the peripheral nervous system involved in stress reactivity. Because of its particularly high GC receptor density, the hippocampus is to date the brain structure probably studied most in stress research (Lupien, Maheu, Tu, Fiocco, & Schramek, 2007). Varying levels of GC on occupancy of GC receptors in the hippocampus lead to increases and impairments of declarative memory (following an inverted U-shape function). Interactions between neurotransmitters in the amygdala and the hippocampus are essential for the encoding of emotionally relevant material. Short-term, detrimental effects of GC on memory have also been found for working memory. These are attributed to GC receptors in cortical regions.

Moderators of Stress Reactivity

The strength of stress reactivity is modulated by sociopsychological (e.g., socioeconomic status, personality traits such as neuroticism, ► [social support](#)), biological (e.g., health, genetics, age), and environmental variables (e.g., stressor type and duration) (Bolger & Zuckerman, 1995; Ganzel et al., 2010; Lazarus & Folkman, 1984; McEwen, 1998; Segerstrom & Miller, 2004). These moderators operate on different levels. To give some examples, ► [self-esteem](#) and neuroticism impact on how a stressor is appraised and how strong affective reactions are. Genetic disposition is associated with interindividual differences in physiological functioning in general and also moderates physiological responses to stress. One's current health status modulates changes in the immune system that accompany stress. Because of the intertwined nature of stress reactivity and positive and negative feedback loops across levels of functioning, effects of single

moderators can be observed on multiple levels. Often moderators may be described best as ► [moderators](#) of mediators (e.g., social support may moderate one's perceived resources to cope with a stressor, which mediates the affective response; appraisal and emotions may mediate a cortisol response following the stressor).

Empirical Approaches to the Study of Stress Reactivity

Empirical approaches to stress and reactivity are vast. Subjectively accessible aspects of stress are often approached using questionnaires. Because reports of appraisal, emotion, and coping underlie memory biases, research has turned to investigating these aspects of stress in daily life by means of ambulatory assessment (Mehl & Conner, 2012; Stone et al., 1998). Advances in technology also allow information on cardiovascular and hormonal functioning to be collected in ecologically valid environments nowadays. Also, standardized protocols are available for studying physiological reactivity in the laboratory (e.g., the Trier Social Stress Test that is implemented to study the HPA axis stress response; Kirschbaum, Pirke, & Hellhammer, 1993). Information on the neurobiological level of stress reactivity, such as effects of CRH on the hippocampus or effects of glucocorticoids on immune markers, is partly obtained with animal models (McEwen, 2007). Finally, clinical and quasi-experimental studies are conducted on stress exposure, reactivity, and adaptation.

The time courses of the different phenomena require proper consideration in empirical investigations of stress reactivity because they largely vary (e.g., from seconds to days). Associations between different levels of reactivity, such as affective and hormonal responses to stress, may only be revealed if the relative delay in the latter is considered (Schlotz et al., 2008). A related issue is whether and how to distinguish reactivity and regulation. For example, one may react to a stressful event by overeating. This may result in a transitory improvement in an otherwise depressed mood following a stressor. Thus, a reaction functions as a regulatory attempt.

In a similar vein, glucocorticoids released from the adrenal cortex in response to stress serve a regulatory function by inhibiting CRH production in the hypothalamus. Here, a reaction also implies regulation. Writings that call for (1) within-person designs that can capture the dynamic and interactive nature of stress processes and (2) measures on numerous levels of functioning reflect the challenges empirical approaches to stress need to meet (Ganzel et al., 2010; Tennen, Affleck, Armeli, & Carney, 2000).

Cross-References

- [Adaptation](#)
- [Distress](#)
- [Eustress](#)
- [Health](#)
- [Health Behavior](#)
- [Moderators](#)
- [Negative Affect](#)
- [Physical Activity](#)
- [Self-esteem](#)
- [Sleep, an Overview](#)
- [Social Support](#)
- [Socioeconomic Status \(SES\)](#)
- [Stress](#)
- [Stressful Life Events](#)

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Stressful Life Events

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Synonyms

Event stress; Event stressors; Life change stress; Life event stressors; Life strains; Traumatic life events

Definition

Stressful life events, or life event stressors, are undesirable, unscheduled, nonnormative, and/or uncontrollable discrete, observable events with a generally clear onset and offset that usually signify major life changes. Stressful life events have significant negative consequences for both physical and psychological well-being.

Description

Broadly defined, stressors are events or conditions that threaten the operating integrity of an organism (Wheaton & Montazer, 2010). The concepts of stress and stressor were first introduced by Hans Selye (1956) whose experiments indicated that repeated and prolonged exposure to noxious conditions and stimuli increased susceptibility to disease and illness in laboratory animals. Following Selye’s research, early studies in the 1960s on stress in humans focused on the negative effects of life events on well-being. Originally, life events stressors were conceptualized as “an occurrence of sufficient magnitude to change the usual activities of most persons” (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978; Holmes & Rahe, 1967). Using this definition, early examinations of stress focused on exposure to life events. The primary example of this approach was the Social

Readjustment Rating Scale (SRRS) (Holmes & Rahe, 1967) which consisted of 43 “stressful life events” ranging from “death of a spouse,” “marital dissolution,” and “jail term” to “marriage,” “outstanding personal achievement,” and going on “vacation”. Each item in the SRRS was assigned a number of “life change units” ranging from 0 to 100, with higher scores indicating a greater degree of change associated with the event. Using this scale, researchers assessed stress by summing the number of life change units reported by a respondent over a given period of time. Those with higher scores on the scale were argued to have higher levels of stress and therefore be most likely to experience lower levels of well-being.

Although the amount of life change one experiences has been demonstrated repeatedly to coincide with mental and physical health problems (Cohen, 1996; Thoits, 1995), this past approach to measuring and assessing life event stress had significant limitations. First, it conflated some life events with chronic stressors which are enduring, problematic conditions. Second, the inclusion and exclusion of specific life events and the assignment of life change units to particular events was somewhat arbitrary. Third, this approach equated stress with exposure to life changes, assumed that all life change was problematic, and implied that individuals are universally vulnerable to stressful life events. Finally, this approach did not account for factors that produce variation in how life changes impact well-being such as the desirability of the event, event scheduling, and predictability, or the existence of resources to cope with changes. Indeed, researchers now recognize that stress is not an inherent attribute of external conditions, but rather is something that emerges from discontinuities between the characteristics of individuals and their experiences (Aneshensel, 1992).

The first factor that significantly determines whether and how life events impact well-being is event desirability. According to Lazarus and Folkman’s (1984) theory of cognitive appraisal, the stress potential of social conditions and events depends on whether individuals appraise them as

(1) positive/benign, (2) irrelevant, and (3) stressful. In order for a condition to be a stressor, it must be viewed as problematic by those who experience it. Accordingly, stressful life events are more appropriately defined by the fact that they are appraised as undesirable. Indeed, undesirable events are more strongly associated with psychological problems than desirable ones (Brown & Harris, 1978). Furthermore, many desirable events, such as the transition into marriage, have been shown to improve well-being (Williams, Frech, & Carlson, 2010). Although some events may be defined as culturally desirable or undesirable, the stress reaction to events nonetheless depends on the individual’s own appraisal (Lazarus & Folkman, 1984). For example, although entering marriage is generally beneficial to well-being and marital dissolution is generally distressing (Williams et al., 2010), those who highly value the institution of marriage experience greater gains from entering marriage and are more distressed by exiting marital unions than those who place less value on marriage (Simon & Marcussen, 1999).

The second factor that determines the stress potential of a life event is the degree to which the event is scheduled, predictable, and/or normative. As noted by Lazarus and Folkman (1984), stressful events do not occur in a vacuum, but in the context of a person’s life cycle and in relation to other events. Therefore, the timing and order of an event in a person’s life greatly shapes how the event is appraised and thus the event’s stress potential. Unscheduled, unexpected, and nonnormative events undermine well-being not only because they are more likely to be evaluated as undesirable but also because a person is less likely to receive support from comparable peers, less likely to be prepared for the event, and less likely to receive satisfaction from it (Lazarus & Folkman, 1984).

A third important factor that shapes the stress potential of life events are the resources available to cope with them. Although one’s primary appraisal of an event – the evaluation of an event’s desirability, predictability, and appropriate timing – influences its stress potential, the

evaluation of one's ability to manage and cope within stressors, known as secondary appraisals, also significantly buffers the stress potential of life events (Lazarus & Folkman, 1984). If an event is appraised as stressful, the stress reaction that results depends on the social (social support) and personal (self-esteem and sense of control) resources one possesses to overcome event-related difficulties. Indeed, those with higher levels of support, self-esteem, and sense of control over events are less likely to be negatively affected by stressors than those with low levels of these resources (Berkman & Glass, 2000; Pearlin, Menaghan, Lieberman, & Mullan, 1981).

Although the identification of factors that shape the stress potential of events has improved researchers' abilities to predict and identify events most likely to pose problems for well-being, an unresolved issue in stress research is whether events themselves have independent, long-term consequences for well-being. Indeed, the long-term changes that result from life events may have greater implications for well-being than the event itself. It is therefore necessary to disentangle the effects of specific events from the consequences of subsequently problematic conditions that may arise from them. For example, although job loss may itself be distressing, it may also lead to periods of economic deprivation, which may also cause stress and harm well-being. Although disentangling the impact of events from the enduring conditions related to them is essential to identifying the consequences of life events, this has proved to be a difficult task because data limitations restrict researchers' abilities to examine well-being at time periods prior to, immediately following, and long after events have occurred. When longitudinal data is available, findings regarding the lasting impact of life event stressors for well-being are inconclusive. Longitudinal studies on widowhood and marital dissolution, for example, find that the negative consequences of these events for well-being are relatively short lived and dissipate after a few years (Williams et al., 2010). Nevertheless, other extremely traumatic events (e.g., natural disaster, death of child) have more enduring effects on well-being (Wheaton & Montazer, 2010).

It appears that the severity of the event may determine how long and to what extent stressful life events continue to harm well-being.

Cross-References

► Stress

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Strike Action

- ▶ [Social Activism](#)
-

Stroke

- ▶ [Cerebrovascular Disorders](#)
-

Stroke Impact Scale

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Synonyms

[SIS](#)

Definition

The stroke impact scale (SIS) is a stroke-specific health-related quality of life (HRQoL) instrument, which was developed by Duncan et al. (1999) at the University of Kansas Medical Center, to measure the consequences of stroke in multiple domains, including physical (strength, hand function, activities of daily living (ADL), instrumental ADL, and mobility), emotion, memory/thinking, communication, and social participation.

Description

The SIS was developed from the perspective of stroke patients, caregivers, and health professionals with stroke expertise. The SIS, version 2.0, includes 64 items. Emotion, communication, memory, and social participation should be scored as individual domains, but if desired, the four physical domains can be

summed to create a single score. Each item is scored between 1 and 5, and performance is self-reported, according to the experienced difficulties. The total scores for each domain are calculated on a continuous scale from 0 to 100, with zero being indicative of a poor outcome and 100, the best. In addition, after the SIS administration, the respondents are asked to rate their percentage of recovery on a visual analog scale of 0–100, with zero meaning no recovery and 100, full recovery (Duncan et al., 1999). Based upon the Rasch analysis results, three items did not fit the construct and two in the combined physical domain. Thus, these items were removed to create the SIS, version 3.0 (Duncan, Bode, Lai, & Perera, 2003), which includes 59 items and assesses eight domains: (1) strength –4 items, (2) hand function –5 items, (3) ADL/IADL –10 items, (4) mobility –9 items, (5) communication –7 items, (6) emotion –9 items, (7) memory and thinking –7 items, and (8) participation/role function –8 items. A shorter version of the SIS (SIS-16), which contains items which evaluate physical function, has been developed (Duncan, Lai, Bode, Perera, & DeRosa, 2003). Both the SIS-59 and the SIS-16 are available in a proxy version, when patients are unable to complete the test (Duncan, Lai et al., 2002).

Administration

The SIS is an interviewer-administered instrument with the patients or proxies. Proxies report the patients to be more impaired than the patients themselves. If the patient was unable to comply for any reason, then a family member is asked to complete the interview, but the researcher must be alert of the biases introduced by the proxies. The strength of the proxy-patient agreement is higher for the physical domains and lower for the more subjective domains (emotion, memory, and communication) (Carod-Artal, Coral, Trizotto, & Moreira, 2009). However, the magnitude of the differences between proxy patients was not clinically meaningful (Duncan, Lai et al., 2002). Persons responded to items in each domain using a 5-point rating scales: For strength, the rating

categories range from “no strength at all” to “a lot of strength”; for emotions and participation, they range from “none of the time” to “all of the time”; and for the remaining domains, they range from “extremely difficult/cannot do it at all” to “not difficult at all” (Duncan, Bode et al., 2003). Application takes about 15–20 min. The SIS can be administered by mail (Duncan, Reker et al., 2002) or by telephone (Kwon et al., 2006).

Internal Consistency

The Cronbach’s alpha coefficients of SIS, version 2.0, ranged from 0.83 to 0.90 (Duncan et al., 1999).

Content Validity

Content validity was established through individual interviews with patients and focus group interviews with individuals with mild and moderate stroke, caregivers, and stroke experts. The authors’ goals were to incorporate the quality of life goals of the stroke survivors and their caregivers with this measure (Duncan, Wallace, Studenski, Lai, & Johnson, 2001).

Convergent Validity

Correlations between the Barthel Index with the ADL/IADL, and mobility domains of the SIS and SIS proxy versions ranged between 0.69 and 0.78 (Duncan, Lai et al., 2002). The ADL/IADL and mobility domains also demonstrated moderate correlations with the 6-min walking test distance (0.56 and 0.72, respectively) (Muren, Hütler, & Hooper, 2008). The SIS-16 shows moderate correlations with the physical domain of the World Health Organization Quality of Life-Bref Scale (WHOQOL-Bref Scale) and with the physical functioning (PF) domain of the Short Form-36 (SF-36) ($r = 0.65$ and 0.79 , respectively) (Edwards and O’Connell, 2003; Lai, Perera, Duncan, & Bode, 2003).

Discriminant Validity

The SIS (2.0) domain scores discriminated across four ranking levels, except for memory/thinking and emotion domains, which could not be discriminated. For the SIS-16, both patient

and proxy scores in all domains were significantly different across the ranking levels.

Reliability

The intra-class correlation coefficients (ICCs) for the test-retest reliability of the SIS (version 3.0) domains ranged from 0.70 to 0.92, except for the emotional domain (0.57). The ICCs were considered good to excellent for mail administrations (0.77–0.99), except for social participation (0.62), and excellent for telephone administrations (0.90–0.99), except for the emotional domain (0.68) (Duncan et al., 2005).

For the test-retest reliability of the Brazilian version of the SIS (3.0), the ICCs ranged from 0.48 (emotion) to 0.94 (hand function) (Carod-Artal, Coral, Trizotto, & Moreira, 2008). For the Italian version, they were rated as good (>0.70), except for the emotional and social participation subscales (Vellone et al., 2010).

Minimal Detectable Changes (MDC) and Clinically Important Differences (CID)

For the physical domain subscales – strength, ADL/instrumental ADL, mobility, and hand function – the minimal detectable score changes (MDC) should reach 24.0, 17.3, 15.1, and 25.9, respectively, to indicate real changes. For the stroke group, the MDC on the four subscales should reach 9.2, 5.9, 4.5, and 17.8 to be regarded as clinically important changes (CID) (Lin, Fu, Wu, Wang et al., 2010). The CID of the SIS-16 ranged from 9.4 to 14.1 (Fulk et al., 2010).

Limitations

Because of the difficulty in the hand function domain with a sample of 144 patients with moderate deficits (3.2–5.2 on the Orpington Scale), 40.2 % scored zero on this domain (Duncan et al., 1999). The communication, memory, and emotional domains are easy and only capable of detecting limitations in the most impaired individuals (Duncan, Bode et al., 2003).

Advantages

Despite the floor effects, the SIS hand function domain is able to detect persisting difficulties in hand function in stroke patients, who have traditionally been considered functionally independent (Lai, Studenski, Duncan, & Perera, 2002). Also, compared to the upper extremity (UE) domain of the Stroke-Specific Quality of Life Scale (SS-QOL), the SIS hand function subscale demonstrated better pre- and posttreatment concurrent validity with the Fugl-Meyer assessment (FMA) and with both the amount of use (AOU) and quality of movement (QOM) of the paretic arm and hand assessed by the Motor Activity Log (MAL) (Lin, Fu, Wu, Hsieh et al., 2010).

The SIS-16 also shows advantages, compared to the physical functioning (PF) domain of the SF-36. Because it includes fewer difficult items, the SIS-16 showed lower floor effects than the PF of the SF-36, when applied to stroke patients with severe disabilities (Lai et al., 2003).

Discussion

Several specific HRQoL scales have been developed over the last years. Different from the WHOQOL-Bref and the SF-36, which are generic, the SIS is a stroke-specific HRQoL instrument. The SIS has undergone extensive psychometric evaluations and is a valid and reliable tool for assessing stroke patients face to face, by mail, by phone, or by proxies. Compared to other stroke-specific HRQoL instruments, one advantage of the SIS 3.0 is that its hand function domain demonstrates better responsiveness to changes after rehabilitation than the SS-QOL UE function. However, a floor effect exists in this domain, which may limit its ability to discriminate individuals with moderate stroke. In addition, the SIS hand function correlated better with the UE impairments scales (FMA and MAL) than the SS-QOL UE domain. The ADL/IADL SIS domains and the self-care domain of the SS-QOL were similarly related to measures of basic (0.69 and 0.65, respectively) and instrumental (0.53 and 0.52, respectively) ADL (FIM and FAI). Finally, the SIS was able to accurately classify individuals according to the severity of their impairments.

Cross-References

- ▶ [Activities of Daily Living \(ADL\)](#)
- ▶ [QOL](#)

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Stroke Impact Scale 3.0 and the Stroke-Specific Quality of Life Scale

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Synonyms

SIS and SS-QOL

Definition

► **SIS** and **SS-QOL** are ► **quality of life (QOL)** measurements for the stroke population. These two patient-centered outcome measures are the most comprehensive stroke-specific scales to be used for measuring health-related well-being of individuals recovering from stroke (Huang et al., 2013; Salter, Moses, Foley, & Teasell, 2008) and are also frequently used in stroke rehabilitation research studies (Kissela, 2006; Lin, Chang, Wu, & Chen, 2009; Lin, Fu, Wu, & Hsieh, 2011; Lin, Fu, Wu, Hsieh, Chen, & Lee, 2010; Lin, Wu, Liu, Chen, & Hsu, 2009; Williams, Weinberger, Harris, Clark, & Biller, 1999). The SIS and SIS-QOL were developed in the United States.

Description

Brief Historical Review for SIS 3.0 and SS-QOL

The SIS 3.0 was developed from the perspectives of patients as well as their caregivers to measure QOL (Duncan et al., 1999; Duncan, Bode, Lai, & Perera, 2003). The current SIS 3.0 was created from the SIS 2.0 by removing some items that misfit the construct (Duncan et al., 2003). The original SIS was developed from unpublished data from Duncan et al. in 1999 (Duncan et al., 1999). The SS-QOL was created by focus interviews with stroke survivors (Williams et al., 1999). Currently, this is the only version of the SS-QOL.

Comparisons of the Items (or Contents) of SIS 3.0 and SS-QOL

The SIS 3.0 assessment measures eight domains containing 59 items. The eight domains include (1) Hand Function, (2) Activities of Daily Living (ADL)/Instrumental ADL (IADL), (3) Strength, (4) Social Participation, (5) Mobility, (6) Memory/Thinking, (7) Emotion, and (8) Communication (Duncan et al., 2003). The SS-QOL is a self-report assessment that includes 12 stroke-specific subscales with a total of 49 items. The 12 subscales are (1) Energy, (2) Family Role, (3) Language, (4) Mobility, (5) Mood,

(6) Personality, (7) Self-care, (8) Social Roles, (9) Thinking, (10) Upper Extremity (UE) Function, (11) Vision, and (12) Work/Productivity (Williams et al., 1999)

The eight domains in SIS 3.0 and the 12 subscales in SS-QOL are unidimensional and are scored separately. Scoring for both scales concerns activities for the past week. The total score is the average of the domain/subscale scores, and the domain/subscale scores are the averages of the item scores. The response for each item is rated on a 5-point Likert scale. All summary scores range from 1 to 5, and higher scores indicate better function or QOL. The response options of SIS 3.0 are scored as 1 (extremely difficult), 2 (very difficult), 3 (somewhat difficult), 4 (little difficult), and 5 (not difficult at all). The response options of SS-QOL are scored as 1 (total help/could not do it at all/strongly agree), 2 (a lot of help/a lot of trouble/moderately agree), 3 (some help/some trouble/neither agree nor disagree), 4 (a little help/a little trouble/moderately disagree), and 5 (no help needed/no trouble at all/strongly disagree).

When comparisons of the domain/subscales of the SIS 3.0 and SS-QOL are made, they have some similar domains/subscales such as mobility, ADL/self care, communication/language, and thinking. The two measures include the greatest number of items to assess patients' physical function, particularly in hand and upper limb function (Salter et al., 2008). However, within each measurement are some unique domains/subscales: The SIS 3.0, for example, has a Strength domain and the SS-QOL has Energy, Personality, Vision, and Work/Productivity subscales. The SIS has fewer domains and is more focused on impairments, and the SS-QOL has more domains and is more focused on the comprehensive QOL dimension (Huang et al., 2013). When the International Classification of Functioning, Disability, and Health (ICF) is used as an independent, external reference system, the SS-QOL covers all components of activity and participation, but the SIS only addresses eight of the nine categories (Schepers, Ketelaar, Van De Port, Visser-Meily, & Lindeman, 2007). The SSQOL contains items to assess the support and relationships category of

the environmental factors, but the SIS does not include any items to measure the environmental factors (Schepers et al., 2007). In addition, the SIS has one item to assess spirituality, whereas SSQOL contains two items to assess personality (Salter et al., 2008). The similarities and discrepancies reflect not only critical components but also the uniqueness of the individual measures.

Metric Properties (Including Psychometric and Clinimetric Properties) of SIS and SS-QOL SIS 3.0

Research with SIS 3.0 showed it had good psychometric properties. The test-retest reliability (Carod-Artal et al., 2008; Duncan et al., 2005), internal consistency, and construct validity (Carod-Artal et al., 2008) were good. The study of Carod-Artal et al. (2008) found intraclass correlation coefficient values of 0.79–0.94. Reliability was established for the each SIS domain, with the Cronbach's alpha value ranging from 0.81 to 0.95, except for the Emotion domain. Duncan et al. (2003) conducted Rasch analysis to further establish the internal construct validity of the SIS in dimensionality and item difficulty hierarchy and to support its reliability. Within each domain, all of the items reflected a single construct and covered a substantial range of difficulty. This study also found that the domain scores could differentiate patients into multiple groups, such as Strength that can differentiate three strata (low, moderate, and high) of patient functioning.

Lin et al. (2010) reported results of the SIS physical domains related to the minimal detectable change (MDC) and clinically important differences (CIDs). The MDC is the smallest change that can be detected by the instrument beyond measurement error. The CIDs is a related concept that shows how much change can be deemed as clinically important and as be seen as a threshold score that a group of patients perceive as noticeable (Portney & Watkins, 2009).

The clinimetric properties information related to MDC and CIDs can help inform clinical decision making on the discontinuation or alteration of a treatment program that aims to improve the client's function. The SIS 3.0 change score of a client has to increase at least 24.0 on the

SIS Strength, 17.3 on the ADL/IADL, 15.1 on the Mobility, and 25.9 on the Hand Function subscale to indicate a true and reliable improvement or the change is likely due to a measurement error. To be considered clinically significant, the mean change scores for the SIS 3.0 domains within a stroke group should be 9.2 for Strength, 5.9 for ADL/IADL, 4.5 for Mobility, and 17.8 for Hand Function (Lin et al., 2010).

Researchers have investigated the predictive models of the SIS to understand the effectiveness of rehabilitation interventions in patients with stroke. Huang et al. (2013) conducted the Chi-squared Automatic Interaction Detector (CHAID) to examine the influence of potential predictors (e.g., age, gender, side of lesion, time since stroke, cognitive status, the UE impairment, and ADL functional status) on patients' overall and domain scores of the SIS. These authors found that ADL functional status was a significant predictor for the ADL/IADL domain and the overall performance of the SIS. However, none of potential factors were significant predictors for the other domains of the SIS.

SS-QOL

SS-QOL has good internal reliability and satisfactory validity in most domains (Muus, Williams, & Ringsberg, 2007; Williams et al. 1999). Reliability was established for each subscale, with the Cronbach's alpha value ranging from 0.73 to 0.89. Construct validity was established by correlating SS-QOL scores with scores on the Beck Depression Inventory, Barthel Index, National Institutes of Health Stroke Scale, and Medical Outcomes Study 36-item Short Form Health Survey (r^2 range, 0.3–5) (Williams et al., 1999).

The validity and reliability of the SS-QOL measurement has been established in many cultures (Boosman, Passier, Visser-Meily, Rinkel, & Post, 2010; Ewert & Stucki, 2007; Lima, Teixeira-Salmela, Magalhães, & Gomes-Neto, 2008; Lin et al., 2010; Muus et al., 2007). However, previous studies on the dimensionality of the SS-QOL have reported inconsistent findings, including solutions using 1, 2, 4, 8, and 12 domains (Boosman et al. 2010; Hsueh,

Jeng, Lee, Sheu, & Hsieh, 2011). Muus et al. (2007, 2011) conducted Rasch analysis using the SS-QOL Danish version and found partially invalidated construct validity. A study conducted in Germany reported that eight instead of 12 domains of the scale seemed to be more appropriate (Ewert & Stucki, 2007). These findings did not confirm the proposed 12-domain structure of the SSQOL, and have left a choice for clinicians and researchers to use various subdomain scores or the total score only.

The clinimetric properties of the SSQOL have been extensively investigated and reported in the literature. Lin et al. (2011) conducted studies to establish the MDC and CIDs of the physical category of the SS-QOL. Their finding suggests that a client's change score has to reach 5.9, 4.0, and 5.3 on the Mobility, Self-care, and UE Function subscales, respectively, to indicate a true and reliable improvement. The mean change scores of the stroke group should be reach the lower bound of CID ranges of 1.5, 1.2, and 1.2 to be regarded as clinically important changes. Muus et al. (2011) studied domain responsiveness to changes by investigating associations between changes in relevant domains of the SSQOL at 3 and 12 months and associations between changes in the SS-QOL and in established measures such as the Major Depression Inventory and Multidimensional Fatigue Inventory. This study found that 8 of 12 domains were mildly to moderately responsive, whereas the remaining 4 domains were nonresponsive. Relations between changes in the SS-QOL and in the established measures ranged from no to very strong relations. There is no strong agreement regarding the clinimetric properties of the SS-QOL, and further investigations are needed using severely affected patients and various times after discharge.

Huang et al. (2013) examined the predictive models of the SS-QOL after patients received distributed constraint-induced therapy using their demographic and clinical characteristics as predictors. Time since stroke onset and hemispheric laterality were identified as important predictors of the SS-QOL Energy domain. Time since stroke onset, using a cutoff

of 10 months, predicted the Family Role domain. Motor function, measured by performance of IADL, was relevant to the SS-QOL Mobility domain. The overall IADL score and age significantly predicted the Mood domain. These findings supported that the SS-QOL assesses various aspects of QOL and provides a comprehensive picture of patient recovery after receiving rehabilitation treatment.

Comparison of Metric Properties of SIS 3.0 and SS-QOL

Lin et al. (2010) compared the responsiveness and criterion-related validity of the SIS 3.0 and SS-QOL for one patient sample after stroke rehabilitation therapy. The two measurements were administered to 74 patients recovering from stroke before and after a 3-week intervention. The results indicated that the SIS 3.0 had better overall responsiveness than the SS-QOL 12 subscales, which showed no response to patient-reported change. The SIS Hand Function showed medium responsiveness and had greater predictive validity than that of the SS-QOL UE function. Although both instruments had comparable criterion-related validity, the SIS Hand Function showed better concurrent and predictive validity than the SS-QOL UE function. Lin et al. had suggested that the SIS 3.0 appears to be more suited for assessing changes after stroke physical rehabilitation intervention.

The SIS is not only more sensitive to changes but also demonstrates better validity than the SS-QOL. Evidence obtained from factor analysis showed that the SIS has four distinct domains (e.g., Emotion, Communication, Memory/Thinking, and Participation) and one composite domain of Physical Function, including the Original Strength, Hand Function, Mobility, and ADL/IADL. But there are no strong agreements about the dimensionality of the SS-QOL. The SIS, compared with the SS-QOL, had better psychometric and clinimetric properties (Salter et al., 2011).

Discussion and Conclusion (Directions for Future Research and Clinical Implication)

SIS 3.0 and SS-QOL are 2 stroke-specific QOL measurements that have been used internationally

and have moderate to good psychometric properties. Studies have investigated the relative strengths of these two scales in responsiveness to change due to rehabilitation intervention and for their criterion-related validity. Both measures have good reliability but show different degrees of validity and responsiveness. For example, the SIS 3.0 has better construct validity, criterion-related validity, and responsiveness (Lin et al., 2010), but the SS-QOL seems to provide a broad and comprehensive picture of QOL in patients with stroke. Each measure has strengths and weaknesses, and the selection of a specific instrument may depend on the purpose of use in research.

To reduce the burden of the administration of specific-stroke instruments, short versions of the SIS and the SS-QOL have been developed, for example, SIS-16 and SS-QOL-12. The SIS-16 was derived from the SIS 3.0 by removing 12 of 28 items from the composite Physical domain (Duncan et al., 2003) and was able to differentiate levels of disability in patients with stroke. Post et al. (2011) selected items with the highest item-total correlation within an individual domain to create the SS-QOL-12, a short version of the SS-QOL. These short versions of QOL measures have not been well investigated, and further investigations in patients with different levels of disability or from different cultural backgrounds are needed.

Studies of these two measurements are still required to answer issues of proxy respondents, interviewer versus self-administration, and performance in people with more severe stroke (Williams et al., 1999). The MDC and CID estimates both may vary with the baseline degree of severity of symptoms. The MDC and the CID values that were reported by Lin et al. (2010, 2011) may only be applied to stroke patients who improve after rehabilitation therapies, who have Brunnstrom stage 3 and higher on the affected UE, and who have sufficient cognitive ability before the rehabilitation therapies. A larger sample size with different severity may be required to validate the results of the studies. The information should facilitate interpretations of patient-reported outcomes after stroke rehabilitation and also provide information for clinicians and researchers when selecting the stroke specific instruments.

Cross-References

► Stroke Impact Scale

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effects on the distribution of resources and opportunities and, inevitably, on the ► [quality of life](#).

Structural factors operate at the aggregate level (neighborhoods, counties, states, etc.), assuming group-level processes extending above and beyond individual-level explanations of behavior such as psychological characteristics or ► [attitudes](#).

Homicide is one of the most consistent and universal indicators of violence, especially for the purposes of comparison across areas and time periods. Homicide is one of the most well-reported crimes of violence (the other violent crimes are rape, assault, and robbery), and its statistics are not as affected by differences in definitions and policies.

Structural Analysis

- [Faceted Smallest Space Analysis \(Faceted SSA; FSSA\)](#)
- [Network Analysis](#)
- [Social Network Analysis](#)

Structural Determinants of Homicide

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Definition

Structural determinants of homicide are causes or correlates of homicide that are related to the structure of ► [social institutions](#) (from families to societies) and their attendant inequalities.

Structural explanations as opposed to cultural or subcultural explanations focus on the effects of ► [poverty](#), income inequality, ► [unemployment](#), racial composition of areas, ► [family structure](#), and other related variables. Even though race can be seen as a demographic characteristic, along with age and gender, the effects of racial inequalities in the modern American society, originally stemming from Black slavery, have far-reaching consequences and long-term

Description

Currently, research into the structural determinants of homicide, and violence in general, focuses mostly on two groups of factors: demographic (age, race, gender, and family status) and socioeconomic (education, poverty, income inequality, unemployment, family structure, etc.). It is important to point out that variables like race and family structure can be construed as both demographic, or individual-level, factors and socioeconomic factors. For example, it is common for inner-city areas in most US cities to have mostly racial minorities among residents, with a high percentage of families headed by single mothers, high unemployment rates, and high rates of families living below the official poverty threshold. Thus, race is more than just a skin color and “divorced” is more than a family status in the modern society – these variables become a proxy for the social and economic adversities that are almost inevitably associated with certain demographic characteristics.

After a seminal work of Land, McCall, and Cohen (1990) on determinants of homicide (reviewed below), researchers working with data on US cities or states routinely combine variables like “percent below poverty line,” “percent

single-parent households,” “percent without high school education,” and “percent black” or “percent non-white” into a composite index of disadvantage since these variables are often so highly correlated that it is impossible to disentangle their separate influences. It is only rarely that these variables can be separated (see Tcherni, 2011b), and it becomes clear that their separate influences on homicide rates are quite strong.

At the same time, there are two structural factors that are so highly correlated as to be practically inseparable: poverty and educational level. Obviously, income and education are two theoretically distinct concepts. However, because there is no empirical way to estimate their influences separately, the term “poverty” in this entry implies both inadequate income and low education.

Thus, the main portion of this entry is devoted to discussing the effects of poverty, which is the most consistent and strong predictor of homicide among the structural forces operating at the aggregate level. Two other structural determinants of homicide whose influences are most unequivocal and well supported by empirical evidence are disruption of family structure (measured by divorce rate) and racial inequality. Empirical and theoretical findings with regard to these two factors are presented as well.

Other structural factors were either shown to be inconsistent in their effects on homicide (this refers to factors like unemployment rates and urban density) or their effects are not reliably established as structural rather than sociobiological (this concerns age or, alternatively, the share of young people in the population and gender). However, for a detailed discussion of gender and age as structural factors in homicide research, see Messner and Rosenfeld (1999). For the most current update on the effects of age structure on homicide, see McCall, Land, Dollar, and Parker (*in press*).

The focus on group-level processes in explaining human behavior, including violence, can be traced back to the “father of sociology,” Emil Durkheim (1858–1917), specifically, his book “Suicide” (published in 1897). However, even though Durkheim wrote about the societal

processes and their effects on suicide and crime, he did not discuss homicide explicitly. Moreover, Durkheim focused on things like group attachment and differences between religious affiliations (Protestants vs. Catholics), which could be construed as either psychological processes or cultural rather than structural determinants of behavior.

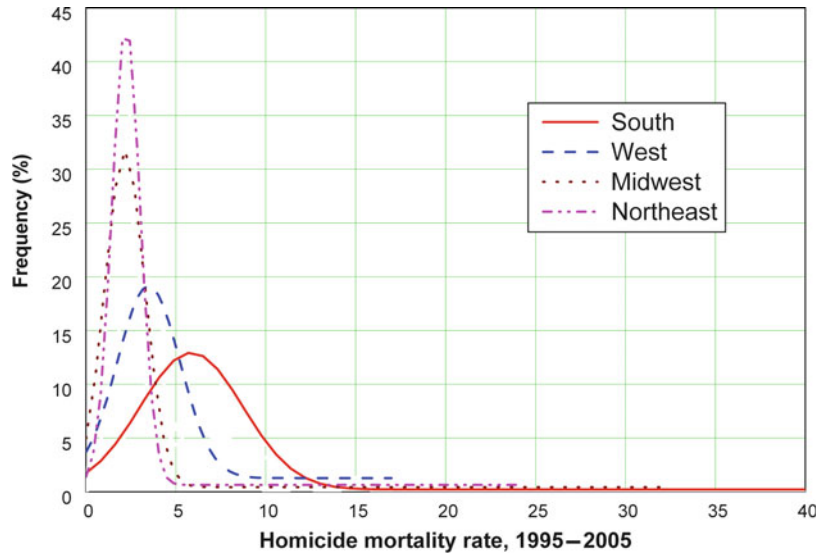
At the same time, homicide research has a long history of causally connecting structural inequalities, especially the ones stemming from poverty, with variations in homicide or violence rates. In mid-nineteenth century, French statisticians Adolphe Quetelet and Andre-Michel Guerry (see Beirne, 1987), as well as an English statistician G. R. Porter (1847), looked at the distribution of homicides by age, gender, education, poverty, and other related factors. About a century later, interest in structural factors piqued again, particularly within the Chicago School of ecological sociology (Shaw & McKay, 1942). Throughout all of the studies, there was general consensus that socioeconomic indicators were strong predictors of high rates of violent crime and homicide.

As for the early theoretical explanations of this link, they mostly focused on the individual level. The fact that poverty leads to violence was explained by the lack of education and sophistication, inability to resolve disputes through verbal means, and preference for immediate physical solutions to problems (see review in Quinney, 1965).

An alternative interpretation of the poverty-violence relationship is to attribute it to socialization into an aggressive subculture, oriented toward retaliation and preservation of honor. The idea of a culture as responsible for violent behavior was given theoretical foundation as well as empirical testing in the works of Hackney (1969) and Gastil (1971) about a Southern “culture of violence.” Besides explaining why Southern folks rely on violence to solve interpersonal conflicts more so than people in other regions of the United States, both authors tested their theories using some version of a “Southernness” variable, based primarily or exclusively on regional location as a measure of

Structural Determinants of Homicide,

Fig. 1 Distribution of homicide rates by region (using continental US counties with population over 5,000) (Using homicide mortality data from the centers for disease control and prevention. National center for health statistics; Gaussian smoothing applied to the histograms of frequency distributions)



culture, along with structural variables included into the regression analyses of homicide rates for 48 US states. Both authors concluded that it is the Southern culture of violence rather than structural disadvantages of the Southern region that are responsible for the elevated homicide rates in the South.

Loftin and Hill (1974) replicated and refined the analyses done by Gastil and Hackney. They pointed out some serious methodological mistakes and reestimated the influence of the regional variables, supposedly representing the “culture,” on homicide rates. The authors concluded that if structural variables are specified properly, the regional variables do not contribute significantly toward homicide rates. Moreover, they cautioned: “unless culture can be measured distinctly and independently of region, the validity of our studies will always be threatened by the large number of non-cultural variables that are systematically related to region” (Loftin & Hill, p. 723). Loftin and Hill’s paper had a profound influence on homicide research and shaped the subsequent debate on determinants of homicide.

In addition to methodological challenges to the “culture of violence” thesis, the old view of the South as standing out in regional patterns of homicide was confronted with a changing

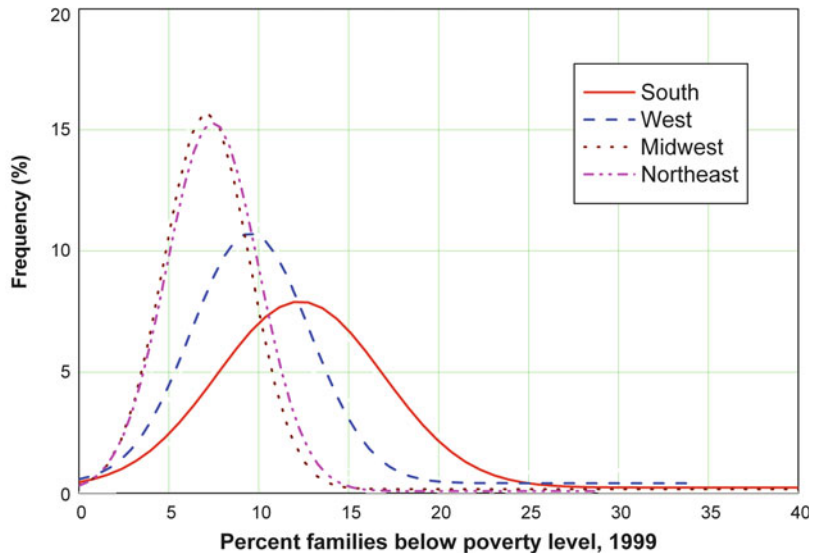
reality: the West had emerged as a major contender to the South for leading the nation in homicide rates (O’Carroll & Mercy, 1989; Parker & Pruitt, 2000). The cultural explanations for the regional differences in homicide rates once again do not seem to be supported by careful analysis of data (see Loftin & McDowall, 2003). To illustrate this point, Fig. 1 shows the distribution of homicide rates in the United States by region. Figure 2 shows the distribution of poverty rates for the same areas.

After the publication of Gastil’s and Hackney’s articles and the famous reevaluation of their findings by Loftin and Hill, several waves of debates ensued concerning the influence of structure versus culture on homicide rates and violence (see review in Pridemore, 2002). Some studies that included several explanatory factors closely related to poverty, for example, “percent of population below poverty” and “Gini index of inequality,” into the same linear regression equation to predict homicide or violence rates found weak or even negative effects of poverty on violent crime.

To clarify these puzzling results, Land et al. (1990) did an extensive analysis of empirical studies on structural covariates of homicide. The authors were able to account for conflicting findings by showing that the process that

Structural Determinants of Homicide,

Fig. 2 Distribution of poverty by region (using continental US counties with population over 5,000) (Using data from the US census bureau, 2000 decennial census; Gaussian smoothing applied to the histograms of frequency distributions)



Gordon (1968) called the partialling fallacy was often to blame for erroneous conclusions about weak or inconsistent effects of poverty and related structural factors on homicide. The partialling fallacy occurs when two explanatory variables included into the same regression equation are more highly correlated with each other than with the outcome variable. In a case like that, the regression estimation algorithms may assign all of the explained variance to one of the regressors and not the other. Under slightly different conditions (e.g., if a random subsample of the original sample is used), the estimation may result into assigning all explained variance to the other regressor and none to the first one. The partialling fallacy problem is different from the traditional interpretation of multicollinearity identified using such measures as the variance inflation factor (VIF). The partialling fallacy may occur even when the correlation between the regressors is not high enough to deem the variables collinear using the VIF criterion.

To resolve the identified problem, Land et al. (1990) applied principal components analysis to combine highly collinear variables into composite factors or indices. This method (often applied using exploratory factor analysis) has since then become a golden standard of research into structural factors. When it is performed properly,

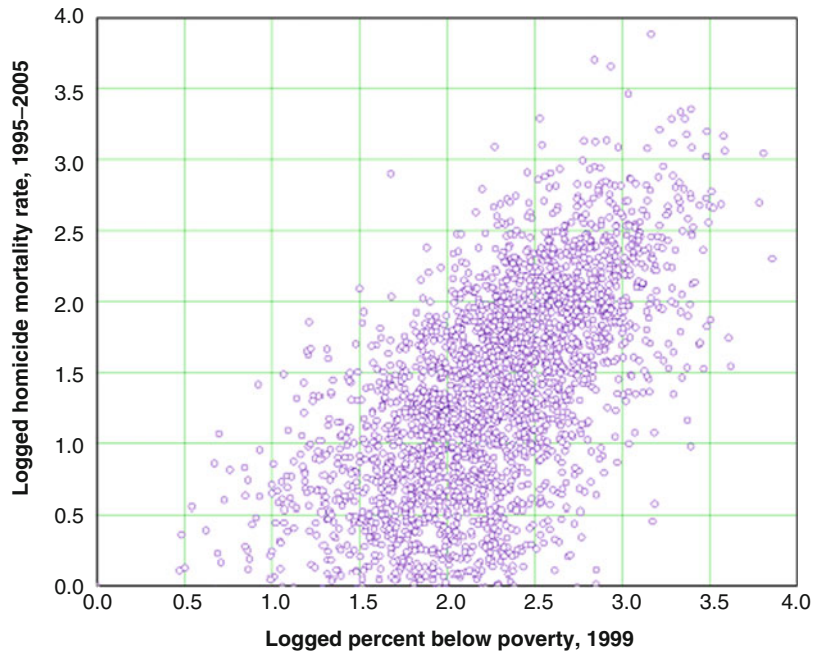
poverty measures (poverty/education index, resource deprivation index, or socioeconomic status) are found to be one of the most reliable and substantively strong structural determinants of homicide and violence in general in various contexts (see Messner & Rosenfeld, 1999; Sampson & Lauritsen, 1994), including cross-national comparisons (Pridemore, 2008).

The relationship between poverty and violence holds at various aggregate levels, as well as at the individual level. The poverty-violence connection, specifically related to homicidal violence, is confirmed using cities, counties, states, and nations as units of analysis, as well as at the individual level (see review in Tcherni, 2011a). People arrested and convicted for homicide come disproportionately from the lower socioeconomic classes. Higher-poverty areas have higher homicide rates. Moreover, even the size of the effect of poverty (inextricably linked with insufficient, low-quality education) on homicide is fairly consistent: for US counties, for each one percent increase in the rate of poverty/low education, there is an associated half-percent increase in homicide rates (Tcherni, 2011b). A graphic representation of this relationship is shown in Fig. 3.

In addition to cross-sectional studies, longitudinal studies confirm the poverty-homicide link

Structural Determinants of Homicide,

Fig. 3 Relationship between poverty and homicide (using continental US counties with population over 5,000) (Data on poverty are from the US census bureau, 2000 decennial census; data on homicide are from the centers for disease control and prevention, National center for health statistics; logarithmic transformation applied to normalize the shape of the distributions and elicit a linear relationship)



as well (Messner, Raffalovich, & McMillan, 2001). Time series analysis has also produced some clear evidence of the relationship between poverty and homicide (McDowall, 1986) though this method has been underutilized in research on structural factors underlying violence/homicide.

Overall, research with sound methodological footing demonstrates general agreement that poverty predicts violence in general as well as lethal violence in the form of homicide.

Several theories attempt to explain the link between poverty and violence. Among them are general theories of crime that aim at explaining all kinds of delinquent behavior via the same mechanism and use this mechanism to explain the poverty-violence relationship as well. For example, Merton's anomie theory (1949) and its extension by Cloward and Ohlin (1960) state that lower-class youth experience more frustration because of blocked legitimate opportunities to attain culturally defined goals and thus resort to illegitimate means of alleviating poverty. Ensuing violence is a consequence of involvement in illegal activities. These ideas are further elaborated by Agnew (1992). He combined the

anomie-strain perspective with the ideas from psychological "drive theories" (stating that the drive created by frustration finds an outlet in aggressive behavior) and formulated the general strain theory. However, empirical tests of Agnew's general strain theory as applied to violent crime produced mixed results (see review in Tcherni, 2011a).

In their book "Crime and the American Dream" (1994), Steven Messner and Richard Rosenfeld extend and apply the ideas of anomie and strain theories to explain some unique processes going on in the modern market-economy-driven society of the United States. They show how society's orientation toward material success puts pressure on individuals to gain material goods by any means, including illegal and violent ones.

Another example of a general theory purporting to explain structural effects is Hirschi's (1969) social control theory. It contends that poor youth have fewer stakes in conformity and thus weaker bonds inhibiting delinquent behavior, including violence.

One of the most successful and widely applied theoretical perspectives is the social disorganization approach (Sampson & Wilson, 1995;

Shaw & McKay, 1942). It states that poverty-stricken neighborhoods lack social control and cohesion, which ultimately leads to the state of disorganization in the community. Inability to maintain order and civility, coupled with the distrust of police by residents of such communities, results in their regular use of violence to resolve conflicts (Krivo & Peterson, 1996). Due to absence or prohibitive costs of educational programs and after-school activities, and due to lack of supervision in most poor communities, the youths have opportunities to occupy their time with activities of their choice. And, predictably, those choices are mostly shaped by the processes going on within the community. Disorganization in poor communities means higher tolerance for (or lack of ability to summon a collective action against) vice and disorder such as prostitution, drug trade and drug use, gambling, proximity of drinking establishments, and so on. Young people who live in these poor communities are inevitably exposed to higher incidences of interpersonal conflicts that can lead to violence and, occasionally, homicide. Lauritsen and White (2001) report that, in their analyses, “neighborhood disadvantage does indeed have an independent influence on an individual’s risk for violence, controlling for individual factors and other area conditions” (p. 49).

However, recent literature on neighborhoods and violence finds that neighborhoods differ substantially in their differentiation into predominantly violent or nonviolent based on which crimes are more prevalent there (see Schreck, McGloin, & Kirk, 2009). Moreover, poverty and low socioeconomic status are shown to lead uniquely to violent crime but not to other types of offending such as property crime (see Elliott, Huizinga, & Ageton, 1985; Krivo & Peterson, 1996). Thus, it becomes clear that none of the general theories account for the unique nature and origins of violence, especially for the fact that, somewhat counterintuitively, poverty leads to violence rather than to property offending motivated by economic gains. For example, one would expect people from poor households to be more likely to steal compared to the more

well-off individuals. However, this is not the case: stealing does not vary by social class whereas violence clearly does.

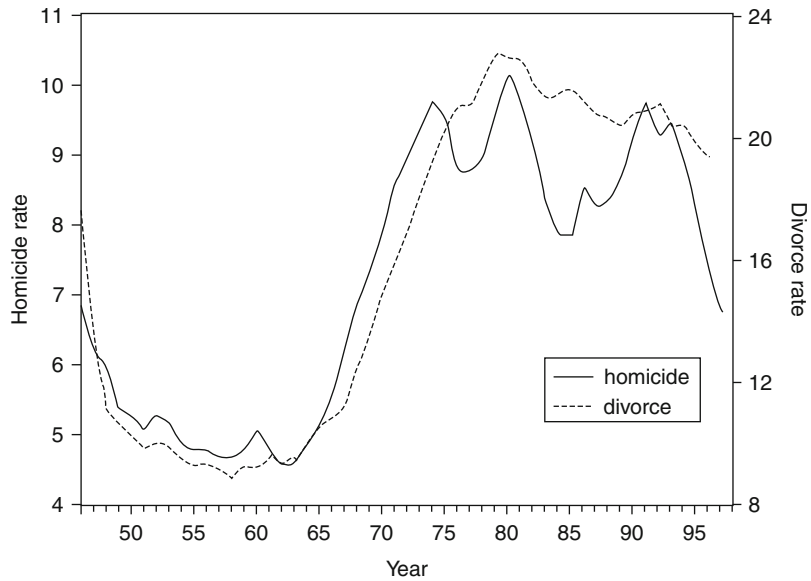
The second major structural force of interest is divorce, often resulting into disruption of a traditional two-parent family, or “broken home.” Despite the fact that divorce rates have been established as a consistent predictor of high homicide rates as illustrated in Fig. 4 (see Greenberg, 2001; also see Beaulieu & Messner, 2010), the theoretical explanations of this link are not very clear. Below, the most likely explanations are summarized, broken down by the level of influence – from neighborhood to family to individual level (see a summary in Table 1).

At the community level, family disruption operates in ways similar to the effects of poverty: single parents lack the economic resources, time, and energy to communicate with neighbors; organize and supervise activities of their own and others’ children; and get involved in community processes (Sampson & Groves, 1989). Thus, the effects of family disruption at the individual and family level (described below) are amplified at the neighborhood level through the weakening of informal social control.

At the interpersonal/family level, family disruption may operate in several ways to increase violence. First, there is a documented relationship between divorce and elevated levels of partner and domestic violence involving estranged spouses or ex-spouses and/or their new partners (see Stolzenberg & D’Alessio, 2007). Conflicts arise for many reasons: jealousy (love triangles), disputes over property, division of parental responsibilities and custody of children, and more. Second, family disruption, unstable household arrangements, and frequent changes in living situations often have adverse effects on children, both early in life and later, during adolescence. Besides leaving in its wake strained relationships between the youth and their parents, divorce often creates a family situation where each of the parents (most importantly, the resident parent) is less involved and has less time and ability to monitor and supervise his/her children, get to know their friends and whereabouts, and so on. Moreover, remarriage and the

Structural Determinants of Homicide, Fig. 4

Time series of homicide and divorce rates in the United States (From Greenberg, 2001, p. 303)



Structural Determinants of Homicide, Table 1 Theoretical model: The big three determinants of homicide and levels of their influence*

Variable Level	Poverty/low education	Family disruption (divorce rate)	Racial composition
Neighborhood/Community	<ul style="list-style-type: none"> disorganization in the community – as a result, higher tolerance for vice and disorder (social disorganization perspective) lack of social control and cohesion 	<ul style="list-style-type: none"> lack of community structures of support and supervision lack of social control and cohesion 	Non-comparability of circumstances for blacks and whites. A larger proportion of blacks: <ul style="list-style-type: none"> live in high-poverty, high-crime, high-segregation neighborhoods (social capital perspective) experience low quality of education and high unemployment for generations of family members have striking levels of imprisonment and mortality from unnatural causes Thus, race stands as a proxy for compounded disadvantages and accumulated adversities for blacks versus whites.
Family/Interpersonal	<ul style="list-style-type: none"> harsher and less consistent discipline higher levels of conflict in relationships (competition for scarce resources) frequent use of physical force 	<ul style="list-style-type: none"> higher levels of conflict in relationships (divorce-related conflicts over property, custody, etc.) adverse effects of divorce/instability on the youths insufficient supervision and monitoring of children’s activities/friendships 	
Individual	<ul style="list-style-type: none"> “organic survival” mode of living (physical pleasures/reactions) lack of skills to solve conflicts in a non-physical way lack of hope for a brighter future 	<ul style="list-style-type: none"> lack of interpersonal skills and patience to resolve “irreconcilable differences” more frequent visits to bars, pubs, etc. (routine activities perspective) 	

*From Tcherni (2011b)

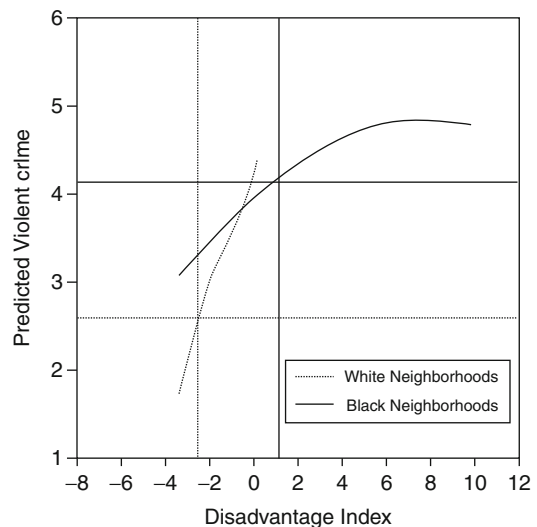
presence of a stepparent do not seem to remedy the situation much, and sometimes, the arrival of half-siblings may exacerbate it further (Apel & Kaukinen, 2008).

The divorce rate variable would operate at the individual level as an indicator of an increased volume of conflicts. First, more divorces conceivably mean there are more people in a state of

conflict (either prior, during, or after divorce), likely lacking interpersonal skills and patience to resolve “irreconcilable differences” and get along as a family, which might have led to divorce in the first place. Third, in line with the routine activities theory, divorce implies a higher likelihood that divorced people would go out more, frequent places where they would be able to meet potential mates, and engage in more activities outside of the house, thus increasing the volume of interpersonal encounters and possible grounds for conflict. Even if the majority of conflicts are resolved peacefully, some of them still escalate into violence. Thus, from a purely statistical perspective, the larger volume of all conflicts (indicated by higher divorce rates) results in the larger number of conflicts leading to violence.

The third major structural force exerting its effect on homicide – racial composition of the area – deserves a special discussion. The link between race (Black) and violence is a complicated one. Most scholars believe that individual-level risk factors operate similarly for both blacks and whites (Moses, 1947; Blau & Blau, 1982; Sampson & Wilson, 1995; Shihadeh & Ousey, 1998; Krivo & Peterson, 2000; McNulty, 2001; Lauritsen & White, 2001; Benson, Wooldredge, Thistlethwaite, & Fox, 2004) and that differences in violent offending reflect the differences in ecological contexts/environments – so-called racial invariance assumption (Ousey, 1999). As McNulty (2001) convincingly demonstrated at the neighborhood level, blacks and whites live in very different conditions, so different indeed that it basically precludes any possibility of meaningful comparisons. It is extremely rare that whites live in neighborhoods of high disadvantage typical for blacks. McNulty calls it “the problem of restricted distributions.” Bruce (2004) puts it even more explicitly: “antisocial behaviors that have been typically thought of as reflections of African American culture were, in fact, a reflection of the resource-deprived neighborhoods in which the group existed” (p. 67).

So, the racial invariance assumption holds that structural factors work similarly for all races



Structural Determinants of Homicide, Fig. 5 Predicted logged violent crime by levels of disadvantage (Atlanta neighborhoods, 1990–1992) (From McNulty, 2001, p. 480)

and thus any effects attributable to race can be explained away by common structural forces. The only caveat in trying to explain the effects of race away seems to be the fact that structural forces, though common in theory, are not that comparable for blacks and whites in reality (see Fig. 5). A substantially larger proportion of Blacks than Whites are poor and live in spatially segregated and disorganized, high-poverty, high-crime areas (Peterson & Krivo, 2005); Blacks’ social heritage is also exacerbated by much higher rates of family disruption and instability of living arrangements for the youth, low quality of education and high unemployment for generations of family members, discrimination, striking levels of imprisonment, and mortality from unnatural causes. For example, Pettit and Western (2004) estimated that among black men born between 1965 and 1969, 20 % had served time in prison by their early thirties (compared to only 3 % of white men). This number – already unbelievably high – further climbs to 30 % for black men without college education and to 60 % for high school dropouts among blacks.

Putting this into a historical perspective, it is important to consider the immensity of changes

in the pattern of areas inhabited by blacks 100 years ago and currently. Before the “Great Migration” (roughly from 1910 through 1970), nearly 90 % of blacks in the US lived in rural areas of the South. According to the 2000 decennial US census, only 10 % of blacks live in rural areas now (9.5 % of all blacks live in the rural areas of the South). As Katz, Stern, and Fader (2005) put it, the “bulk of African Americans started the twentieth century clustered in America’s poorest spaces, rural southern farms; they ended it again concentrated disproportionately in the nation’s least promising spaces—now, central cities” (p. 80).

Thus, the problem of compounded disadvantages and accumulated adversities for blacks versus whites makes it extremely difficult to measure structural factors in a way that would capture the racial inequality of circumstances. This is especially true for analyses at an aggregate level. As a result, the variable of racial composition of the area (percent black) stands as a proxy for all the spillover effects of racial disparities that are not captured by other variables in the model.

Table 1 (from Tcherni, 2011b) presents a theoretical model summarizing the effects of the three major structural factors on homicide.

Cross-References

- ▶ [Census](#)
- ▶ [Composite Index Construction](#)
- ▶ [Correlation Coefficient](#)
- ▶ [Cross-national Comparison\(s\)](#)
- ▶ [Demographics](#)
- ▶ [Density, Urban](#)
- ▶ [Disadvantaged Populations](#)
- ▶ [Domestic Violence](#)
- ▶ [Exploratory Factor Analysis](#)
- ▶ [Family Features and Violent Behavior](#)
- ▶ [Family Structure](#)
- ▶ [Gini Coefficient](#)
- ▶ [High School Completion Rates](#)
- ▶ [Index Construction](#)
- ▶ [Level of Education](#)
- ▶ [Linear Regression Model](#)
- ▶ [Offense Definitions’ Impact on Criminal Justice Data Quality](#)
- ▶ [Partner Violence](#)
- ▶ [Poverty](#)
- ▶ [Poverty Lines](#)
- ▶ [Poverty Measurement](#)
- ▶ [Regression Coefficients](#)
- ▶ [Single-parent Families](#)
- ▶ [Social Inequalities](#)
- ▶ [Socioeconomic Status \(SES\)](#)
- ▶ [Unemployment](#)
- ▶ [Units of Analysis](#)
- ▶ [Violence](#)
- ▶ [Youth Violence](#)

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Structural Equation Models

► Latent Growth Curve Modeling

Structural Hypotheses

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Definition

A hypothesis consisting of multiple specific hypotheses. Each specific hypothesis addresses one aspect of a broader theoretical approach. A set of specific hypotheses that address correspondents between the content of items under study and their empirical distribution, based on proximity coefficients.

Description

A specific hypothesis (if X then Y) concerns one aspect of a phenomenon. When there are multiple and overlapping aspects of an issue under study, it becomes necessary to articulate a *structural hypothesis* which simultaneously considers all of the relevant aspects and their interrelationships. Following de Saussure (1916), Jakobson (1971–1985), Levi-Strauss (1958; 1973) developed a method of structural analysis, through which general laws governing a system under study are derived by observing the relations between items in the system. This enables the system to be broken down into distinctive features that may be grouped into pairs of

oppositions. The many applications of this approach in the social sciences include structural analyses of social behavior (Benjamin, 1974), friendship choices (Verbrugge, 1977), ethnic identity (Cohen, 2008, 2009a, 2010; Hurh & Kim, 1984; Rebhun, 2004), social networks (Wellman, 1988), school achievement (Cohen, Kramarski, & Mevarech, 2009), well-being (Levy & Guttman, 1975), and holiday rituals (Cohen, 2003).

Tools for Generating Structural Hypotheses

There are a number of methods for developing and articulating a structural hypothesis. Three content-based geometrical methods described here are (1) the mapping sentence, (2) graphic portrayal, and (3) graphic portrayal based on a hypothetical matrix of interrelationships. All three of these methods linked are to Facet Theory, a metatheoretical approach pioneered by Louis Guttman and expanded by his many disciples and colleagues (Elizur, 2001; Guttman, 1982; Guttman & Greenbaum, 1998; Levy, 1985, 1994, 2005). A facet is one way of classifying the research content. In each of these FT-based approaches, the structural hypothesis may be empirically verified (and modified) through the procedure similarity structure analysis (usually known as smallest space analysis) (SSA) [add link] which portrays structural relationships between variables based on their extent of correlation (proximity coefficient).

The three approaches are not mutually exclusive; they can be used collaboratively, each one enriching the others.

1. *Mapping Sentence*. The mapping sentence is a fundamental tool of Facet Theory. The mapping sentence guides the researcher to formulate hypotheses by specifying and organizing facets (and their elements) and assigning formal roles of the facets in establishing structural hypotheses (Guttman, 1991; Levy & Guttman, 1985; Levy, 1985, 2005). A mapping sentence is comprised of *facets*

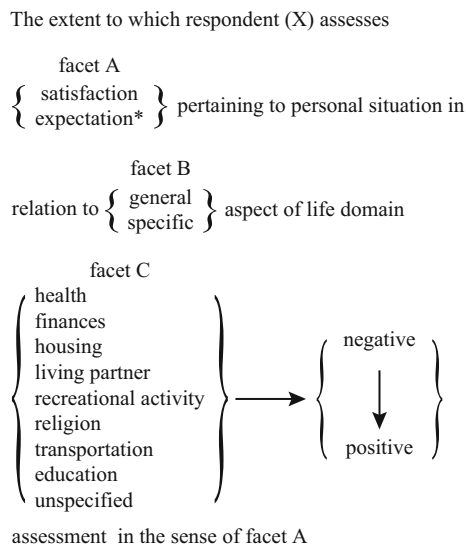
representing aspects of the research content. The facets are sets of *elements*, conceptually related by a common rule. The order and phrasing of the mapping sentence show logical relations among the facets. The mapping sentence is a definitional framework for the items under study and serves as a basis for the formulation of a structural hypothesis. (See Borg & Shye, 1995; Levy, 1985, and in this Encyclopedia; Guttman, 1991).

The mapping sentence has been employed for decades in sociological studies in a wide variety of fields (see, e.g., Birenbaum, 1997; Clark & Payne, 1998; Cohen, 2000, 2001; Cohen & Levy, 2005; Elizur, Borg, Hunt, & Beck, 1991; Guttman & Levy, 1982; Levy, 1976, 1979; Levy & Guttman, 1975, 1989; Levy & Katz, 2005; Lyra, Roazzi, & Cohen, 2001; Sabbagh, Dar, & Resh, 1994; Sagie, Elizur, & Yamauchi, 1996; Zeidner, 1998 among many others. For a comprehensive bibliography of FT publications, see Cohen 2009b).

Facets in a mapping sentence are hypothesized to play roles in partitioning the space of the variables into contiguous regions. Further, the mapping sentence enables predictions regarding the structure of the SSA. Levy (1985) summarizes the rationale behind the correspondence between the content of the facets and various ways of partitioning an SSA. For example, if the elements in a facet are unordered (has no beginning and no end in any sense), the structure is expected to be *circular*, represented by pie-like wedges emanating from a common origin, the facet playing a *polar* role. Facets which consist of ordered elements may play a *modular* role (such as from central to peripheral concentric belts) or an axial *role*. Combinations of these structures may be predicted, represented by multidimensional structures.

The mapping sentence below articulates a structural hypothesis of quality of life,

following elaboration of Cohen (2000) on Lance et al. (1995):



* "expectation" refers to the have-want discrepancy

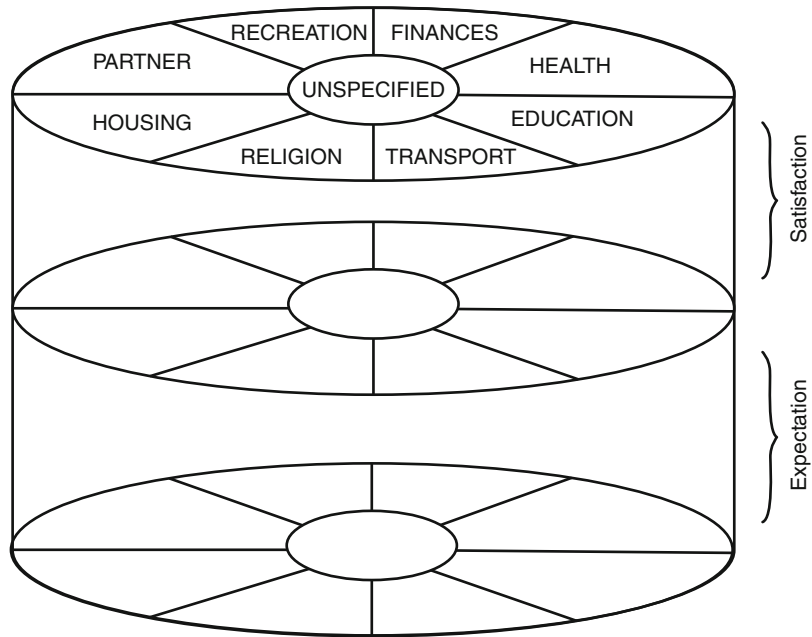
From this mapping sentence, it is possible to construct an hypothesis re the structure of the items. First, as noted above, it is predicted that there will be a region for each of the elements of the three facets.

The elements in Facet C are unordered, and thus, Facet C is expected to play a polar role, where each life area will be represented as a pie-like wedge emanating from a common origin.

Facet B differentiates between specific and general aspects of life domains. It is expected that the "general" aspects will constitute the common origin and the specific aspects will spread further.

Facet A modifies the range of the mapping sentence in the sense of satisfaction and expectation. This kind of facet is called a *stem facet*. It is hypothesized that the elements of this facet will partition the space into two layers (one above the other: expectation and satisfaction) perpendicular to the circular order, the total structure being a cylinder as portrayed schematically in Fig. 1. This hypothesis was confirmed by using the SSA methods (see Cohen, 2000).

Structural Hypotheses,
Fig. 1 Schematic representation of the cylindrex of quality of life (After Cohen, 2000)



2. Graphic Portrayal of a Structural Hypothesis.

Another method is to formulate the structural hypotheses by graphically portraying the relationships between concepts, predicting the structure without first developing a mapping sentence. Schwartz and his colleagues intensively used this method of *graphic portrayal of a structural hypothesis* in the development of a universal structure of values (Sagiv & Schwartz, 2000; Schwartz & Bilsky, 1990; Schwartz & Sagiv, 1995; Schwartz, Melech, Lehmann, Burgess, & Harris, 2001). As shown in Fig. 2, this model identifies two basic oppositions which gave rise to four main concepts: openness to change vs. conservation and self-transcendence vs. self-enhancement. These four concepts were expanded and modified over the course of several decades of work and research in the field.

3. Matrix-Generated Structural Hypothesis.

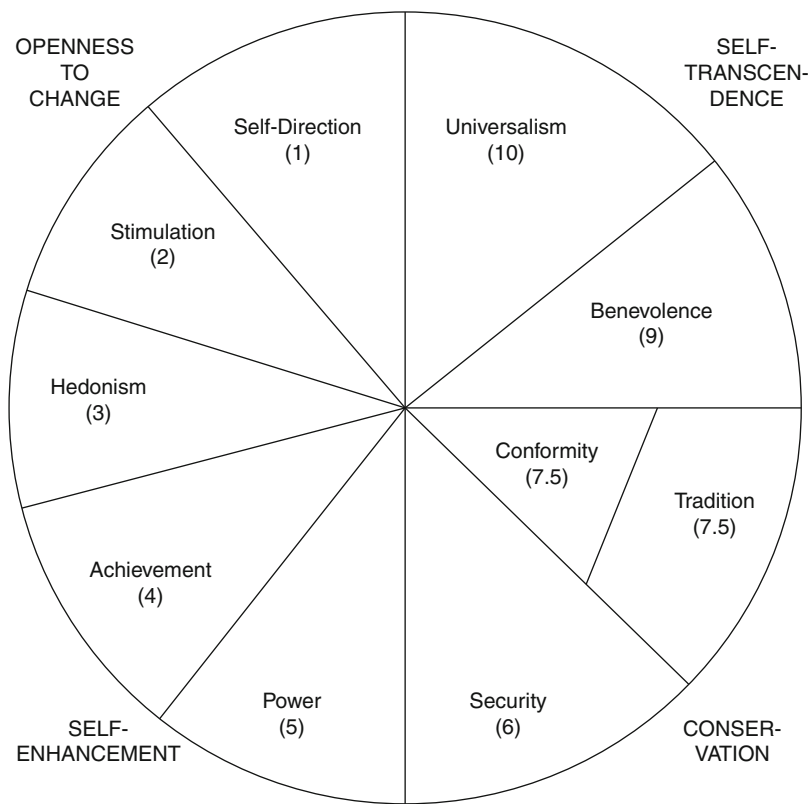
A further approach uses a matrix based on anticipated correlations to formulate a hypothetical structure (Cohen & Tresser, 2011a, b). This follows from each of the

previous methods. As with Levi-Strauss', it uses the premise of identifying oppositions between concepts. Like the mapping sentence, very specific elements and the relationships between them are articulated. The final result, like the previous ones, is a graphic portrayal of a structural theory. The innovation of this method is the use of a matrix to articulate a set of micro-hypotheses predicting the correlations between each pair in a set of selected items. One important distinction between this method and the previous ones is that rather than considering general concepts, it follows a dyadic process of predicting relationships between each individual pair of variables. The correlations are predicted based on the cumulative knowledge in the field under study and eventually on the researcher's intuitive common sense.

For example, in the development of a matrix-based structural hypothesis of quality of life (Cohen & Tresser, 2011a, b), 11 specific aspects of QoL, plus a "general" category, were identified. A mapping sentence designed by Levy (1976) was instrumental in guiding

Structural Hypotheses,

Fig. 2 Theoretical model of structure of relations among ten value constructs (From Schwartz et al., 2001, p. 522)



Structural Hypotheses, Table 1 Abridged hypothetical matrix for QoL

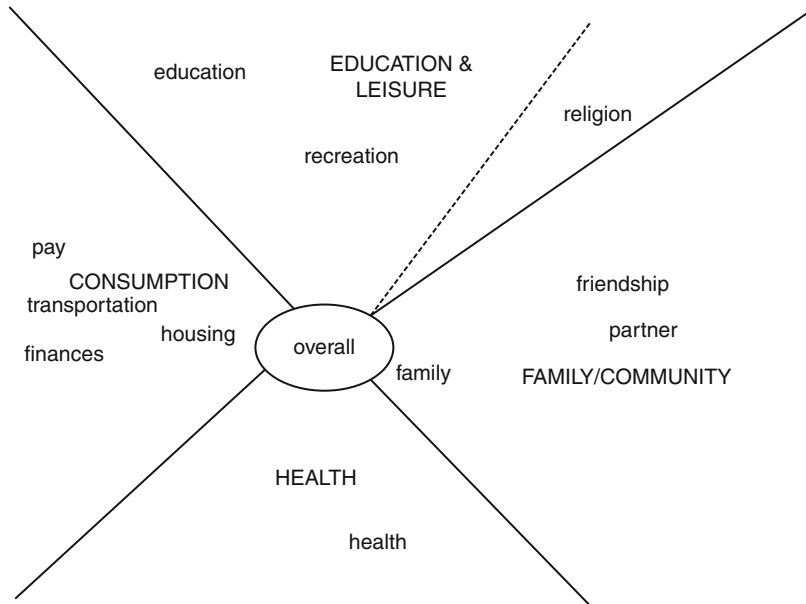
	Health	Finances	Family	Pay	Friends	Housing	Partner	Recreation	Transport	Education	Religion	Overall
Health	–	Med	Med	Low	Med	Med	Med	Low	Med	Low	Med	Med
Finances	Med	–	Med	High	Low	High	Low	Med	High	Med	Low	Med
Family	Med	Med	–	Low	High	High	High	Med	Low	Med	Med	High

this first step. For each pair of items, a correlation of high, medium, or low was predicted. This entails consideration of previous knowledge and research on the precise items. To give only one example, the correlations between *general* QoL and *friends*, *family*, and *partner* were all predicted as being high because links between social relationships and happiness and satisfaction and QoL have been repeatedly confirmed cross-culturally and over time (see Cohen & Tresser, 2011a, b). It may be noted that the high/medium/low format employed in the QoL case is only one option: less precise (yes/no) or more precise (scale of 1–10) may be used,

as applicable. As an illustration, few lines from the hypothetical matrix are given in Table 1.

Once the matrix is completed, with micro-hypotheses articulated for each pair, the information in the hypothetical correlation matrix is then analyzed using the SSA method (or other multidimensional data analysis techniques). That is, the variables are placed in a conceptual map based on their proximity coefficients (predicted correlations in this case), in such a way that strongly correlated items are close together and weakly or negatively correlated items are placed far apart. The program considers the entire matrix

Structural Hypotheses, Fig. 3 Theoretical SSA of life domains generated by the matrix approach



simultaneously, thus graphically portraying the holistic structure of the relationships between the items in the matrix.

In this way, the matrix forms the basis of a graphical portrayal of the structural hypothesis, as shown in Fig. 3. At the origin is a region of “overall” or “general QoL.” Surrounding this are four main regions: family/community, health, consumption, and education and leisure. The dotted line indicates the possibility that the item “religion” could be included in the psychological or the family/community region.

The model generated using the matrix method closely corresponds to an SSA based on data from a study on QoL (Cohen, 2000), which had the same basic structure (from Cohen & Tresser 2011a, b, p. 13).

Conclusion

These various approaches illustrate three methods of formulating structural hypotheses in the social sciences. Levi-Strauss pioneered the field, putting forth the idea of structural analysis of sets of opposed concepts as a way to define a field.

This approach coincides with the Facet approach pioneered by Guttman. In all the above cases, the space of variables is based on proximity coefficients among the variables. Basically, the three examples concern the facet of life domain, each in its own meaning: motivational domain of personal values in one research and life domains re the quality of life in the two others.

As in other well-being studies, all the indicated examples show a circular structure, with overall well-being constituting the common origin. On the other hand, the value example has the advantage of a rationale for the circular order, namely, opposed concepts. This lawfulness is shared by value research throughout (inter alia, Cohen, 2011; Levy, 1990; Maslovaty & Shitreet, 2003).

Moreover, some kind of opposed concepts rationalizing the circular order can be found also in the quality of life example, where the area of personal consumption is opposed to the more social collective family and community area.

The matrix method is pioneering and requires more field testing, but it represents a logical additional step following from and enriching the previous methods, particularly as its

didactic approach requires the full attention of the researcher to relationships between variables in the construction of the structural hypothesis.

Cross-References

- ▶ [Facet Theory](#)
- ▶ [SSA: Similarity Structure Analysis](#)

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Structural Interview of Symptoms and Concerns (SISC)

- ▶ [Self-Perceived Burden to Others](#)

Structural Network Power Index (SNPI)

- ▶ [Measures of National Power](#)

Structure of Quality of Life

- ▶ [Systemic Quality of Life Model \(SQOL\)](#)

Structure of Society and Happiness

- ▶ [Social Structure and Happiness](#)

Structure of Well-Being: A Facet Approach

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Definition

For establishing successful theories leading to scientific generalizations, i.e. scientific

lawfulness, some formalization must take place. Formalization is the ultimate lawfulness which has assumed a form to be passed on, such as structural formations (patterns).

This raises the need for a formal definition for the universe of content of the concept under study. Guttman's mapping sentence idea is intended to meet this requirement. A mapping sentence is the formalization of a subject in which the researcher is interested. It is a general device for design of observations, incorporating formal facets with informal verbal connectives needed for actual empirical work. This enlarged content design can also serve as a basis for stating and testing hypotheses and thus promote systematic development of scientific generalizations, thereby contributing towards cumulative science. The utilization of the facet approach is reviewed in the context of building a structural theory for well-being.

Description

The problem which pertains to any research analysis and especially to the analysis of structural hypotheses is that of *defining* the universe of content. The facet theory approach was developed by Guttman to answer this problem. The point of departure of facet theory is Guttman's definition of the concept of theory itself.

Historically, theory and research were developed independently in the social sciences.

The need for joint formalization of theory and research is emphasized in Guttman's following definition of theory:

"A theory is an hypothesis of a correspondence between a definitional system for a universe of observations and an aspect of the empirical structure of those observations, together with a rationale for such an hypothesis" (Guttman, 1973, p. 35, 1982, p. 335).

The above definition implies that the researcher has to take care about two distinct things: (1) the design of his observations, and (2) their empirical structure. In any theoretical leap these two aspects must be considered

in tandem. Hence, theory and method are inseparable in the process of theory construction as "the form of data analysis is part of the hypothesis" (Guttman, 1982). The concept of "rationale" is added, "since this suggests how to go ahead in a cumulative fashion should the hypothesis be established" (Guttman, 1986).

The facet design provides the definitional system of the observations together with the rationale for hypotheses. The empirical aspect of the theory dealt with here are intercorrelations among the observations.

Faceted Definition for the Concept of Well-Being

A broad multivariate concept, such as "well-being," cannot be defined in the usual way. Rather, a strategy is needed that enables thinking in terms of observations on the concept and thereby address the problem of what variables are to be studied. This requires specifying facets both for the domain (question part) and the range (possible answers) of the items. Accordingly, the universe of well-being items was defined formally as follows (Levy & Guttman, 1975):

"An item belongs to the universe of well-being items if and only if its

domain asks for a $\left\{ \begin{array}{l} \text{cognitive} \\ \text{affective} \\ \text{instrumental} \end{array} \right\}$ assessment of $\left\{ \begin{array}{l} \text{level} \\ \text{treatment} \end{array} \right\}$

of the state of social group (g) in some life area (1), and the range is

ordered from $\left\{ \begin{array}{l} \text{very satisfactory} \\ \text{to} \\ \text{very unsatisfactory} \end{array} \right\}$ according to the

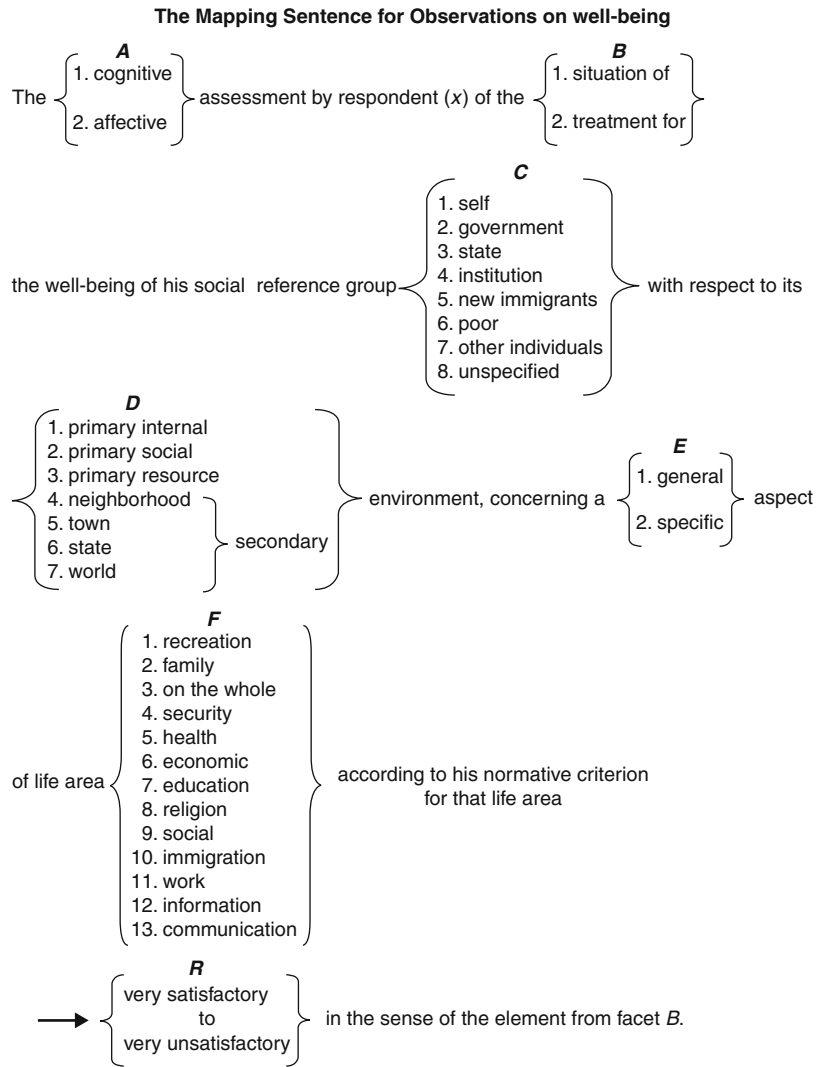
normative criterion of the respondent for that area of life." (Levy and Guttman, 1975, p.364).

A detailed comprehensive discussion concerning the rationale for the above faceted definition can be found in the entry "► [Definitional framework for the concept of well-being](#)" in this encyclopedia (see also Levy & Guttman, 1975; Guttman & Levy, 1982).

Design of Observations: The Mapping Sentence

Having defined the overall concept of well-being a classification scheme for the design of observations for the well-being items under study is constructed. A general device for the

**Structure of Well-Being:
A Facet Approach,
Fig. 1** The Mapping
Sentence for Observations
on well-being



design of observations, is the mapping sentence introduced by Guttman (1954, 1959; Borg & Shye, 1995; Canter, 1985; Levy, 1976, 1985, 1994, 2005 and in this Encyclopedia; Shye & Elizur, 1994). Such a sentence states the population being studied (population facet), the variables under study (content facets) and the range/s facet (answer categories) of the variables. It is actually a set of sentences of ordinary speech which have common connectives and which differ according to their facet elements. Each facet is one way of classifying the research variables, according to some rule. Since any research content is usually classified

in more than one way, the mapping sentence includes several content facets. Thus, the mapping sentence presented below for designing the observations on well-being contains six explicit content facets (A–F) (Elaboration of Levy & Guttman, 1975, p. 365) (Fig. 1).

Facet A specifies the *modality* (cognitive a_1 , affective a_2) of the respondent’s assessment regarding (B) the situation (b_1) or treatment thereof (b_2) concerning a certain *group* in a certain *environmental framework*. Accordingly, facet C classifies groups, and facet D environmental framework. For example, a respondent may evaluate his own state of

well-being in terms of his internal primary environment (his mood, happiness, etc.) or his secondary environment (e.g., satisfaction with life in his town). Similarly, he may estimate the well-being of other social groups (new immigrants, the State, etc.). The environmental facet *D* is treated here as ordered from the “self” to “community” or “State.” Facets *E* and *F* list the life areas for the various kinds of well-being. Facet *F* specifies the life area itself (family, recreation, economics, residence, etc.), and Facet *E* specifies whether an assessment is being made for the life area in general or for some particular aspect of it (e.g., economic problems of the State vis-à-vis the particular economic problem of the poor).

Each question is defined by a structuple (profile) composed of one element from each of the six content facets *ABCDEF*. For example, the question, “How do you evaluate your family life? (very good to very bad)” is assigned the structuple $a_1b_1c_1d_2e_1f_2$. All the other questions can be similarly classified. The research design is expressed by the mapping sentence as a whole, which calls for assigning to each respondent (*X*) (population facet) a value in the range facet (*R*) for each item classified by the content facets (*A–F*).

To facilitate perception of the universe of the well-being items according to the six content facets of the mapping sentence, it is convenient to present it in a tabular fashion such as [Table 1](#) below. The total picture presented in the table is that of a *factorial design* (in the language of R. A. Fisher, 1935). In each cell of the table, defined by the six content facets, one or more questions can be listed. Thus, it is possible to construct in a systematic fashion a sample of items for the topics of interest (and to reveal other possibilities that have not been thought of previously). Though carrying out a total design like this is generally impossible in practice, in each case a small sample of items that will nevertheless suffice to yield the essential information about the facets can be systematically constructed, as is the case for the empirical studies on well-being mentioned here (Levy, 1990; Levy & Guttman, 1975). However, actual item construction has to

conform with the research topic of interest which will result in placing different emphases on certain features of the facets of the mapping sentence under discussion. Endeavor usually lies in: (a) representing the facets – all or part – depending on the foci and the aims of the study, in constructing the items; and (b) replicating the study either by the same items or by constructing new variables according to the same facet design of contents (Guttman, 1992). See another example of this kind of factorial design in Cohen, Pianelli, and Abric (2003).

The General Hypothesis of Facet Theory

Each facet in the mapping sentence has a specific role in partitioning the space of the empirical observations. The general hypothesis of Facet Theory is that the specification of formal roles for the facets in a mapping sentence provide a rationale for structural theories concerning a correspondence between the definitional framework – the mapping sentence – and an aspect of the empirical data; thereby facilitating the formation of scientific lawfulness in cumulative fashion. Indeed, the regional lawfulness to which the Similarity Structure Analysis – SSA (previously called “Smallest Space Analysis”) – is a partner supports this general hypothesis about structural theories.

The SSA technique, introduced by Guttman, is an intrinsic geometrical technique for analyzing multivariate data which emphasizes looking at regions in the space of variables rather than coordinate systems. In this technique each variable is treated as a point in a Euclidean space in such a way that the higher the correlation between two variables, the closer they are in the space. The space used is of the smallest dimensionality that allows such an inverse relationship between all the pairs of observed correlations and the observed geometric distances. Only the relative sizes of coefficients and the relative distances are of concern (Borg & Lingoes, 1987; Guttman, 1968; Lingoes, 1968; and in Amar & Levy in this encyclopedia).

Each content faced corresponds to a certain partitioning of the SSA space into as many regions as there are elements to the facet.

Structure of Well-Being: A Facet Approach, Table 1 Classification scheme for the well-being? variables, according to the content facets of the mapping sentence: the factorial design (From Levy, 1990, p.175)

Facet F	Facet E	Stem facets B?and C							
		State of self							
		Environmental framework (Facet D)							
		Primary			Secondary				
Life area	Aspect	Internal	Social	Resources	Neighb	Town	State	State of community	Institutional treatment
Recreation	General								
	Specific								
Family	General								
	Specific								
On the whole	General								
	Specific								
Security	General								
	Specific								
Health	General								
	Specific								
Economic	General								
	Specific								
Education	General								
	Specific								
Religion	General								
	Specific								
Society	General								
	Specific								
Politics	General								
	Specific								
Work	General								
	Specific								
Information	General								
	Specific								
Communication	General								
	Specific								

Having several content facets, each with its own role, leads to intersecting partitions that generate various geometrical structures. The division into regions is accomplished by introducing boundary curves according to the structures (profiles) of the variables in the mapping sentence. Note that regions are not “clusters” that are discernible by “empty space” around them. Regional hypotheses are for a space that has points everywhere in principle. This means that some variables in one region may correlate less with other variables of the same region than they do with variables from other regions.

Roles of Facets in Establishing Structural Theory for Well-Being

The Axial Role of the Stem Facets

Until the late 1980s hypotheses about lawfulness concerning sizes of correlations were based on considerations of order among elements in the content facets (Borg, 1986; Canter, 1985; Guttman, 1959, 1977; Jordan, 1978 and references therein; Levy, 1976, 1985). However, rationale for various partitioning correspondences comes also from the *role* that the content facets play within the mapping sentence.

Differentiation is made between two varieties of content facets: stem and modifying facets.

(The term “stem” was suggested by Guttman a short time before his death. Earlier, it was treated under different names; one example is in Levy & Guttman, 1975.) A stem facet directly modifies the name of the range of the mapping sentence but does not modify the other facets.

It is not always easy to specify which facets are stem facets. Inspection of the above mapping sentence for well-being suggests that facet *E* (aspect) is a modifier of facet *F* (life area), facet *F* is a modifier of facet *D* (environment) and facet *D* is a modifier of facet *C* (social reference group). Hence none of facets *D*, *E* and *F* appear to be stem facets.

Facet *A* modifies the act of assessment and hence also is not a stem facet. This leaves facets *B* and *C* for consideration. Having the range of the mapping sentence refer back directly to facet *B* specifies that facet *B* (“situation” versus “treatment”) is a stem facet. Facet *C* presents a variety of social groups including one’s self. As noted, for the purpose of the study a crude dichotomy of two elements was considered for the reference group facet (facet *C*): “self (and family)” versus “community”. Accordingly, what is being assessed from “very satisfactory” to “very unsatisfactory” may be, for example, the situation (b_1) of the well-being of one’s self (c_1). Hence, facet *C* (reference group) may be considered a stem facet as together with facet *B* it modifies only the range and not any other facet.

Guttman hypothesized that “stem facets should partition the space orthogonally to each other; a modifying facet sub-partitions into stem facets” (personal communication). The hypothesis that “a set of stem facets should partition the space orthogonally to each other” was first confirmed in the 1970s for the topic of well-being as shown in Fig. 2a below (Levy & Guttman, 1975).

In Fig. 2a the plane is partitioned into four regions according to the stem facets *B* and *C*. Facet *B* (“situation” versus “treatment”) partitions the space from top to bottom, while facet *C* (“community” versus “self”) partitions the space in the orthogonal direction, from left to right. Hence each of the stem facets specifies order along an axis. One region is empty of points: “No questions were asked about treatment

of self, and the data themselves act as if they recognize this fact! The SSA left an empty space for such variables” (Levy & Guttman, 1975, p. 386). Having a correspondence between content facets and the SSA space as in Fig. 2a is called a *duplex*. The same axial lawfulness was replicated for a further well-being study carried out in 1982 (Levy, 1990) and reconfirmed in six points in time when only economic well-being was under investigation (Levy, 1986, 1990). Since a stem facet modifies the range of the mapping sentence, it is by definition an “ordered” facet, because the range (or ranges) of the mapping sentence is ordered. Hence a stem facet whose order is unrelated to that of other facets is hypothesized to play an axial role in partitioning the space.

The Radex Generated by the Modifying Facets: The Polarizing Role of the Life Area Facet

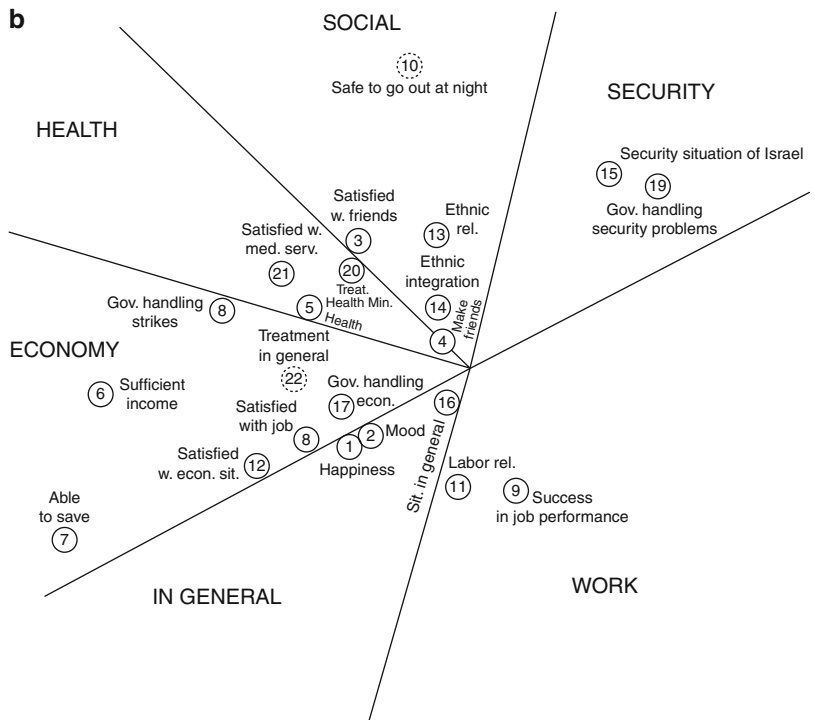
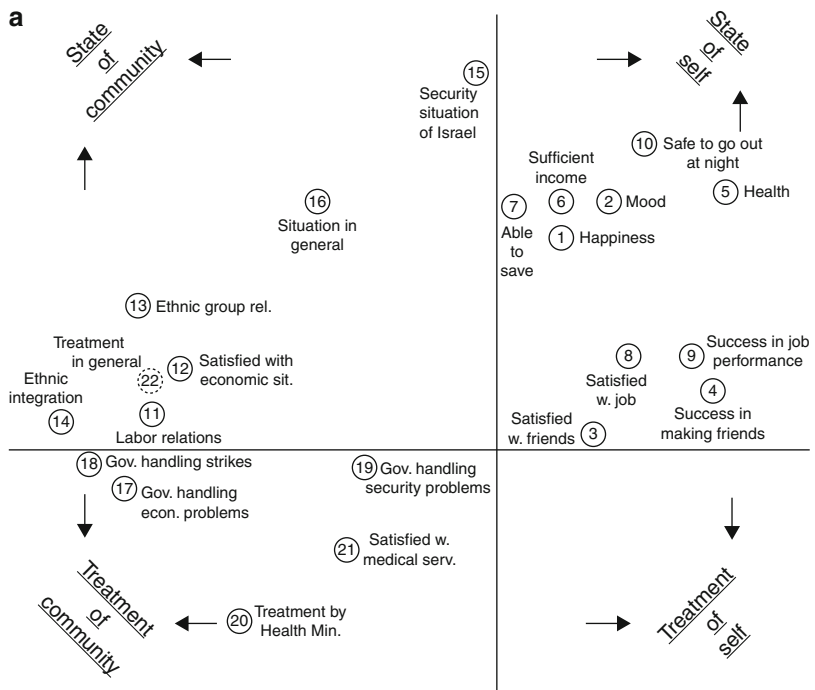
The hypothesis proposed for a correspondence between the total well-being mapping sentence and the SSA is that of interpenetrating cylindrexes (Levy & Guttman, 1975). A cylindrex is defined in terms of two concepts: a two-dimensional radex and an axis orthogonal to it. In the current case two orthogonal axes are involved (Fig. 2a above) and therefore we hypothesize the structure to be that of interpenetrating cylindrexes.

A radex is a circular arrangement in the plane. Two distinct notions are involved in a radex. One is that of a difference in *kind* between well-being variables such as the *area* of the well-being, and the other is that of difference in *degree* such as *social environment* that is intrinsically ordered from primary to secondary (Guttman, 1954). An axis orthogonal to the radex helps define a cylindrical configuration: the circular arrangement is repeated at each stratum of the axis.

To formulate a radex hypothesis one needs facets playing polarizing and/or modulating roles. An unordered facet is expected to play a polarizing role: each element of the facet will correspond to a different direction in the SSA space, emanating from a common origin. The unordered elements of the *area of life* facet

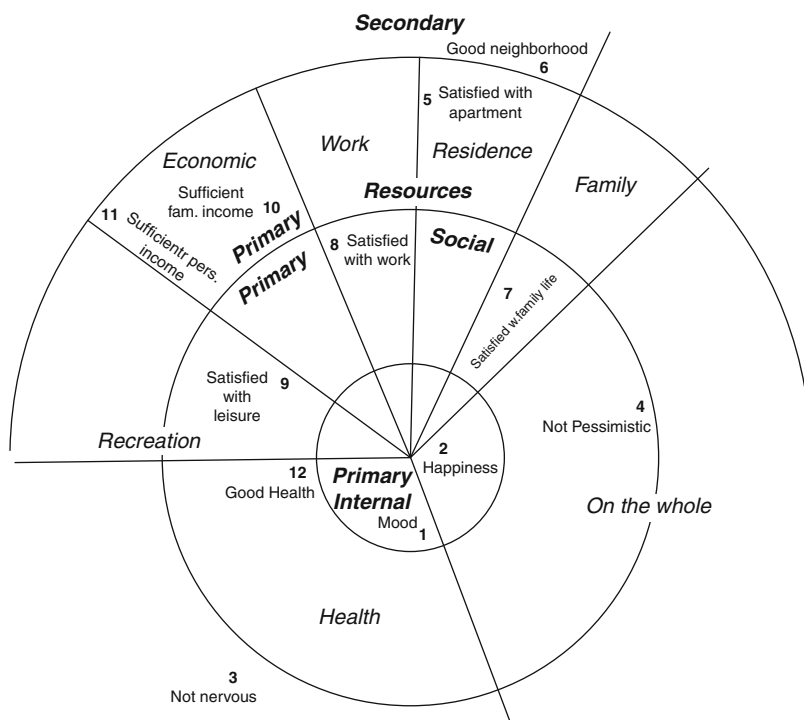
Structure of Well-Being: A Facet Approach,

Fig. 2 (a) The SSA projection of well-being corresponding to the two axial stem facets *self-vs.-community* and *situation- vs.-treatment* (From Levy & Guttman, 1975, p. 385). (b) The radex projection of well-being corresponding to the polarizing facet of areas of life, orthogonal to the duplex projection of (Fig. 2a) (From Levy & Guttman, 1975, p. 386)



Structure of Well-Being: A Facet Approach,

Fig. 3 Radex of the situation of the well-being of *self* corresponding to *life areas* in various *social environments* (From Levy, 1990, p. 166)



(Facet *F*) play a polarizing role as shown in Fig. 2b below. Each life area corresponds to a wedgelike region emanating from a common origin (Levy & Guttman, 1975). Verification of the polarizing role hypothesis of the *life area* facet comes from numerous well-being studies as well as from additional topics (see for example Bilsky, 2003; Bilsky & Wetzels, 1993; Cohen, 2000; Levy, 1976, 1985, 1990; Levy & Guttman, 1975, 1989; Levy & Sabbagh, 2008; Rebhun, 2004).

The radex presented in Fig. 2b for the total well-being design is partitioned only into circular regions according to the life area facet. Regional partitions according to the modulating facets (regarding the notion of *degree*) are not shown explicitly because modulating facets differ for different strata as will be shown below.

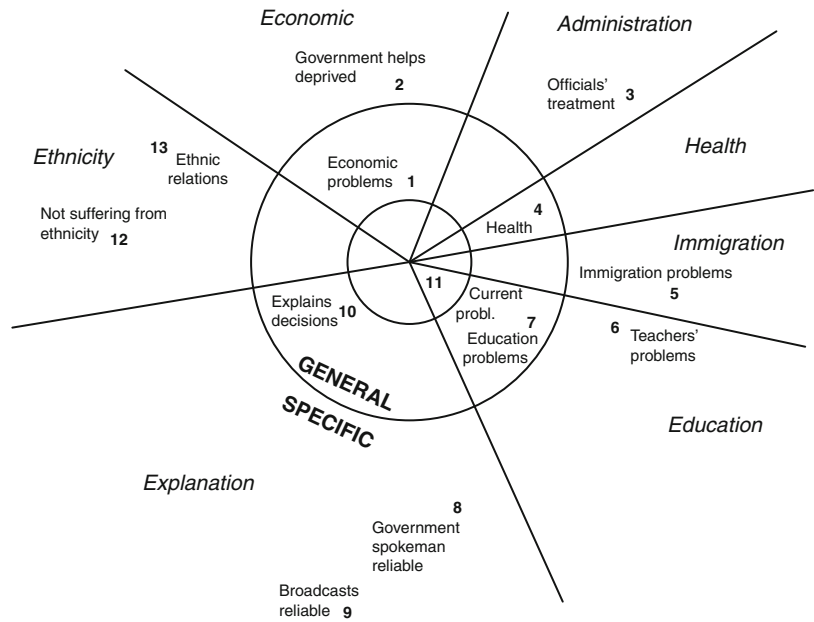
Distance from Happiness: The Modulating Social Environment Facet

The *social environment* facet (*D*), that is intrinsically ordered from inner primary to secondary environment, is hypothesized to play

a modulating role. This partition is expected for the “self” well-being, since “community” refers only to secondary environment. As hypothesized, the transition from primary environment to secondary environment modulates the distance from the origin in the space of self’s well-being (Fig. 3). The innermost circles in Fig. 3 relate to the internal primary environment with the feeling of happiness at the origin, and to the primary social environment. Primary resources and secondary environment spread towards the periphery. Hence, happiness is closest to variables relating to well-being in primary internal or primary social environment. Moreover, the items least correlated with happiness are instrumental resources, such as income, residence etc. This means that feelings of well-being in physical and instrumental aspects of life cannot predict personal happiness as well as socio-psychological (personal and interpersonal) aspects. This is widely replicated and reconfirmed. However, for specific populations such as the retired, the instrumental resource “sufficient income” is more strongly related to

**Structure of Well-Being:
A Facet Approach,**

Fig. 4 Radex of government’s *treatment* corresponding to *aspect of life area* (From Levy, 1990, p. 168)



happiness. For the retired, “sufficient income” is in the vicinity of the innermost circle of the self’s well-being space, together with the personal and primary interpersonal aspects of well-being (Guttman, Levy, & Man, 1970).

A similar distinction between the inner and outer aspects of the self’s well-being, was found also by Campbell, Converse, and Rodgers (1976). This distinction, which was obtained in different countries at different points of time, contributes to a more comprehensive understanding of the self’s well-being and its interaction with the social environment (primary or secondary). In later research this radex theory was expanded by elaborating the life area facet to include self’s *personality* domains (Levy & Sabbagh, 2008).

Modulation of Distance from the Origin: General Versus Specific Aspect

Another modulating facet is that of *general* versus *specific* aspects of life area (Facet *E*) with generality encompassing the origin and specificity spreading towards the periphery. A tendency to this kind of partition is also apparent in the radex of Fig. 2b. However, this facet presents a clear systematic partition in the

context of community well-being in the sense of *government’s treatment* (Fig. 4).

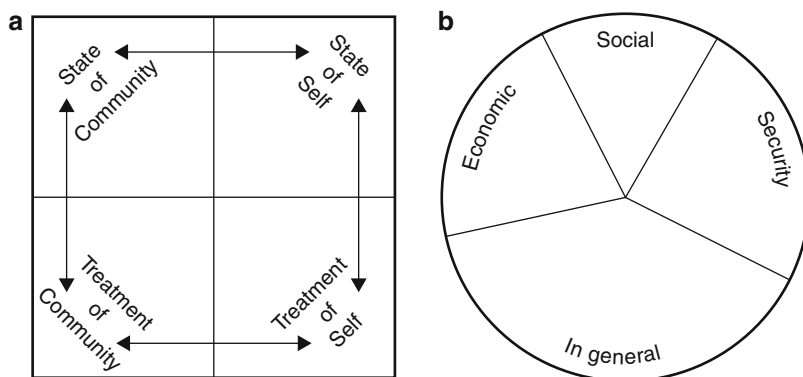
The Four-Dimensional Radex-Duplex Structure of Well-Being

The overall four-dimensional structure of interrelations among the well-being items, may be termed “radex-duplex” (as presented schematically in Fig. 5a, b). The radex (Fig. 5b) is the circular structure presented empirically above in Fig. 2b, and the duplex (Fig. 5a) is the double- axes rectangle *orthogonal* to it, presented empirically in Fig. 2a above.

It is possible to interpret the four-dimensional “radex-duplex” as a structure composed of interlocking three-dimensional cylinders. Each axis, together with the given radex, generates a cylindrex. Four axes, then, generate four cylindrexes. Holding constant one of the duplex axes we are left with a three-dimensional cylinder whose base is the radex, and whose axis is one of the duplex axes. For example, holding constant the axis of *situation* of well-being defines a cylindrical configuration where the circular arrangement (the radex), is repeated at each stratum of the axis, namely: *self* and *community*.

Structure of Well-Being: A Facet Approach,

Fig. 5 The four-dimensional duplex-radex of well-being. (a) Duplex of axes for cylinders. (b) Radex of strata of cylinders (From Levy & Guttman, 1975, p. 377)



In this case results show that the well-being items in the *self* stratum tend to correlate more within the stratum of “self” than with the stratum of “community” (for a detailed description see Levy & Guttman, 1975). An example of such a cylindrical structure can be found in the entry “Structural Hypotheses” in this Encyclopedia.

Conclusion

The mapping sentence defines simultaneously the varied substance of the well-being items in a manner that is independent of their formulation. Such a common definitional framework makes it possible to overcome problems of interpreting translations from one language to another, and thereby enables cross cultural comparisons of the structure of interrelations of observations on well-being. At the same time the mapping sentence serves as a device for hypothesizing structural relationships among the variables by assigning differential roles to the facets. These hypotheses, whether for the entire design or for parts of it, as shown above, may be confirmed with the aid of the SSA technique, since the positioning in the SSA space of the well-being variables reflect the similarities and differences in their content as designed by the mapping sentence.

Thus, the use of facet theory facilitates the understanding of the basic lawfulness of human perception of well-being in cumulative fashion.

In this regard it is appropriate to conclude by citing from one of the earliest studies, on the structure of well-being (using also SSA), conducted in the United States by Campbell and his colleagues, which relates directly to the well-being of the self presented above (Fig. 3): “The radiation of the map from a central core seems so basic to the structure of human life that it is hard to imagine that it would not be characteristic of any segment of the population, or for that matter, populations” (Campbell et al., 1976, p. 72).

Cross-References

- ▶ [Definitional Framework for the Concept of Well-Being](#)
- ▶ [Facet Theory](#)
- ▶ [RMQoL \(Radex Model of Quality of Life\)](#)
- ▶ [SSA: Similarity Structure Analysis](#)
- ▶ [Structural Hypotheses](#)

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Structured Questionnaires

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Synonyms

[Questionnaire, structured](#)

Definition

Structured questionnaire is a document that consists of a set of standardized questions with a fixed scheme, which specifies the exact wording and order of the questions, for gathering information from respondents.

Description

Structured questionnaire is the primary measuring instrument in ► [survey research](#). The use of structured questionnaire has a close relationship with quantitative analysis. The use of structured questionnaires in social research was pioneered by Francis Galton and is very common in the collection of data in ► [quality of life research](#) nowadays. A typical example of a structured questionnaire is the ► [Census](#) questionnaire, which collects demographic information from individuals. In addition, structured questionnaire is also often used as an assessment tool for psychological and psychiatric tests.

From Population Census to mini-surveys, structured questionnaires can appear in many different forms and are used in different types of surveys. For example, structured questionnaires can be used in mail survey, online survey, telephone survey, and household survey, depending on the target population and research design. Sometimes a structured questionnaire is also used to collect demographic information from respondents before or after an unstructured interview. A structured questionnaire can contain both open-ended and closed-ended questions. However, closed-ended questions are more frequently used in survey research. A structured questionnaire can be self-administered (i.e., completed by a respondent), interviewer-administered (i.e., completed by an interviewer), or both (for details, readers can see cross-reference ► [survey administration](#)). In times when a structured questionnaire is self-administered, detailed instructions on how to complete the questionnaire are usually given to the respondents. Self-administered questionnaires without clear instructions may result in poor quality of data. When the questionnaire is

interviewer-administered, interaction between a respondent and an interviewer is largely scripted by the structured questionnaire. Interviewers are not allowed to change the structure, wording, and order of the questions, in order to reduce response bias. No unplanned follow-up question can be added in a structured interview. It is also difficult to add new questions into the questionnaire once the data collection process has started.

► [Questionnaire design](#) is closely related to the quality of the data collected. The choice of wording, order of questions, the length of the questionnaire, and the order of the responses for closed-ended questions are all influential to the data quality (Fowler, 1995). Some prior knowledge about the topics of the survey and the respondents are important. For example, the appropriate choice of wording in the questionnaire mostly depends on the literacy of the target respondents. Jargons and technical terms are usually to be avoided in structured questionnaires unless the target respondents are familiar with the terms. Using wordings which the respondents cannot interpret correctly can lead to biased results (Kalton & Schuman, 1982). A pretest of the questionnaire for its feasibility is essential to ensure that the target respondents are able to answer the questions correctly.

Generally speaking, a lengthy questionnaire increases the respondents' burden. Therefore, the length of a questionnaire is argued to be negatively related to the data quality. The length of a structured questionnaire is highly variable and is affected by many factors. A lengthy questionnaire is often divided into a number of modules, with each focuses on a particular topic. Some modules are to be completed by a portion of the respondents only who are relevant to the topic of the modules. For example, a structured questionnaire may have a specific module for respondents' history of migration. Respondents who did not have a history of migration do not need to complete the module. This arrangement helps researchers to manage a lengthy questionnaire, so this arrangement is common in practice. For more discussions on questionnaire design, readers can see

cross-reference ► [questionnaire design](#) or see Bethlehem (2009); Converse and Presser (1986); Marsden and Wright (2010); Singer and Presser (1989) for recommendations.

There are many advantages of using structured questionnaire to collect data for research purposes. First, it is relatively cheap and convenient to gather information from a large group of respondents by using structured questionnaires. Structured questionnaire is particularly suitable when large sample is required. For other ► [data collection methods](#) such as in-depth interview and focus group, it is difficult to manage and analyze the data when sample size is large (e.g., more than 100 respondents). Relatively speaking, data collected through structured questionnaire are easy to be compiled for immediate statistical analysis. Secondly, data collected through carefully designed questionnaires are less likely to suffer from interviewer bias because standardized questions are used in structured questionnaires. In addition, results of standardized questionnaire items are comparable among different surveys if the items are carefully designed. A variety of standardized questionnaires has been developed in the literature. For examples, readers can see cross-references such as ► [Quality of Life Questionnaire](#), the [General Health Questionnaire](#), and the ► [Oxford Happiness Questionnaire](#). These questionnaires are designed to measure certain indicators of quality of life across contexts. They can be used as a stand-alone questionnaire, or as a module of a more comprehensive questionnaire. With standardized items, large-scale studies that involve multiple samples are feasible. Thirdly, evaluation of the questionnaire design and data quality is relatively easy, compared to other data collection methods, because of its transparency. It is easy to make the research transparent to the third parties. Samples of the original questionnaires, codebooks, instructions for the questionnaires, and raw data can be made accessible to the researchers, data users, and other parties. A study using structured questionnaire can be repeated by other parties easily.

However, there are also several shortcomings of using structured questionnaires in research.

For closed-ended questions, which are frequently used in structured questionnaires, respondents may feel difficult, sometimes even frustrated, to choose an answer from the available options. This is particularly problematic for opinion-type questions. In case when a respondent does not feel comfortable to choose any answer available in the questionnaire, the respondent may choose to answer “don’t know” or refuse to answer. A large portion of respondents who cannot choose an appropriate answer may present problems for analysis. Therefore, some researchers use open-ended questions for opinion-type questions. However, coding the answer for open-ended questions can be very difficult and time-consuming, especially when the sample size is large. Sometimes, the data are not suitable for statistical analysis when the answers of open-ended questions are poorly coded. Secondly, there is generally a lack of flexibility to change the direction of the research during the process of data collection. Unlike qualitative research that are motivated by grounded theory, it is difficult for the researchers, who use structured questionnaires in their research, to formulate new research questions and change the research directions once data collection has started. In addition, structured questionnaire is also weak as a research tool when the focus is put on particular individual cases rather than the aggregate of the cases. Comparatively, in-depth interview is a better tool for research if a researcher is interested in certain individual cases and their narrative accounts. Besides, respondents may feel hesitated to disclose the true answer in the questionnaire when the questions are related to sensitive topics (see ► [social desirability bias](#)). It is difficult for the researchers to gain trust and rapport from the respondents when the conversation is largely scripted and predetermined. To address some of these limitations, some researchers adopt mixed methods approach that integrates the use of structured questionnaires and qualitative data such as data from participant observations and in-depth interviews. Sometimes, researchers may decide to use semi-structured interview, which allows interviewers to ask follow-up questions when needed, instead of a structured questionnaire.

Cross-References

- ▶ [Census](#)
- ▶ [Data Collection Methods](#)
- ▶ [Focus Groups](#)
- ▶ [Oxford Happiness Questionnaire](#)
- ▶ [Participant Observation](#)
- ▶ [Qualitative Methods](#)
- ▶ [Quality of Life Questionnaire](#)
- ▶ [Quality of Life Research](#)
- ▶ [Questionnaire Design](#)
- ▶ [Respondent Burden](#)
- ▶ [Response Bias\(es\)](#)
- ▶ [Social Desirability Bias](#)
- ▶ [Survey Administration](#)
- ▶ [Survey Research](#)
- ▶ [Unstructured Interviews](#)

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Student Achievement

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Synonyms

Student evaluation; Student examinations;
Testing students

Definition

Assessment of student achievement is concerned with documenting competencies, including knowledge and skills, in measurable terms, for either formative or summative purposes.

Description

Introduction

Parents, students, and those who teach and run education systems seek good information on how well their education systems prepare students. Teachers regularly assess students in classrooms and many countries now also assess students' learning comparatively. For example, among the 34 countries of the Organization for Economic Cooperation and Development (OECD), 22 countries undertake student examinations and/or assessments at regular intervals. For student performance measures, student assessments (assessments without direct consequences for an individual student's further educational career) were, by 2008, used in 17 countries, whereas national examinations were used, by 2008, in 10 OECD countries.

Assessments of student achievement can influence educational policies and practices in various ways by signaling priorities for curricula as well as instructional practice. For example, high visibility assessments can focus the content of instruction when school administrators and teachers pay attention to what is tested and

adapt curriculum and teaching accordingly. Similarly, curriculum developers, particularly commercial interested ones, respond to important tests by modifying existing textbooks and other instructional materials.

Well-designed assessment systems can provide a window into students' understandings and the conceptual strategies a student uses to solve a problem and add value for teaching and learning, particularly when tasks incorporate transfer and authentic applications and provide opportunities for students to organize and deepen their understanding through explanation and use of multiple representations, and when the results are fed back to teachers and school administrators in meaningful ways and formats. In contrast, poorly designed assessments take learning time away from students and can narrow teaching methods and instructional content.

Comparative international assessments can further extend and enrich the national picture by providing a larger context within which to interpret national performance, and governments attribute growing importance to these. The interest in internationally comparative assessments of student achievement derives from several considerations: (1) by revealing what is possible in education in terms of the performance levels demonstrated in the countries with the highest performance levels, international assessments can enhance the quality of existing policies but also create a debate about the paradigms and beliefs underlying policies; (2) while international assessments alone cannot identify cause-and-effect relationships between inputs, processes, and educational outcomes, they can shed light on key features in which education systems show similarities and differences, and make those key features visible for educators, policy makers, and the general public; (3) in some countries, international assessments are also used to set policy targets in terms of measurable goals achieved by other systems, and seek to identify policy levers and establish trajectories as well as delivery chains for reform; and (4) international assessments can assist with gauging the pace of educational progress,

through assessing to what extent achievement gains observed nationally are in line with achievement gains observed elsewhere.

Designing Effective Assessment Systems

Many countries have begun to establish advanced multilayered assessment systems that extend from classrooms to schools to regional to national and even international levels. High quality assessment systems seek to support improvement of learning at all levels of the education system, are largely performance based, make students' thinking visible, and allow for divergent thinking. They also add value for teaching and learning by providing information that can be acted on by students, teachers, and administrators. And they make these assessment systems part of a comprehensive instructional system, and communicate clearly what is expected and hold relevant stakeholders accountable. Assessment systems also increasingly capitalize on improved data handling tools and technology connectivity to combine formative and summative assessment interpretations in a comprehensive picture of student learning.

Several dimensions need to be considered. First of all, it is important that assessments are built on a well-structured conceptual base that reflects an expected learning progression. This conceptual base, in turn, needs to be rooted in standards for student achievement, which set out the competencies students are expected to have attained at different stages of their education, as well as in curricula and instructional material that operationalize these standards for student achievement. If assessments are not well aligned with standards and curricula, then their results will not allow to judge how well students have learned what they were supposed to be taught.

Equally important is consistency and complementarity of assessment systems across administrative levels of the system, across grades, and over time. That ensures that students, teachers, and school administrator have access to a continuous stream of evidence that tracks the individual progress of students as well as

progress in the achievement levels of schools and systems. This requires clearly defining what mastery means for a given skill level; establishing progress variables that delineate the steps that learners typically follow as they become more proficient; an evaluation of students reasoning in terms of the correctness of their solutions as well as in terms of their complexity, validity, and precision; an understanding of the breadth and depth of the learner's understanding of the domain at a particular level of advancement; as well as an operational definition of what student's understanding would look like at each of the stages of progress.

To achieve this, modern assessments use a range of assessment methods that ensure adequate measurement of intended constructs and measures of different grain size to serve different decision making needs at different levels of the education system. They seek to provide productive feedback, at appropriate levels of detail, to fuel accountability and improvement decisions at multiple levels. Teachers need to be able to understand what the assessment reveals about students' thinking. And school administrators, policymakers, and teachers need to be able to use this assessment information to determine how to create better opportunities for student learning.

Instruments to serve these goals include large-scale standardized tests. They also include classroom-based formative assessments – the frequent, interactive assessment of student progress to identify learning needs and shape teaching as well as enhancing teacher capacity in assessing against standards, with detailed guidelines on marking assessments and strengthen moderation processes between teachers and schools. Teacher-based summative assessment can include teacher-made tests, classroom-embedded assignments, project work, and portfolios. Due to its continuous nature, teacher-based assessment often allows for important achievements to be measured that cannot be easily captured in a final examination, such as extended projects, practical assignments, or oral work. In practice, a combination of teacher-based and external

assessments can serve to maximize validity and reliability.

While assessment is conceived to measure the outcomes of learning, it is important to recognize that the approach to assessment can in turn have a strong impact on the learning process itself. Different assessment policies and practices influence students' motivation, effort, learning styles, and perceptions of self-efficacy as well as teaching practices and teacher-student relationships.

Methodological Considerations

The design of effective assessments that enhance the learning of students, teachers, school administrators, and policy makers poses major conceptual and technical challenges, as successful learning is as much about the process as it is about facts and figures. The design needs to begin with the establishment of a strong conceptual framework which extends from: the development of a working definition for the assessment areas to be assessed and the description of the assumptions that underlay that definition; an examination of how to organize sets of tasks constructed in order to report to policy makers and researchers on performance in each assessment area; the identification of a set of key characteristics to be taken into account when assessment tasks are constructed in ways that meaningfully reflect learning progressions; the operationalization of the set of key characteristics to be used in test construction; and the validation of the variables, and assessment of the contribution which each made to the understanding of task difficulty. The framework then provides the foundation for the design of tasks that can be used to generate informative student responses, the coding/valuing of those responses, the delivery of the tasks and the gathering of the responses, and the modeling of the responses with respect to the constructs to be assessed.

Beyond a sound conceptual foundation, assessments need to fulfill a range of sometimes competing methodological requirements. Most obviously, they need to provide a high degree of validity – the degree to which assessments and evaluations measure what they are intended to

measure, reliability – the consistency and stability of results across student populations, and usability – how policy makers, school leaders, and teachers make sense of and respond to assessment and evaluation results and they need to be fair across different student groups.

Comparative assessments face the added challenge of ensuring that their outcomes are valid across the cultural, national, and linguistic boundaries over which they extend and that the target populations from which the samples in the participating countries are drawn are comparable.

Comparative assessments have made considerable progress toward assessing knowledge and skills in content areas such as mathematics, reading, science. However, they are still limited in the coverage of important cognitive outcomes, in particular the assessment of creative or social competencies. Similarly, the tension between achieving high degrees of objectivity and reliability in the assessments, which tend to favor multiple-choice tasks that can be scored without human judgment, on the one hand, tends to detract from the assessment of the higher-order competencies and the production of knowledge, which require open-ended assessment tasks, on the other. At times, assessments sacrifice validity gains over efficiency gains by giving undue weight to assessment tasks that can be easily administered and scored, to make the assessments affordable. The least progress has been made to assess interpersonal dimensions of competencies which are often recognized as of increasing importance, such as the capacity of students to relate well to others, to manage and resolve conflicts, or to respect and appreciate different values, beliefs, or cultures.

Internationally comparative assessments face additional constraints even in well-established content areas: Countries vary widely in their intended, implemented, and achieved curricula. Inevitably, international assessments need to strike a balance between narrowing the focus to what is common across the different curricula of school systems, on the one hand, and capturing a wide enough range of competencies to reflect the content domains to be assessed adequately, on

Student Achievement, Table 1 Policy frameworks

	(1) Education and learning outputs and outcomes	(2) Policy levers and contexts shaping educational outcomes	(3) Antecedents or constraints that contextualize policy
(I) Individual participants in education and learning	(1.I) The quality and distribution of individual educational outcomes	(2.I) Individual attitudes, engagement, and behavior	(3.I) Background characteristics of the individual learners
(II) Instructional settings	(1.II) The quality of instructional delivery	(2.II) Curriculum, pedagogy and learning practices and classroom climate	(3.II) Student learning conditions and teacher working conditions
(III) Providers of educational services	(1.III) The output of educational institutions and institutional performance	(2.III) School environment and organization	(3.III) Characteristics of the service providers and their communities
(IV) The education system as a whole	(1.IV) The overall performance of the education system	(2.IV) System-wide institutional settings, resource allocations, and policies	(3.IV) The national educational, social, economic, and demographic contexts

the other. Even if the assessment instruments are of high quality, meaningful comparisons can only be made if the target populations being assessed are also comparable. Comparative assessments therefore need to use great care when: (1) defining comparable target populations; (2) ensuring that they are exhaustively covered with minimal and well-defined population exclusions; and (3) ensuring that the sampled students do participate in the assessment.

Last but not least, well-designed internationally comparative assessments need to be well implemented to yield reliable results. The process begins with ensuring consistent quality, cross-cultural appropriateness, and linguistic equivalence of the assessment instruments where results are to be compared across countries. Precise translation and adaptation guidelines are needed, also including instructions for the selection and training of the translators. Assessments then need to be implemented through standardized procedures, with precise instructions for the work of school coordinators and scripts for test administrators for use during the assessment sessions.

Policy Frameworks for Comparative Assessments

To provide useful guidance to policy, comparative assessments often contextualize measures of

student learning outcomes with background information collected from students, school principals, and sometimes teachers and parents in order to interpret the observed variation in learning outcomes between students, classrooms, schools, and education systems. To facilitate this, they operate with research frameworks that provide data at up to four levels of the education system, namely: (1) the education system as a whole; (2) the educational institutions and providers of educational services; (3) the classrooms or instructional setting; and (4) the learners themselves (see Table 1).

The policy frameworks of comparative assessments typically address different classes of research issues: (1) A first class relates to simple comparisons of learning outcomes at each of the four levels. (2) A second class provides information on the policy levers or circumstances which shape the outputs and outcomes at each level of the education system. This includes, for example, measures of attitudes and behaviors at the level of students, measures of student learning and teacher working conditions and human and material resources at the level of instructional settings and institutions, and measures of structures and resource allocation policies and practices at the level of the education system. These policy levers and contexts typically have antecedents – factors that define or constrain policy,

and which are represented in a third class of research areas. (3) This third class which, for example, provides information on the socioeconomic context of students, schools or systems is particularly important in an international comparative context, as it allows to ensure “like with like” comparisons, that is comparisons of schools that have a similar socioeconomic intake or countries that operate under similar socioeconomic conditions. Each of the cells resulting from cross-classifying the above two dimensions can then be used to address a variety of research issues from a comparative perspective relating, for example, to the quality of educational outcomes and educational provision; to issues of equality of educational outcomes and equity in educational opportunities; or to the adequacy, effectiveness, and efficiency of resource management.

Cross-References

- ▶ [Benchmarking](#)
- ▶ [Comparative Analysis](#)
- ▶ [Data Analysis](#)
- ▶ [Education](#)

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Student Evaluation

- ▶ [Student Achievement](#)

Student Examinations

- ▶ [Student Achievement](#)

Student Quality of Life

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Definition

Student **perceived quality of life (SPQL)** or **life satisfaction (LS)** is a component and a key indicator of a student's **subjective**

well-being (SWB). It is “a pleasurable emotional state resulting from a person’s enactment of the role of being a student” (Bean & Bradley, 1986, p. 398) and has been defined as a student’s overall subjective appraisal of the quality of one’s life overall or with important domains (Diener, 1994) and “a person’s subjective evaluation of the degree to which his or her most important needs, goals, and wishes have been fulfilled” (Frisch, 2000, p. 220). A broader and more comprehensive definition includes “student short-term perception of satisfaction and **happiness** with multiple **life domains** in light of salient, **psychosocial** and **contextual** factors, and personal meaning structures” (Benjamin, 1994). The time frame would focus on the immediate past, objective circumstances would include a range of demographic **indicators**, while psychosocial factors would distinguish between situational **events** (**stress**) and prevailing emotional **states** (**depression**, **anxiety**). Finally, personal meaning structures would include prevailing **family interaction** patterns, student **goals** and expectations, and student **identity**, especially **self-esteem** and self-perception of competence.

Description

Numerous studies provide support for the importance of SPQL. Not only is positive SPQL an important outcome in and of itself as it facilitates adaptive development, it in turn appears to mediate students’ interpersonal and intrapersonal behavior and affects other important behaviors like depression and school dropout.

Although abundant research has been conducted on SPQL with college students, only few studies have been conducted with children and adolescents. Similar to findings with adults (Diener & Diener, 1996), most children and adolescents view their overall lives positively though results varied by domains. These results have been replicated across various cultures including American. Similar to adults, global life satisfaction (LS) and PQSL do not correlate significantly with demographic variables such as gender, age, SES, and grade level of students, and relationship

with these demographic variables is modest at best (Gilman & Huebner, 2003).

The possibility of **developmental** changes in student LS has been noted. Although global LS reports are invariant across elementary and secondary schoolers, differential correlates have been found (Huebner, Gilman, & Laughlin, 1999). For example, parental behaviors (supervision, autonomy provision, and emotional support) account for greater variance in middle (34 %) versus secondary (22 %) students (Suldo & Huebner, 2004), and it is a relatively weak correlate in college students (Emmons & Diener, 1985).

Similarly, the influence of multiple **life** contexts on perceived quality of student life has been reported. (Ash & Huebner, 2001) report that adolescent LS was uniquely related to a variety of ongoing life experiences in the family, peer, and school/college environments. Positive family experiences and relationships have been shown to be of greater significance to their overall life satisfaction than peer, school, or community-level ratings (Dew & Huebner, 1994; Huebner, 1991). Despite increasing amounts of time spent with peers, the quality of family relationships appears to be most important to adolescents’ lives and across cultures. SPQL among adolescents has also been linked with behaviors, attitudes, and experiences in the school setting. The research suggests the significance of active participation by youth in developmentally appropriate structured activities both in and out of school. (Gilman, 2001) reported that adolescents who participated in greater numbers of structured extracurricular **activities** (SEAs) also reported higher school LS than students who participated in very few or no activities. Other studies investigated the relationship between quality of life (QOL) of college students and these contextual factors (Chow, 2005; Cha, 2003). College students who indicated a higher SES obtained a higher GPA, and those who were more satisfied with their academic experience, self-esteem, relationship with significant other, and living conditions expressed a higher level of life satisfaction (Chow, 2005). For university students, students’ satisfaction with their instructor was the most influential

predictor, yet university-related variables had no impact when they were examined in combination with the life domains for life satisfaction. For satisfaction with overall quality of student life, the most influential explanatory variable is satisfaction with one's self-esteem (Michalos & Orlando, 2006).

Personal characteristics relate strongly to students' LS. One of the most significant correlates of global LS is global self-esteem, with correlations in the .40–.60 range among US students (Adelman, Taylor, & Nelson, 1989). The relationship is lower among children from some other countries (e.g., (Leung & Zhang, 2000; Neto, 1993)), suggesting that **cultural** influences may moderate the relationship and influence level of satisfaction. Similar constructs, such as self-reliance and **self-efficacy**, internal **locus of control**, and levels of social interest have also consistently been associated with students' LS (Ash & Huebner, 2001; Gilman, Huebner, & Laughlin, 2000; Greenspoon & Saklofske, 2001).

Measures

The most common technique for measuring student SPQL or LS is the **self-report** scale, and its use has been consistently supported. However, valuable information can also be attained from other methods like observations and parent reports. Multi-method approaches may be most methodologically sound when feasible (Gilman & Huebner, 2003).

Existing measures of student LS were developed based on differing underlying conceptual models or theoretical formulations. The Multiple Discrepancies Theory (MDT) (Michalos, 1993) has claimed that QOL and QSL result from the discrepancy between what one has and what one aspires to, while (Csikszentmihalyi, 1988) "Flow Theory" emphasizes the role of engagement in different activities in order to produce higher levels of QSL. Most studies concluded that student satisfaction is multiply determined and distinguished between various domains (Benjamin, 1994; Michalos, 1993; Hendershott, Wright, & Henderson, 1992) with choice of domain based on either intuition or previous

research. (Campbell, Wilson, & Hanson, 1980) and (Roberts & Clifton, 1991) are exceptions, having derived theirs based on theory.

Various measures used reflect two overarching aims: the assessment of unidimensional LS. (i.e., global LS) and **multidimensional** LS. Whereas unidimensional scales target an assessment of satisfaction with life as a whole, multidimensional scales target multiple, specific life domains, yielding more differentiated information. Currently, measures are typically based on one of three basic conceptual models, including two unidimensional models and one multidimensional model (Antaramian, Huebner, & Valois, 2008). The two unidimensional models include general and global life satisfaction. In unidimensional models, a single overall score is used to represent a person's satisfaction. Global satisfaction is assessed by items that are entirely free of context (e.g., "My life is going well"); thus, individuals judge their satisfaction based on their personal standards. In contrast, general satisfaction is determined by ratings of several specific life domains, such as family (e.g., "I enjoy being at home with my family") and friends (e.g., "My friends are great"), and is conceptualized as the sum of satisfaction across these life domains. Like general models, multidimensional models include assessments of several life contexts; however, the various domain scores are considered independently, providing distinct measures of the domains of interest.

Research over the past decade has led to the construction of a number of psychometrically sound global and multidimensional student PQSL measures mainly for adults with a handful for children and adolescents. Among the most commonly used global measures are the Students' Life Satisfaction Scale (Huebner, 1991), the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), the Quality of Life Profile (Raphael, Rukholm, Brown, Hill-Bailey, & Donato, 1996), and the Perceived Life Satisfaction Scale (Adelman et al., 1989). Multidimensional measures include the Multidimensional Students' Life Satisfaction Scale, MSLSS, (Huebner, 1994), the

Comprehensive Quality of Life Scale-School Version (Cummins, 1997), and Quality of School Life Questionnaire (QSL). MSLSS assesses satisfaction across five distinct domains, including family, friends, living environment, school, and self, as well as general life satisfaction.

Some research focused on developing well-being and QOL measures that were specially adapted for college students. Some of QOL measures developed specifically for college students include the Wellness Evaluation of Lifestyle (WEL) measure (Witmer & Sweeney, 1992), the Student Quality of Life and Satisfaction (SQOLAS) measure (Disch, Harlow, Campbell, & Dougan, 2000), and the Maggino and Schifini D'Andrea measure (Maggino & Schifini D'Andrea, 2003).

Other studies involving college students opted for developing a well-being measure that captures the QCL of the students and not their overall QOL. Most prominent among these is the Quality of College Life (QCL) measure (Sirgy, Grzeskowiak, & Rahtz, 2007). According to this model, QCL was defined in terms of overall feelings of satisfaction a student experiences with life in college, and this is hypothesized to be determined by positive and negative effect in two types of student experiences in college, namely, satisfaction with the academic aspects of the college and the social aspects. Satisfaction with the academic aspects, in turn, is hypothesized to be influenced by satisfaction with university facilities and services. Similarly, satisfaction with the social aspects is hypothesized to be influenced by satisfaction with university facilities and services. Model was validated both in the States and internationally (Sirgy et al., 2010).

Discussion

Across all age and cultural groups, students positively view their overall life, and effect of demographic variables has been modest. However, studies revealed that culture may influence a students' level of satisfaction as well as its correlates as some values are emphasized to different degrees in different cultures. Researchers have sought to assess the presumed determinants of student QOL, in addition to demonstrating the roles of

individual factors and the variety of contextual factors that relate to student life satisfaction. Life domains closest to self and family displayed the highest correlations with student QOL, so QSL will need to differentiate between various life domains, not those in school or campus. QSL is more than simply a by-product of life experiences; it also plays a functional role in the development of interpersonal and adaptive behavior. Accordingly, research on the perceived levels and correlates of LS among students of all levels should lead to a more comprehensive understanding of their psychological well-being and better intervention efforts to promote their optimal development.

Cross-References

- ▶ [Family](#)
- ▶ [Happiness](#)
- ▶ [Indicators, Quality of Life](#)
- ▶ [Life Satisfaction](#)
- ▶ [Locus of Control](#)
- ▶ [Perceived Quality of Life](#)
- ▶ [Self-Efficacy](#)
- ▶ [Self-Esteem](#)
- ▶ [Stress](#)
- ▶ [Subjective Well-Being](#)

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Studies on Measurement Properties, Appraisal Tool

- [COSMIN: Consensus-Based Standards for the Selection of Health Status Measurement Instruments](#)

Study Design

► [Epidemiologic Measurements](#)

Study of Urban Form

► [Urban Morphology and Citizens' Life](#)

Study Population

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Definition

Study population is a subset of the target population from which the sample is actually selected. It is broader than the concept ► [sample frame](#). It may be appropriate to say that ► [sample frame](#) is an operationalized form of study population. For example, suppose that a study is going to conduct a survey of high school students on their ► [social well-being](#). High school students all over the world might be considered as the target population. Because of practicalities, researchers decide to only recruit high school students studying in China who are the study population in this example. Suppose there is a list of high school students of China, this list is used as the ► [sample frame](#).

Description

Study population is the operational definition of target population (Henry, 1990; Bickman & Rog, 1998). Researchers are seldom in a position to study the entire target population, which is not always readily accessible. Instead, only part of it—respondents who are both eligible for the study and available—are recruited. In some cases, a list of elements of the target population

simply does not exist for sampling purposes. Even where the list does exist, it is usually somewhat incomplete. For example, not all migrant workers register themselves with the government. Still, part of the population of research interest may be omitted for other practical considerations. For example:

“National polling firms may limit their national samples to the 48 adjacent states, omitting Alaska and Hawaii for practical reasons.”

“A researcher wishing to sample psychology professors may limit the study population to those in psychology departments, omitting those in other departments.” (Babbie, 2010:199)

The study population should be defined before an investigation begins. Researchers need to define the characteristics of individuals who will be selected for the study, to avoid ambiguity and confusion. Researchers also need to make these definitions clear to other researchers and the public. There are several reasons for this. First, the academic community and the public must know to what kinds of people the research findings apply; second, knowledge of the study population helps other researchers assess the study's merit and appropriateness; third, details of the methods and procedures are necessary for the other researchers to be able to replicate or expand the study (Friedman, Furberg, & DeMets, 2010).

The required information to answer research questions is obtained from the study population (Kumar, 2011). Similar to the process of narrowing the research problem, a specific and clear framework for the study population is developed, enabling the selection of appropriate respondents. Moreover, “it is only through making your procedures explicit that you can validly describe, explain, verify and test.” (Kumar, 2011:57) Notice that Kumar (2011) also points out that both the research problem and the study population need to be narrowed, and as specific as possible in quantitative research, however, in qualitative research, the two should remain loose and flexible to ensure obtaining varied and rich data.

Specifically, defining the study population has received great research attention in medical and clinical study (Friedman et al., 2010; Gerrish &

Lacey, 2010; Riegelman, 2005). The characteristics of those being studied are defined by inclusion criteria and exclusion criteria. Inclusion criteria identify the types of individuals who should be included in the study and must be present for an individual to be eligible to take part. Exclusion criteria mean that the individuals are no longer eligible for the study even if they meet the inclusion criteria. Without exclusion criteria, the situation may be more complicated and the interpretation of the research findings more difficult. Here is an example from Riegelman (2005):

“An investigator wanted to study the effect of a new therapy for breast cancer. He selected all available breast cancer patients and found that the treatment, on average, resulted in no improvement in outcome. Later research revealed that the therapy provided a substantial improvement in outcome for women with stage III breast cancer. The therapy, however, was shown to have no benefit if women with breast cancer had undergone previous radiation therapy.”

If stage III breast cancer were required as an inclusion criterion and previous radiation therapy as an exclusion criterion in this investigation, the results would be very different.

Friedman et al. (2010) proposed a framework to develop individual eligibility criteria. For example, those who have the potential to benefit from the clinical intervention obviously should be eligible for the study; any person for whom the intervention is known to be harmful should not be enrolled into the study. Although the framework is heavily based in medical science, it might be informative and interesting to researchers of other fields.

Inclusion criteria and exclusion criteria narrow the group being studied. As a result, the study population may or may not reflect the target population to whom investigators wish to apply the research findings. It is thus very important to understand the gap between the study population and the target population and to make it explicit and clear to the readers. Moreover, considering how representative is the sample of the study population, it requires more careful considerations in generalizing from participants actually being studied to the study population and then to

the target population. For the characteristics such as age, sex, or weight which can be clearly stated and measured, it is relatively easy to specify how the study sample and study population are different from the target population and therefore to decide the appropriateness of generalizing the research findings. For other factors of the study participants, it may be difficult to make appropriate compensatory adjustments in the analysis. For example, are volunteers who agree to participate in the study different from those who do not and in what ways? If there are some specific factors that motivate the participants, how do they affect the representativeness of the study sample?

Discussion

Study population is an important concept in ► [survey research](#), clinical trial, and other special designs or experiments. Defining the study population is indispensable to posing and narrowing the research question, obtaining required information to address the research question, verifying and testing hypotheses, and applying the research findings. Usually, there is a gap between the study population and the target population. The inclusion and exclusion criteria developed to obtain the study population should always be made as specific, explicit, and clear as conditions allow. Caution is needed to generalize the research findings based on study participants—the sample selected from the study population—to the study population and then to the target population. More research needs to be done to help us understand how the process of defining and operationalizing study population may impact on coverage error, enrolment of study participants, ► [sampling error](#), and generalizability of the research findings.

Cross-References

- [Sample Frame](#)
- [Sampling Error](#)
- [Social Well-Being](#)
- [Survey Research](#)

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Subarea/District Planning

► Community-Based Planning

Subjective Age Identity Scale (SAIS)

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Synonyms

SAIS

Definition

The *Subjective Age Identity Scale (SAIS)*; Hubley, 1998, 2004/2007) is an 8-item self-report measure of subjective age identity.

Description

Overview and Administration

The *Subjective Age Identity Scale (SAIS)*; Hubley, 1998, 2004/2007) is an 8-item self-report

measure of subjective age identity (see [Table 1](#)). Subjective age identity typically refers to the age that someone identifies with or feels. It can also include the age that a person chooses to be or considers to be ideal. The SAIS addresses the age one feels right now, physically, mentally, and socially, as well as the age one looks to oneself and others, the age that others treat one as, and the age one would like to be. The measure uses a 5-point Likert-type ► [response format](#), ranging from 1 = much younger than my age to 5 = much older than my age. The SAIS is designed to be self-administered, but the items can also be read aloud to a respondent if this is preferred (e.g., due to difficulties with literacy or vision). The SAIS may be used free of charge for research purposes.

Development

The SAIS originally consisted of 5 items (see items 2, 3, 4, and 8 from [Table 1](#) as well as an item worded “I look. . .”) developed by Hubley in 1998 and first published in a study on health and quality of life in older people (Michalos, Hubley, Zumbo, & Hemingway, 2001). A 5-point Likert-type response format, ranging from 1 = much younger than my age to 5 = much older than my age, was used. In 2004, Hubley split the original look age item into two more specific items (items 5 and 6 in [Table 1](#)) because she had noted that responses differed based on whether the respondent answered based on their own view of their appearance (i.e., self-defined) versus what other people said (i.e., other-defined). At this point, the response option of 9 = “This statement makes no sense to me” was added. In 2007, Hubley added the more general item (“Right now, I feel”; see item 1 in [Table 1](#)) because she noted that, despite differences in physical and mental age, most people seem to have an overall sense of the age that they feel. The wording of this item is similar to the single-item measures initially used in subjective age research. Nonetheless, it is important to be aware of the phrasing used. An item simply worded “I feel. . .” is quite vague compared to adding phrasing such as “right now,” “overall,” or “in general” as these all imply different time references. This item is also administered first as

Subjective Age Identity Scale (SAIS), Table 1 Subjective Age Identity Scale (SAIS)

Instruction: *Sometimes people feel different (older or younger) than they actually are in years. For each statement below, please circle the number that best describes the way you feel about your age right now.*

	Much younger than my age	Somewhat younger than my age	About the same as my age	Somewhat older than my age	Much older than my age	This statement makes no sense to me
1. Right now, I feel . . .	1	2	3	4	5	9
2. Physically, I feel . . .	1	2	3	4	5	9
3. Mentally, I feel . . .	1	2	3	4	5	9
4. Socially, I feel . . .	1	2	3	4	5	9
5. Others tell me I look . . .	1	2	3	4	5	9
6. To myself, I think I look . . .	1	2	3	4	5	9
7. Other people treat me as though I am . . .	1	2	3	4	5	9
8. Ideally, I would like to be . . .	1	2	3	4	5	9

respondents are more likely to respond using their general sense of the age they feel rather trying to average their responses to the other *SAIS* items. Researchers who want to explore respondents' answers in more detail may add a qualitative follow-up question to each item inquiring as to "why?" the respondent has selected the response he/she did. Content for the *SAIS* was developed through an extensive review of the literature and the author's research experience in the area (e.g., Hubley, 1996; Hubley & Hultsch, 1994, 1996; Lindsay & Hubley, 2006; Russell, Rusticus, & Hubley, 2004, 2005).

A Turkish adaptation of the *SAIS* is also available from the author.

Scoring

Scores for each item on the *SAIS* range from 1 to 5. The response 9 = "This statement makes no sense to me" is treated as ► [missing data](#) in statistical analyses but can provide some important qualitative information and helps avoid some respondents simply leaving an item blank or selecting a response that is meaningless to them. If responses to items are missing, mean replacement or other techniques for replacing missing values should not be used. There are no

reverse-scored items. Items may be used as individual variables or, if supported by ► [factor analysis](#), may be summed to create a Subjective Age Composite Score (i.e., total score). Higher scores indicate older subjective age identities. By reporting an average of the items used to create a Subjective Age Composite Score, researchers can use the labels associated with the response format to describe the overall score. For example, an average Subjective Age Composite Score of 2.1 would indicate that respondents felt, on average, somewhat younger than their chronological ages.

Factor Structure

The factor structure of the *SAIS* has been examined in three studies. Hubley and Russell (2009) conducted an ► [exploratory factor analysis](#) using principal axis factoring on a 5-item version of the *SAIS* (i.e., using physical, mental, social, look, and ideal age items) administered to a sample of 875 older adults (67.7 % female) aged 55–97 years ($M = 69.1$, $SD = 8.83$) living in nonmetropolitan communities who took part in a large survey of quality of life in seniors (Michalos et al., 2001). The analysis produced a strong single-factor solution, but the factor

loading for the ideal age item was only 0.20. Consequently, the factor analysis was repeated without the ideal age item, and the four remaining items loaded between 0.62 and 0.79 onto the one factor. These four items were summed to produce a Subjective Age Composite Score, which showed a significant, but low, correlation ($r = 0.18$) with the ideal age item.

Launeanu and Hubley (2009) used a 7-item version of the SAIS (excluding the item about the age a person is treated) in their study of 210 adults (141 women and 69 men) from the general community who ranged in age from 19 to 78 years ($M = 43.1$, $SD = 12.8$). When the SAIS was subjected to an exploratory factor analysis using principal axis factoring, all items (except the ideal age item) loaded on a single factor.

A 6-item Turkish adaptation of the SAIS (using physical, mental, social, look, ideal, and treated age items) was used with a sample of 60 Turkish elders (76 % women) aged 59–103 years ($M = 78.1$, $SD = 8.69$) residing in two seniors' homes (Arim, Hubley, & D'Almeida, 2005). An exploratory factor analysis, using principal axis factoring, found all items loaded on a single factor, with the exception of the treated age item.

Although only a few studies have been conducted with the SAIS and these included different numbers of items, it appears that a single factor may be expected using the first six items in Table 1 with the English version of the SAIS. Items that do not load on such a factor may be used as single-item measures. More factor analytic work is needed, however, that uses all of the SAIS items.

Reliability

► **Internal consistency** of SAIS scores has been examined in three studies. Hubley and Russell (2009) reported a ► **Cronbach's alpha ► reliability** estimate of 0.79 using a 4-item version of the SAIS (i.e., using physical, mental, social, and look items) with a sample of 875 older adults living in nonmetropolitan communities. Launeanu and Hubley (2009) also reported a Cronbach's alpha of 0.79 using six items of the SAIS (i.e., excluding the last two items from Table 1) in their study of 210 adults from the

general community. Finally, Arim et al. (2005) reported a Cronbach's alpha reliability estimate of 0.82 using five items from a Turkish adaptation of the SAIS (i.e., using physical, mental, social, look, and ideal ages) in their study of 60 older adults.

Overall, internal consistency reliability estimates for the SAIS are satisfactory. Evidence of ► **test-retest reliability** is still needed.

Validity

Current validation research with the SAIS focuses on descriptive scores and relationships with variables such as chronological age, sex, and scores on measures of self-reported health, life satisfaction, and depression. Research with the SAIS has consistently found that adults and older adults, on average, report younger subjective age scores. Hubley and Russell (2009) reported that older adults, on average, felt slightly but significantly younger than their chronological ages (using the Subjective Age Composite Score based on the physical, mental, social, and look age scores) and would choose to be somewhat younger than their chronological ages. Focusing only on 63 older married caregivers from the Michalos et al. (2001) study, Hubley, Hemingway, and Michalos (2003) reported that these caregivers felt somewhat younger mentally and slightly younger physically and socially than their chronological ages. Hubley, Gadermann, Russell, and Palepu (2008) used three SAIS items (i.e., physical age, mental age, look age) with a sample of 60 predominantly White homeless and vulnerably housed adults (71 % men) aged 22–74 years ($M = 46.5$; $SD = 12.78$). On average, these respondents felt slightly younger physically and mentally, and thought they looked slightly younger, than their chronological ages. Finally, Turkish elders reported SAIS Subjective Age Composite Scores (based on physical, mental, social, look, and ideal ages) that were younger than their actual age and they believed that they were treated as younger than their age (Arim et al., 2005). These findings are consistent with previous research using different subjective age measures (e.g., Hubley & Hultsch, 1994; Montepare, 2009; Montepare & Lachman, 1989;

Rubin & Berntsen, 2006; Westerhof, Barrett, & Steverink, 2003).

Chronological age was not significantly related ($r = 0.00$) to SAIS Subjective Age Composite Scores in a large sample of older adults, although it did show a significant but very small correlation with the ideal age item ($r = -0.13$) (Hubley & Russell, 2009). Arim et al. (2005) reported that Subjective Age Composite Scores on a Turkish adaptation of the SAIS were not significantly correlated ($r = .08$) with chronological age in their sample of older adults. The near-zero correlation between chronological age and Subjective Age Composite Scores is not surprising given that the SAIS response format (e.g., 3 = about the same as my age) references, and essentially controls for, the respondents' chronological age.

Similar to other studies using different subjective age measures (e.g., Baum & Boxley, 1983; Hubley & Hultsch, 1994; Uotinen, 1998), no ► [sex differences](#) have been reported on SAIS scores (Arim et al., 2005; Hubley & Russell, 2009).

Subjective health is well recognized as a correlate of subjective age (Bowling, See-Tai, Ebrahim, Gabriel, & Solanki, 2005; Uotinen, Rantanen, & Suutama, 2005). Hubley and Russell (2009) reported significant low to moderate negative correlations (ranging from $r = -0.14$ to -0.55) between Subjective Age Composite Scores and a variety of ► [SF-36](#) health scores (but most notably general health, vitality, health satisfaction, and physical functioning) in older adults, indicating that better health was associated with younger subjective ages. Correlations between each of the health variables and ideal age scores, however, were almost all near-zero for both men and women, which is consistent with previous research (e.g., Hubley & Hultsch, 1994). In a sample of homeless and vulnerably housed adults, *SF-12* self-rated functional health showed a low positive and significant relationship ($r = 0.27$) with age felt physically, meaning that the worse one's self-rated health, the older one tended to feel relative to one's age (Hubley et al., 2008). Health did not correlate significantly with the age felt mentally ($r = 0.08$) or the age one

looked ($r = 0.09$). Similar findings were reported in the same study for 60 age- and gender-matched adults from the general community.

Using the Turkish adaptation of the SAIS, a younger Subjective Age Composite Score was associated with higher levels of life satisfaction ($r = -0.28$ with the ► [Satisfaction with Life Scale](#)) and lower levels of depressive symptomatology ($r = 0.38$ with the ► [Geriatric Depression Scale](#)) (Arim et al., 2005). These findings were similar to those found with seniors in North America (Logan, Ward, & Spitze, 1992) and Germany (Westerhof & Barrett, 2005).

Preliminary validity evidence for the SAIS is promising but somewhat limited at the present time. Future validation research needs to focus on content validation, further factor structure evidence using all SAIS items, and both convergent and discriminant validation.

Desired Age Measure

An adjunct to the SAIS is the *Desired Age Measure (DAM)* (Hubley, 2006), which was developed to measure different aspects of the age someone would choose or like to be (see [Table 2](#)). This 6-item measure uses the same 5-point Likert-type response format as the SAIS. Like the SAIS, a qualitative follow-up question inquiring as to "why?" the respondent has selected the response he/she did may be added to each item. At present, little information is available on the psychometric properties associated with this new measure.

Discussion

The SAIS (Hubley, 1998, 2004/2007) is an 8-item self-report measure of subjective age identity. The factor analytic research conducted with the SAIS is limited, but it appears that a single factor may be expected using the first six SAIS items. Nonetheless, a Subjective Age Composite Score (i.e., total score) should only be computed using items that load on a single factor, and researchers should be clear about the items that are included in the total score. Items that do not load on such a factor may be used as single-item measures. Preliminary internal consistency reliability estimates for the SAIS are satisfactory, but evidence of test-retest reliability is still

Subjective Age Identity Scale (SAIS), Table 2 Desired Age Measure (DAM)

Instructions: *Sometimes people wish they were a different age than they are. For each statement below, please circle the number that best describes the age you would choose to be right now if you could.*

	Much younger than my age	Somewhat younger than my age	About the same as my age	Somewhat older than my age	Much older than my age	This statement makes no sense to me
1. Ideally, I would choose to be...	1	2	3	4	5	9
2. Physically, I would choose to be...	1	2	3	4	5	9
3. Mentally, I would choose to be...	1	2	3	4	5	9
4. Socially, I would choose to be...	1	2	3	4	5	9
5. I would choose to look...	1	2	3	4	5	9
6. I would choose to be treated like someone...	1	2	3	4	5	9

needed. The current validation research with the SAIS is somewhat limited. Descriptive information shows that adults and older adults, on average, report slightly or somewhat younger subjective age scores on the SAIS, which is consistent with previous subjective age research using different measures. The few studies that have examined sex differences on the SAIS have reported no significant differences between men and women; these findings are also consistent with prior research using different measures. Other research shows low to moderate correlations between scores on the SAIS and measures of self-reported health, life satisfaction, and depression but little systematic convergent and discriminant validation evidence. The *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 1999) describes five sources of validation evidence: test content, response processes, internal structure, relations to other variables, and consequences of testing. In particular, future validation research with the SAIS needs to focus more immediately on content validation, further internal structure (i.e., factor structure) evidence using all SAIS items, more planful convergent and discriminant validation, and research examining response processes.

Cross-References

- ▶ [Content Validity](#)
- ▶ [Convergent Validity](#)
- ▶ [Correlation Coefficient](#)
- ▶ [Cronbach's Alpha](#)
- ▶ [Discriminant Validity](#)
- ▶ [Exploratory Factor Analysis](#)
- ▶ [Factor Analysis](#)
- ▶ [Geriatric Depression Scale](#)
- ▶ [Internal Consistency Reliability](#)
- ▶ [Missing Data](#)
- ▶ [Reliability](#)
- ▶ [Response Format](#)
- ▶ [Satisfaction with Life Scale \(SWLS\), an Overview](#)
- ▶ [Sex Differences](#)
- ▶ [SF-36 Health Survey](#)
- ▶ [Test-retest Reliability](#)

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Subjective Class

► Class Identification

Subjective Class ID

► Class Identification

Subjective Discount Rate and WTP

- ▶ [Willingness to Pay for Private Environmental Goods](#)

Subjective Embodiment

- ▶ [Embodied Subjectivity](#)

Subjective Happiness Scale

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Synonyms

[Happiness](#); [Happiness, subjective](#); [Life satisfaction and subjective happiness](#)

Definition

The Subjective Happiness Scale is a 4-item measure of overall subjective happiness based on the respondent's own perspective.

Description

The Subjective Happiness Scale (SHS) is a 4-item self-report measure developed to assess an individual's overall [happiness](#) as measured through self-evaluation (Lyubomirsky & Lepper, 1999). The [response format](#) is a 7-point Likert-type scale. A single composite score is computed by averaging the responses to the four items following reverse coding of the fourth item. Scores range from 1.0 to 7.0, with higher scores reflecting greater happiness (Lyubomirsky & Lepper).

Item one asks respondents to what extent they identify themselves as being a happy person (1 = not a very happy person, 7 = a very happy person), whereas item two asks respondents to rate their level of happiness relative to their peers (1 = less happy, 7 = more happy). The third and fourth items describe happy and unhappy individuals, respectively, and ask respondents to what extent each characterization describes them.

Development

The SHS was developed to capture subjective happiness, that is, an individual's assessment of whether he/she is a happy or an unhappy person (Lyubomirsky & Lepper, 1999). Current and widely used multi-item subjective well-being measures, such as the [Satisfaction With Life Scale](#) and the [Affect Balance Scale](#), assess either cognitive or affective components of well-being by asking respondents to rate how they think or feel over a specific period of time (Bradburn, 1969; Diener, 1984). Existing single-item evaluations, such as the Delighted-Terrible Scale, by definition, restrict respondents to make a single judgment about the quality of their life overall (Andrews & Withey, 1976). What is lacking is a measure that indicates a broader reflection of well-being and taps into a more global psychological phenomena (Diener, 2000). The SHS was designed to provide such a measure.

Technical

Item Selection and Sample Data

The authors created 13 original items to reflect an individual's overall subjective happiness. An initial six items were dropped because they were found to be similar in meaning, and an additional three items were dropped when a principal components analysis demonstrated they did not load onto a single factor (Lyubomirsky & Lepper, 1999).

Data for the development and initial validation studies were drawn from 12 samples (N = 2,732) consisting of high school, college, and adult community populations in the United States and two Russian samples drawn from a college campus

and adults in the general community ($N = 130$). Students ranged in age from 14 to 28 years ($M = 19.2$ for the college sample, $M = 17.3$ for the high school sample). Adult community participants ranged from 20 to 94 years ($M = 55$ for the adult sample, $M = 69.5$ for the retired sample). The measure was administered in a variety of settings: as part of a group-administered questionnaire, individually in a laboratory setting, or individually at home (Lyubomirsky & Lepper, 1999).

Factor Analysis

Test authors performed a principal components analysis on each sample and reported that the four items loaded onto a single factor (Lyubomirsky & Lepper, 1999). They did not provide statistical details supporting their findings nor a rationale in support of their use of PCA as an appropriate method of analysis. It is suggested that researchers in the social sciences use (true) ► [exploratory factor analysis](#) to determine whether the latent construct being measured loads onto a single factor (Shultz & Whitney, 2005).

Test-Retest Reliability and Internal Consistency

The SHS has been examined for ► [test-retest reliability](#) and ► [internal consistency](#). Data collected from five independent samples drawn from high school, college, and adult community populations in the United States suggested that the SHS shows strong evidence of test-retest reliability. The time lags between testing sessions were 3–4 weeks (college sample), 3 months (high school sample), and 1 year (adult community sample). High school and college sample sizes averaged $N = 61$ and ranged from $N = 36$ to 86. Test-retest reliability coefficients ranged from 0.55 to 0.90 ($M = 0.72$), with the adult community sample demonstrating the lowest temporal stability coefficient. This lower coefficient is not surprising considering the extensive time lag between testing conditions. Internal consistency estimates appear strong with Cronbach's alpha ranging from 0.80 to 0.94 in US high school, adult, and retired populations (Lyubomirsky & Lepper, 1999).

Validity

There is some initial support for ► [convergent validity](#) between the SHS and related measures. The test developers reported moderate correlations with dispositional constructs found to be empirically and theoretically related to happiness (Rosenberg Self-Esteem Scale, Life Orientation Test, Positive Emotionality, Negative Emotionality, Extraversion, Neuroticism, ► [Beck Depression Inventory](#)) ranging from 0.36 to 0.60. Positive correlations with established and widely used measures of happiness (Satisfaction With Life Scale, Affect Balance Scale, Delighted-Terrible Scale, Global Happiness Item, and the Recent Happiness Item) ranged from 0.52 to 0.72 ($M = 0.62$) (Lyubomirsky & Lepper, 1999). Regarding the happiness measures, the authors assert that, because these correlations do not generally exceed 0.70, the scale is not equivalent to these other measures. However, there are no explicit predictions, proposed in advance of their analysis, regarding the pattern of associations expected between their scale and the convergent measures used for comparison. One is left with a series of correlations of varying magnitudes but no context in which to interpret their relative standing in relation to a proposed theory. As well, the samples used in the analysis consisted of predominantly US college students ($N = 528$) and a US retired community sample ($N = 622$), leaving the general adult population underrepresented. Mattei and Schaefer (2004) did predict strong correlations with the SHS and the Satisfaction With Life Scale and the Positive Affect Scale, but the correlations reported were moderate ($r = .66$ and $r = .49$, respectively).

Additional ► [discriminant validity](#) evidence is needed. Lyubomirsky and Lepper (1999) examined college grade point average, math and verbal ability (verbal and quantitative SAT scores, verbal and math ETS scores), and stressful life events (score on the Social Readjustment Rating Scale) in a US college sample ($N = 372$) and a US adult female community sample ($N = 92$). Reported correlations ranged from -0.03 to $.14$. Similar to the convergent validity evidence, the researchers did not provide expected associations between these variables and thus little context for

interpretation. One study did use the Playfulness Scale for Adults as a discriminant measure predicting a low correlation between the two measures and reported a statistically nonsignificant correlation of $r = .32$ (Mattei & Schaefer, 2004). No content validation has been conducted.

Cross-Cultural Use

The SHS scale has been translated into Russian, Japanese, Malay, German, and Tagalog (Lyubomirsky & Lepper, 1999; Shimai, Otake, Utsuki, Ikemi, & Lyubomirsky, 2004; Swami, 2008; Swami et al., 2009). Though each version was back translated to ensure accuracy and equivalence in meaning, the translation methods used were not consistent across studies. All translated versions lacked validation checks to account for the general limitations of self-reports. Researchers of all versions did report factor loadings that support a unitary factor structure and adequate test-retest reliability and internal consistency estimates with the exception of the researchers of the German and Tagalog versions who did not examine test-retest reliabilities (Swami et al.). Though all studies were consistent in their use of PCA, a (true) exploratory factor analysis would be more appropriate in this context (Shultz & Whitney, 2005).

Validity evidence for the translated versions is weak. Convergent validity of the scales was measured against established happiness measures, and correlations of a wide range were reported with no expected relationship between the measures provided. While each author claimed to report similar findings to those indicated by the test authors, their interpretation of results varied. For example, authors of the Malay scale suggested that positive correlations with the Delighted-Terrible Scale and the Global Happiness items supported convergent validity though the correlations reported were moderate (ranging from .30 to .67) and slightly lower than Lyubomirsky and Lepper's correlations of .52–.70 (Lyubomirsky & Lepper, 1999; Swami, 2008). Lyubomirsky suggests that a moderate correlation of the SHS with the Rosenberg Self-Esteem Scale ($r = .55$) provides evidence of convergent validity, while Swami et al. (2009)

suggested that a low correlation between the two measures ($r = 0.20$) provides evidence of discriminant validity. That Swami et al. came to this conclusion without indicating whether the RSE was being used as a discriminant or convergent measure further demonstrates the need for validity evidence to be based on a theoretical rationale rather than solely on the basis of the magnitude of the resulting correlations. No reference was made in any study as to the validity of the translated versions of the convergent measures. Validation of the Malay Subjective Happiness Scale lacked the use of multi-item measures, and no discriminant validity analyses were conducted for the Malay, German, and Tagalog versions of the scale (Swami, 2008; Swami et al., 2009).

Discussion

The SHS shows great promise as a measure of subjective happiness. It is unique in being the only measure that explores an individual's assessment of his/her overall level of happiness. The preliminary work appears to demonstrate that subjective happiness is a distinct psychological construct. The items seem to support a single factorial structure though further analysis using true exploratory factor analysis procedures as opposed to PCA is recommended and would provide stronger evidence. Stability estimates were also strong across studies.

Convergent and discriminant validity evidence needs to be explored in greater depth. Researchers need to provide a theoretical rationale for their use of specific convergent and discriminant validity measures and an a priori prediction of the correlations expected between measures. Because all measures used in the validity analysis to date were self-report measures, a multitrait-multimethod (MTMM) approach to control for method variance would be an area for future research to strengthen validity evidence. Additionally, as a self-report measure, the issue of social desirability responding needs to be more thoroughly examined. A greater use of informant reports and possibly interviewer ratings is suggested. Content validation studies to determine the extent to which the SHS represents all

aspects of the construct of subjective happiness, as well as known groups validity studies to determine whether the SHS can discern between groups that are known to vary in levels of subjective happiness, are also needed.

Cross-References

- ▶ [Affect Balance Scale](#)
- ▶ [Beck Depression Inventory](#)
- ▶ [Composite Index Construction](#)
- ▶ [Content Validity](#)
- ▶ [Convergent Validity](#)
- ▶ [Correlation Coefficient](#)
- ▶ [Cross-cultural Adaptation](#)
- ▶ [Discriminant Validity](#)
- ▶ [Exploratory Factor Analysis](#)
- ▶ [Extroversion](#)
- ▶ [Factor Analysis](#)
- ▶ [Happiness](#)
- ▶ [Internal Consistency Reliability](#)
- ▶ [Known-groups Validity](#)
- ▶ [Multitrait-Multimethod Analysis](#)
- ▶ [Principal Component Analysis](#)
- ▶ [Response Format](#)
- ▶ [Satisfaction with Life Scale \(SWLS\), an Overview](#)
- ▶ [Social Desirability Bias](#)
- ▶ [Test-retest Reliability](#)

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Subjective Happiness Scale (SHS)

- ▶ [German and Tagalog Happiness Scales](#)

Subjective Health and Subjective Well-Being

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Synonyms

[Happiness and subjective health](#); [Health, subjective](#); [Life satisfaction](#); [Self-assessed health](#); [Self-reported health](#)

Definition

Subjective health – as measured by self-reported evaluations of general or physical health – is positively correlated with measures of subjective well-being (SWB). In general population samples, the association is moderate (i.e., correlations up to 0.5) and varies by measures of health and SWB. There is no consensus on the mechanisms that can explain the association. Generally in the SWB literature,

good subjective health is seen as an important component of SWB. Objective measurements of health are less important for SWB. At the same time, SWB is seen as a determinant of health and longevity and a number of longitudinal studies seem to support this.

Description

Concepts and Measurement

Subjective Health

Subjective health is the self-reported evaluation of one's overall health status. Health has a very broad definition as it is left to respondents in surveys to apply their own interpretation of (general) health.

Subjective health may be correlated with particular objective health indicators, but this need not be the case. The self-evaluation considers a person's overall health status. There is no single clinical indicator for overall health (except perhaps mortality, but its threshold is too extreme) nor is there a generally accepted index of the many possible clinical measures. Each individual may attach different weights to objective indicators of specific aspects of health (i.e., blood pressure, mobility, grip strength) (see, for instance, Manderbacka, 1998).

Some of the most well-known indicators for self-reported health used throughout the social sciences are the SF-36 (and its shorter variants such as the SF-12 or SF-6) which aims to capture domains of both mental and physical health, and the CES-D and GHQ which are used to measure depressive symptoms or mental health status. Instruments like these are often used in research in subpopulations, for instance, patient groups. In population-based research, however, the most frequently used indicator of general health is a one-item question on the evaluation of one's overall health status. This entry focuses on the evaluation of general or physical health and its relationship with SWB.

The simple one-item question about self-assessed health is one of the indicators recommended by the WHO and EU for monitoring population health.

There are several variations of the self-assessed health item, but the core is about how good one thinks one's general health is on a four- or five-point scale. The wording of the question sometimes indicates a time period – the last 12 months, for instance – but this is not all ways the case. The answer categories also vary across surveys. In the US General Social Survey the question is “Would you say your own health, in general, is excellent, good, fair, or poor?” In the European Social Survey it reads “How is your health in general? Would you say it is very good, good, fair, bad or very bad?” Variations in formulation does not seem to matter greatly for the patterns of associations between age, gender, socioeconomic position and marital status on the one hand, and self-assessed health on the other hand.

The power *and* limitation of self-assessed health is that it clearly measures something that people know about their health, but it is not completely clear what (Benyamini, Leventhal, & Leventhal, 1999; Krause & Jay, 1994; Mavaddat et al., 2011). Self-assessed general health obviously captures some mental and sociopsychological aspects of health as well, but its main driver is thought to be physical health. Self-assessed health has repeatedly been shown to be a good indicator of general health as measured by other instruments (Ferraro & Farmer, 1999; McHorney, 2000). In a longitudinal population-based study, Mossey and Shapiro (1982) showed that self-assessed health predicts mortality independently of age, sex, income, residence, life satisfaction, and objective health status. Moreover, the association of self-assessed health with mortality was stronger than the association between objective health status and mortality. For a variety of populations, countries, and age-groups, it has been reported that in longitudinal studies the one-item question measuring a person's perceived general health status predicts mortality (Benyamini & Idler, 1999; DeSalvo, Blosner, Reynolds, He, & Muntner, 2006; Idler & Benyamini, 1997).

Subjective Well-Being

(See entry on Subjective Well-being) “Subjective well-being” (SWB) is often defined as a person's

cognitive and affective evaluation of his or her life. SWB is commonly used interchangeably with “life satisfaction” or “▶ [happiness](#)” although these concepts are not entirely equivalent. SWB has been described by Diener, Suh, Lucas, and Smith (1999) as “a broad category of phenomena that includes people’s emotional responses, domain satisfactions and global judgements of life satisfaction.” Throughout the SWB literature, which spans several disciplines, ▶ [satisfaction with life](#) and ▶ [positive affect](#) are seen as the main components of SWB.

Correlation

Although relative few studies explicitly focus on the relationship between self-assessed health and SWB, many studies on SWB include a general health indicator as a covariate in the analysis. In these studies, the correlation between self-assessed health and SWB varies by population (i.e., by country, age, and other demographics) and measurements of self-assessed health and SWB, but the overall pattern is one of moderate correlation. That is, the reported correlations are seldom lower than 0.2 or much higher than 0.5. In the first three waves of the European Social Survey (2002–2006), for instance, the correlation between self-assessed health and life satisfaction was 0.36. A meta-analysis from the early 1980s (Okun, Stock, Haring, & Witter, 1984) revealed a correlation of 0.32. Also Larson (1978), in a review of studies in older populations, found self-rated health to be a strong predictor of SWB. (For correlations between happiness and self-assessed health, Veenhoven’s (2012) World Database of Happiness is a useful source.)

Interpretation and Causality

There seems some consensus in the SWB literature that subjective health is an important component of (or competence needed for) SWB and that, at the same time, SWB has an effect on measurable objective health outcomes and longevity (see, for instance, Argyle, 1999; Diener et al., 1999; Diener & Chan, 2011).

Very few empirical studies have examined the relationship between SWB and subjective

health over time, especially for general population samples. Although the association usually remains significant and substantial in cross-sectional data after controlling for observed confounders, little can be said about the causal nature of the relationship on the basis of these studies. There is no (or better: not yet) consensus on a compelling theoretical framework that specifies the mechanisms by which SWB and subjective health affect each other. In the literature one can find studies supporting both directions of causality (see, for instance, Feist, Bodner, Jacobs, Miles, & Tan, 1995).

With regard to the relationship between SWB and more objective health outcomes and longevity the empirical evidence is stronger. Diener and Chan (2011) and Veenhoven (2009) provide reviews of longitudinal studies that examine the link between SWB and happiness on the one hand and later (more “objective”) health outcomes and/or mortality on the other hand. The evidence seems to suggest that, among healthy subpopulations, SWB and happiness affects longevity and specific health outcomes. In some cases, this relationship is mediated by self-reported health. However, also here the mechanisms are not yet understood well and these need to be defined and empirically examined. Moreover, not all possible sources of spuriousness have been ruled out. One obvious and important candidate is a common genetic factor in SWB and longevity: a certain genetic disposition may increase the likelihood of high SWB as well as longevity. Twin studies are one way to explore this (see, for instance, Røysamb, Tambs, Reichborn-Kjennerud, Neale, & Harris, 2003 for SWB and subjective health), but also the increasing availability of large population-based samples with genetic data provides an opportunity to examine the role of genetic influences with regard to SWB and health.

Cross-References

- ▶ [Happiness](#)
- ▶ [Health](#)
- ▶ [Life Satisfaction](#)

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Subjective Importance Assessment

► Subjective Weighting

Subjective Income Inequality

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Definition

Income inequality is mostly measured by a statistical characteristic like the log variance of incomes, the ► **Gini coefficient**, or the Atkinson measure. They are based on objective income measures, sometimes corrected by household equivalence scales. *Subjective* income inequality instead is based on satisfaction with income, as derived from income satisfaction questions. Similar measures may be constructed for inequality with respect to other life domains, leading to subjective health inequality, job satisfaction inequality, etc.

Description

Subjective inequality was first defined in Ferrer-i-Carbonell and Van Praag (2003) and dealt with extensively in Van Praag and Ferrer-i-Carbonell (2004). The idea is that income differences are felt by individuals as differences in income or financial satisfaction. Let $I(y_1, \dots, y_N)$ stand for any income inequality measure, where the vector y_1, \dots, y_N stands for the incomes of the population, then a corresponding subjective version of the inequality measure would be $I(U(y_1), \dots, U(y_N))$, where $U(\cdot)$ stands for the satisfaction, derived from the income y . In this context, the function U has a cardinal significance.

The measure which is advocated by Ferrer and Van Praag is the variance of log-marginal satisfaction. Let the satisfaction function be estimated by $S = \beta_1 \ln y + \beta_2 \ln(fs) + \gamma x$, where y stands for income, fs for family size, and x for a vector of relevant explanatory variables (e.g., education, region, rural vs. urban, sex, age). Then $\text{var}(S)$ may be interpreted as a measure of subjective inequality because the coefficients are empirically estimated and reflect subjective effects on the evaluation of income. It is easily seen that the variance of log income, a traditional measure of income inequality, is just a member of the general class where there are no subjective effects. It seems there are several advantages of this approach. First, in the example above, we may interpret the term $\beta_2 \ln(fs)$ as a correction to y in order to take into account family size differences. This leads to a subjective satisfaction inequality of household-corrected income. The same correction is possible for all other variables x . Second, the inequality may be corrected for one variable or for several variables simultaneously. It is also possible to decompose the variance into inequalities within and between subgroups. Third, the same methodology may be used for other satisfactions like satisfaction with health and ► [job satisfaction](#). Fourth, when looking at satisfaction of life as a whole, we may apply the same inequality concept on satisfaction with life as a whole and decompose that overall satisfaction with respect to various life domains like health, financial situation, job, and social life.

Finally, it is also possible to replace the functional specification of the variance by other usual specifications as the Atkinson measure or the Gini index, where S takes over the role of income in the traditional measures.

Cross-References

- [Household Income, Satisfaction with](#)
- [Personal Income, Satisfaction with](#)

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Subjective Indicators

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Synonyms

[Perceptual indicators](#); [Subjective well-being indicators](#)

Definition

Subjective social indicators are statistics that have some significance for measuring the quality of life from the point of view of some particular subject(s). They are contrasted with objective social indicators that are statistics that have some significance for measuring the ► [quality of life](#) from the point of view of any independent observer.

Description

The word “quality” in the phrase “quality of life” has a descriptive sense meaning sort, type, or kind and an evaluative sense meaning briefly good or bad. Although all ► [social indicators](#) are supposed to have normative significance or at least to admit of normative uses, the normative significance may be explicit or not. Given the two senses of “quality,” two species of subjective indicators may be distinguished:

1. Descriptive subjective indicators, e.g., self-reported income and self-reported ethnic identity
2. Evaluative subjective indicators, e.g., self-reported good health and self-reported criminal victimization

In the definitions given above, “subjective” and “objective” are used to designate the point of view or perspective from which an indicator is being reported, i.e., the perspective of some particular person versus the perspective of any independent observer. The distinction being emphasized is familiar to most people, for example, a stick in water appears to be bent from a particular observer’s perspective but is known to be straight from the perspective of a variety of independent observers and observation points.

Besides designating different observational perspectives, the terms “subjective” and “objective” are used to designate different kinds of objects, namely, mental versus material objects. The former are intangible, unobservable, and directly experienced by individuals, e.g., feelings of positive or ► [negative affect](#); feelings of fear, joy, and anger; ► [attitudes](#); beliefs; hopes; ► [knowledge](#); memories; motives; goals; needs; wants; ► [happiness](#); or ► [satisfaction](#).

Researchers do not have direct, sensible access to other people’s felt feelings, beliefs, and so on, although it is precisely such attributes that supremely characterize our species. For such attributes it is reasonable to give special privilege to self-reports unless there are good reasons for doubting their validity. It would, e.g., be unreasonable to accept self-reports provided under duress, under the influence of intoxicating drugs or some diseases, or reports of knowledge claims

that are patently false. For a relatively brief period in the history of social indicators research, there was some discussion over the question of whether social reports ought to contain only subjective or objective indicators, but as suggested in Sheldon and Moore (1968) and Campbell and Converse (1972), very early the vast majority of researchers agreed that both kinds of indicators are necessary to comprehensively and accurately assess the quality of life.

It would be a challenge to try to provide here precise definitions of all the terms underlined in the previous paragraph. The great advantage of having an encyclopedia is that one can draw upon the expertise of others to provide precise explanations of many more things than a single author could hope to cover. However, the most important thing to remember is that when people think of subjective indicators, they should be aware that there is a huge variety of kinds of mental phenomena to be considered. If researchers restrict their attention to measures of ► [happiness](#), ► [life satisfaction](#), ► [positive affect](#), and ► [negative affect](#), they will never be able to adequately describe and explain what it means for a human being to have a good quality of life. A person with no beliefs, hopes, fears, goals, and so on would be a mere caricature of the real thing, and the quality of life of such a person would be equally useless to have, describe, or explain.

Important research summaries concerning subjective indicators can be found in the Reference section below.

Cross-References

- [Life Satisfaction Judgments](#)
- [Michalos-Zumbo Well-Being Index](#)
- [Subjective Indicators of Well-Being](#)
- [Subjective Well-Being \(SWB\)](#)

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Subjective Indicators of Well-Being

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Synonyms

Absence of anxiety; Absence of psychopathology; Happiness; Health-related quality of life; Liveability; Mental health indicators; Quality of life and subjective indicators of well-being; Quality of living; Stress or depression indicators; Well-being, subjective; Well-being, subjective indicators of

Description

There are no agreed indicators to measure or conceptualize well-being. The term indicates

a positive view of life but nothing more specific. In terms of its spelling, a search of 751 papers and reports published in 2010, randomly selected within the broad area of quality of life, revealed that 464 (61.8 %) included the word “well-being” and 268 (35.8 %) included the term “well-being.” The counting of the former version is magnified by line breaks producing a hyphenated version of the word, so it can be concluded that both versions are popular. More important, very few of these papers offer a definition of the term.

The Australian Bureau of Statistics (Trewin, 2001) provides the most panoramic definition of well-being. They regard the term as being applicable to individuals and society, comprising living conditions, social arrangements, and progress towards social goals. These areas then subsume all of the demographic statistics (e.g., unemployment rate) and subjective measures (e.g., are conditions getting better or worse?) measured by that agency. In a similar vein, qualitative studies seeking the personal meaning of “well-being” also yield broad whole-of-life descriptions (e.g., Mark & Lyons, 2010), and many omnibus surveys contain the word, such as the Australian Unity Well-being Index (Cummins et al., 2010). Crucially however, in these uses of the term, no attempt is made to create a single value of “well-being.”

There are many alternative views. Some authors regard well-being as a synonym for happiness (Brulde & Bykvist, 2010) or use well-being to mean a cluster of psychological scales, the scores from which are combined to form a single value. Such clusters usually include positive affect and subjective well-being (e.g., Huppert et al., 2009), but some include scales measuring negative constructs. They may include, for example, hopelessness and depression (Zuckerman & O’Loughlin, 2009) or negative affect (e.g., Merz & Huxhold, 2010). The creation of single values derived from combinations of positive and negative scales defies interpretation and is certainly not recommended for any academic or applied purpose.

Other common uses of the term “well-being” are in combination with either “subjective” or

“psychological.” Once again, there is wide variation in the way each is defined and measured.

Subjective well-being (SWB) is most commonly regarded as a composite construct. The strongest confirmation of this view is a set of guidelines for nomenclature, published by Diener (2006), endorsed by some 50 prominent researchers in the area. According to this document, well-being and SWB are seen as synonyms, so it is not surprising to see that the description of SWB is also highly inclusive. These guidelines describe SWB as referring “to all of the various types of evaluations, both positive and negative, that people make of their lives. It includes reflective cognitive evaluations, such as life satisfaction and work satisfaction, interest and engagement, and affective reactions to life events, such as joy and sadness. ---[It] is an umbrella term for the different valuations people make regarding their lives, the events happening to them, their bodies and minds, and the circumstances in which they live” (pp 399–400). So, in this definitional framework, well-being is an inclusive term for the subjective experience of life.

Despite the complexity of this definition, there are three commonly used instruments that purport to measure SWB as a single construct. The most widely used is a single item of satisfaction with “life as a whole” or “life in general” (Andrews & Withey, 1976). In terms of scales, the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) is the most widely used, and the other is the Personal Well-being Index (International Well-being Group, 2006). The former uses five “agree-disagree” items, while the latter uses seven items of satisfaction.

Psychological well-being is best conceptualized by the Psychological Well-Being Questionnaire (Ryff, 1989) which has sovereign status in defining the term. This instrument measures the construct through six subscales as follows: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose of life, and personal growth. These are useful as separate measures, and also as embodying the construct of eudaimonic well-being, as opposed to the Hedonic construct of well-being measured by SWB (see Ryan & Deci, 2001).

Unfortunately, however, the term psychological well-being has also been used to mean a variety of other constructs. Like “well-being,” it has been measured by averaging the combined scores from individual scales of well-being and ill-being (e.g., Bryant & Veroff, 1982; Smith, Ntoumanis, & Duda, 2010), the balance of positive to negative affect (Broom, 1994), the absence of psychopathology (Brough & Kelling, 2002), the absence of psychological distress (Brunier, Graydon, Rothman, Sherman, & Liadsky, 2002), etc.

The field of medicine adds another level of confusion to the use of the term by using well-being as an antonym of ill-being. That is, the absence of ill-being equals well-being. To give some examples, Hildingh and Baigi (2010) measures well-being by using the General Health Questionnaire (Goldberg & Williams, 1988), as do Batinic, Selenko, Stiglbauer, and Paul (2010), who refer to their results as “psychological well-being.” In fact, this scale is intended as a screening device for identifying minor psychiatric disorders. Alvarez, Bados, and Pero (2010) describe the output of the WHOQOL-Bref (WHOQOL Group, 1994) as well-being, but this is a health-related quality of life scale and, as such, measures symptoms of pathology (for a critique of the HRQOL construct, see Cummins, 2010).

It seems only fitting that the last input into this section should come from the two major English dictionaries and Wikipedia. According to Merriam-Webster online, it is “the state of being happy, healthy, or prosperous,” with synonyms of “good, interest, and weal,” with the antonym of “ill-being.” The Cambridge Dictionary Online states that well-being is “the state of feeling healthy and happy,” while Wikipedia equates well-being with quality of life. Such determined definitions are clearly not supported by most researchers who use this term, which brings the authority of such reference sources into question.

In summary, there is a complete lack of consensus regarding the definition and measurement of “well-being.” It can be concluded that, in agreement with Merriam-Webster, it is an

antonym of “ill-being” but that hardly advances understanding. Well-being indicates a positive, rather than a negative appraisal of life, but has no additional agreed meaning.

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Subjective Legitimacy of Public Safety Indicators

► Public Safety Indicators in Taiwan

Subjective Poverty

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Synonyms

[Self-rated poverty](#)

Definition

Subjective poverty is an individual's perception on his or her financial/material situation. Poverty is defined on the basis of individual feeling, i.e., those who say that they feel poor represent subjective poverty.

Description

The concept of poverty is elusive; there is no straightforward definition of the concept and a generally accepted way of measurement. In most poverty studies a person is defined as poor if he or she lacks enough resources to reach an acceptable standard of living. Usually the analysis is restricted to economic deprivation and misery. Measurements that use low resources as an indication of poverty are often referred to as indirect measurements of poverty (Ringen, 1988).

Indirect poverty measurements are the most widely used when determining whether a household is poor or not. In indirect poverty measurement, a household's available material resources are estimated, and if they fall below a specific threshold, the household is identified as poor. Poverty lines are usually fixed by experts. Subjective poverty presents a direct poverty measurement. It gives voice to the people and aims to establish poverty criteria on the basis of public opinion (Veit-Wilson, 1987; Walker, 1987).

Subjective measures are viewed valuable as they reveal where poverty and economic hardship are being experienced. Subjective poverty measures have been used in developed countries from the 1970s and recently to a growing degree also in developing countries. In developing countries traditional income-based poverty measures have particularly been problematic. Van Praag and Ferrer-i-Carbonell (2006) point out that it is hard to get a good idea about the income of households in these countries, especially because of the fact that such societies are not completely "monetarized" and because there is a considerable amount of home production and exchange in kind. Thereby, the use of subjective measures has become more common (see, e.g., Pradhan & Ravallion, 2000).

There are several commonly used ways to measure poverty on the basis of subjective perceptions. Here we present few of them. The subjective approach starts by asking households how they evaluate their own situation. The simplest approach is to ask people themselves: "Do you feel poor?" Or people can be asked to assess their life in terms of verbal labels: "bad," "sufficient," and "good." These kinds of questions consider poverty as a more general concept than just income poverty and often come close to such terms as subjective well-being, life satisfaction, and happiness. Subjective perceptions can be used to study monetary aspects as well. A very popular method is to ask people if she or he is able to make its ends meet (often called as the Deleeck question) or whether people have had difficulties in making necessary payments. Instead focusing primarily on the feeling of poverty, it ties the feeling of poverty to the financial hardship and is in that sense money metric as well.

Eurostat is one institution that gathers data on subjective poverty using this type of question: "Thinking of your household's total income, from all sources and from all household members, would you say that your household is able to make ends meet?" Respondents are offered with six response categories ranging from with great difficulty to very easily. This subjective measure identifies the share of people with financial difficulties and/or having economic strain. A similar

type of question, more comprehensive though, is to ask “How satisfied are you with your level of income?” This question captures the ability of income to purchase the goods and services that the individual would like to acquire. A widely used measure, the minimum income question (MIQ), was introduced by Goede hart, Halberstaad, Kapteyn, and van Praag (1977). It focuses on the monetary amounts which people consider necessary to make ends meet for their households, for example, posing the following question: “What income level do you personally consider to be absolutely minimal?” That is to say, with less you could not make ends meet. The exact wording of the MIQ varies considerably in different studies (see, e.g., Callan & Noland, 1991; Bradbury, 1989).

A very similar method to the MIQ question is the so-called income evaluation question (IEQ) introduced by Van Praag (1968), and same cases the MIQ question is thought of as a special case of Van Praag’s question. The difference is that income evaluation question does not only ask respondent’s perception on minimal level but gives a wider perspective what people consider insufficient and sufficient income level. The question asks what income (after tax) is considered very bad, bad, insufficient, sufficient, good, and very good. The responses to the MQI and IEQ questions are used to construct subjective poverty lines, which are often referred also as a consensual poverty line. After the poverty line is determined, the analysis proceeds similarly as in any other income methods. The Leyden poverty line (LPL) is based on the income evaluation question (Hagenaars, 1986; Van Praag, Hagenaars, & van Weeren, 1982), while the related subjective poverty line (SPL) used by Kapteyn (see Kapteyn, van de Geer, & van de Stadt, 1985) is based on the minimum income question. Poverty measurements through subjective feelings and perceptions have also been criticized. The question “Do you feel poor?” would be the perfect indicator of poverty if everyone shared one understanding of the minimum level of well-being and they would use exactly same verbal description for expressing it (Hagenaars, 1986).

However, people tend to have different ideas, for example, on what is the minimum level of well-being that should be met and also a different understanding of abstract concepts like poverty. It is not clear that different people will regard “making ends meet” in the same light. Many studies have shown that the level of minimum income tends to vary with income and with time (e.g., Saunders & Bradbury, 1991). Many people do not consider a subjective view to be a sufficient or a necessary condition of poverty. It may be that someone who is characterized by a relatively high level of need satisfaction in terms of objective measures might feel himself or herself to be poor. Consequently, many of those who can be identified as poor on objective grounds do not subjectively feel themselves to be poor. However, figures of subjective feelings of poverty give valuable information on the satisfaction of people. Poverty, defined by the poor, can inform policy for effective poverty reduction. Poverty should be studied by using more than one indicator (see, e.g., Gordon & Townsend, 2000; Halleröd, 1995). Effectively poverty reduction requires a comprehensive understanding of a multifaceted phenomenon.

Cross-References

- ▶ [Poverty](#)
- ▶ [Poverty Lines](#)
- ▶ [Poverty Measurement](#)

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Subjective Poverty: The Leyden Approach

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Synonyms

[Leyden poverty](#)

Definition

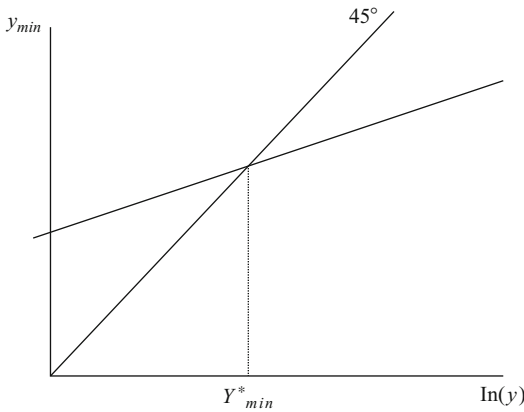
A poverty line is an income level (y_{min}), such that individuals or families that earn less than that

income level are called “poor.” If such a line is based on subjective satisfaction questions or the **▶ income evaluation question**, it is called a subjective poverty line.

Description

Subjective poverty is usually derived in one of three ways:

1. The first is to ask individuals to evaluate their own income y_n on a verbal or numerical scale. Poverty is here defined as a feeling, and respondents are called “poor” if they evaluate their own income by “bad.” The poverty line is set at the income where respondents feel their income to be “bad”. However, the problem is that not all respondents call the *same* income level “bad.” It depends very much on other circumstances as the number of family members to be supported, the age of the respondent, the incomes of members of his reference group, and so on, in short a vector of variables x . Hence, the poverty line is a function $y_{min}(y_n; x_n)$. Statistically, the response is determined by the group of respondents who feel that their own income is “bad.” It implies that the opinions of individuals who do *not* evaluate their own income as bad are not counted. As a definition of a socially acceptable poverty line, it is not usable, as it does not necessarily reflect the opinions of the whole population, but only of the “poor” segment itself.
2. This is solved if we ask a representative sample of people (including “poor” and “nonpoor”) to give their opinion on what amounts to a “bad” income level. This is the so-called minimum-income question (MINQ). This approach is a bit more complex as the answer, now given by all respondents in the sample, does not depend on x only but also on the actual income y_n of the respondent n . It implies that the answer will be a function $y_{min}(y_n; x_n)$. Moreover, we may assume that responses on what represents a poor income increase with actual income; hence, the function $y_{min}(y_n; x_n)$ is increasing in y_n .



Subjective Poverty: The Leyden Approach, Fig. 1 Determining the poverty line

However, it is empirically found that $\partial y_{min} / \partial y_n < 1$. Or in words, the slope of the function $y_{min}(y_n; x_n)$ is smaller than 45° (Fig. 1).

Consider now the function $y_{min}(y_n; x_n)$ as a function of actual income y as drawn in the figure, where we fix x . It is nearly always estimated by an equation of the type $y_{min} = \beta_1 \ln(y_n) + \gamma' x_n + \beta_0$. Then we see that the function intersects the 45° line at exactly one point y^*_{min} . At the left of y^*_{min} , people feel that their own income is less than the income they would call “bad”; hence, they qualify their own income as “bad” or worse than that, while at the right they feel better off. Hence, it follows that y^*_{min} is the ideal candidate for the socially acceptable poverty line, corresponding to the verbal level “bad.” In a similar way, we may identify the income levels corresponding to the verbal levels “severely poor” or “nearly poor.” However, the level thus defined holds only for a specific value of the “other characteristics” x . Let, for instance, x be family size fs , and then if we vary family size, we get a set of *family size*-specific poverty lines, corresponding to a household of 1, 2, 3, . . . persons. In general, we can estimate subjective poverty lines for any subgroup.

A minor modification is as follows. Let the satisfaction question, such as the Cantril question, be answered on a numerical scale, e.g., from 1 to 5 or 1 to 10. Identifying the poor

level with 4 or 5 and applying the same method on a function y_4 or y_5 , we can get the poverty lines $y^*_{4}(x)$ or $y^*_{5}(x)$.

3. An alternative is to depart from the ► **individual welfare function** of income as defined by van Praag (1971). Van Praag used the ► **income evaluation question** to estimate a ► **cardinal utility function** of income $U(y; y_n; x_n)$, the welfare function of income (WFI), according to which an individual n evaluates income levels y on a (0,1) scale. Solving the equation $U(y; y_n; x_n) = 0.4$ for y , we estimate a function $y_{min} = \beta_1 \ln(y_n) + \gamma' x_n + \beta_0$. The constant β_0 increases with the satisfaction or utility level. The poverty line $y^*_{0.4}$ is then found from solving the equation $y^*_{0.4} = \beta_1 \ln(y^*_{0.4}) + \gamma' x_n + \beta_0$.

The critical equation in the methods described under 2 and 3 is the equation $y_{min} = \beta_1 \ln(y_n) + \gamma' x_n + \beta_0$. Fortunately, for all those methods, the equation yields almost identical estimates for all coefficients except for the intercept, which is clearly determined by the specific verbal or numerical evaluation level chosen.

These methods were originally developed in the seminal paper by Goedhart, Halberstadt, Kapteyn and van Praag (1977) and by Hagenaars (1986). Since then, the subjective methods have been applied with sensible and comparable results to a large number of countries. In no country thus far, it has been adopted for official poverty statistics.

Two remarks are in order. First, the methods require the assumption that responses are comparable between individuals (response equivalence or interpersonal comparison). Moreover, using the WFI presupposes that this is a valid estimate of a cardinal utility function of income.

Second, the method can be and has been used to define poverty lines for other domains of life, viz., health and job satisfaction. This approach is hampered however by the fact that most domains have to be described by more variables than one, as is the case for financial satisfaction.

An extensive survey is found in van Praag and Ferrer-i-Carbonell (2004).

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Subjective Quality of Rural Living Conditions

- ▶ [Rural Life, Quality of](#)

Subjective Sexual Well-Being

- ▶ [Sexual Satisfaction and Sexual Costs in Women](#)

Subjective Weighting

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Synonyms

[Preferences](#); [Subjective importance assessment](#);
[Well-being/quality of life judgments](#)

Definition

Subjective weighting refers to the judgments, preferences, or relative levels of importance (importances) that individuals assign to various domains of life (aspects of their social and personal circumstances) in assessing their well-being/quality of life (WB/QOL). These subjective weights then can be used to construct

composite indices of the overall WB/QOL of individuals, groups of individuals, and entire societies.

Description

A long stream of research on subjective well-being has concluded that a simple weighted average model predicts individuals' overall judgments of their WB/QOL from satisfaction with individual aspects or domains of their lives (Campbell, Converse, & Rodgers, 1976; Cummins, 1996). Although the direction of causality is ambiguous in some studies ("top-down" models predict that higher overall affect causes higher ratings of individual domains), researchers agree that if actual conditions in a domain improve, then the change in overall rating of WB/QOL is well predicted by a linear (weighted) additive model (Lucas, Clark, Georgellis, & Diener, 2003; Sastre, 1999). Another research finding is that if the weights contain excessive error in measurement (e.g., if weights are measured at the individual level rather than aggregated over larger samples), then an equal-weights model will perform as well or better than a weighted model.

Using the weighted average principle as a good description of individuals' WB/QOL judgments and defining individual i 's importance weight for domain k as w_{ik} and overall WB/QOL judgment as Q_i , an algebraic representation of *weighted average model (WAM)* to predict i 's WB/QOL judgments is

$$Q_i = \sum_k w_{ik} x_k, \quad w_{ik} > 0,$$

where Σ denotes summation, w_{ik} is i 's weight (importance) for the k th domain indicator x_k , and the summation goes over the total number of domains used to make judgments of WB/QOL (Hagerty & Land, 2007).

Cross-References

- ▶ [Composite Index Construction](#)
- ▶ [Subjective Well-being](#)
- ▶ [Weighting Schemes](#)

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Subjective Well-Being

- ▶ [School-Based Interventions](#)

Subjective Well-Being (SWB)

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Synonyms

[Happiness](#); [Hedonic level](#); [Individual well-being](#); [Life satisfaction](#); [Morality and subjective well-being](#); [Satisfaction with life](#)

Definition

Subjective well-being (SWB) is the personal perception and experience of positive and negative emotional responses and global and (domain) specific cognitive evaluations of satisfaction with life. It has been defined as “a person’s cognitive and affective evaluations of his or her life” (Diener, Lucas, & Oishi, 2002, p. 63).

Simply, SWB is the individual evaluation of quality of life (QOL) and therefore converges with the definition of QOL.

Description

The term SWB was first introduced by Diener (1984) as a means of identifying the field of psychology that attempts to understand people’s evaluations of their QOL, including both their cognitive judgments and affective reactions (Diener, Suh, & Oishi, 1997). The scientific term “subjective well-being” introduced by Diener (1984) is often used interchangeably with, or in order to avoid the ambiguous meaning of, the term “▶ [happiness](#).” The SWB literature covers studies that have used such diverse terms as happiness, hedonic level, ▶ [satisfaction with life](#), moral, and ▶ [positive affect](#).

The first broad review of happiness research was conducted by Wilson (1967) and concluded that “the happy person emerges as a young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married person, with high ▶ [self-esteem](#), high job moral, modest aspirations, of either sex and of a wide range of ▶ [intelligence](#)” (p. 294). In the decades since Wilson’s (1967) review, investigations into SWB have broadened and evolved to include not only the correlates and demographic characteristics of happiness but also the underlying processes, interactions between internal and external circumstances, and causal pathways through which personal and environmental factors effect and influence how individuals perceive their lives.

Subjective well-being has three components: ▶ [life satisfaction](#) (LS), positive affect (PA), and ▶ [negative affect](#) (NA) (Andrews & Withey, 1976). Individuals are said to have high SWB if they experience LS and frequent PA (e.g., joy, optimism) and infrequent NA (e.g., sadness, anger). Conversely, individuals are said to have low SWB if they are dissatisfied with life, experience little joy, and frequently feel negative emotions such as anger or ▶ [anxiety](#) (Diener et al., 1997). However, positive SWB is not to

be considered synonymous with mental or psychological health, just as the absence of psychopathology is not indicative of positive SWB. It is possible for an individual to have high levels of psychopathology and high SWB, just as it is possible for an individual to have low levels of psychopathology and low SWB (Greenspoon & Saklofske, 2001).

As a tripartite category of phenomenon, SWB is viewed as a broad area of scientific interest that includes global and domain specific judgments of LS and positive and negative emotional responses (Diener, Suh, Lucas, & Smith, 1999). The field covers the entire range of well-being from agony to ecstasy and therefore not only concerns itself with the causes of depression and anxiety but also seeks to differentiate slight happiness from moderate and extreme happiness and determine what leads to happiness over time (i.e., interest is not in momentary moods or fleeting emotions, but what produces long-term positive SWB) (Diener et al., 1997). Subjective well-being is defined by internal experience and measured from an individual's own perspective (i.e., self-reported), a characteristic which differentiates the field from clinical psychology (Diener et al.).

According to research conducted by Lucas, Diener, and Suh (1996), PA, NA, and LS are separable constructs, and therefore, researchers interested in studying SWB may wish to assess these components separately. In general, the affective components of SWB have received more attention in the literature than the cognitive components (i.e., LS) (Diener, Emmons, Larsen, & Griffin, 1985; Pavot & Diener, 1993), despite their equal importance (Gilman, Huebner, & Laughlin, 2000). This imbalance is accounted for in part by the fact that the affective components are based on emotional responses which, although invariably short lived and fluctuating, are representative of the nature of everyday life (Gilman et al., 2000). Indeed, Diener and Emmons (1985) demonstrated that trait measures of PA and NA are essentially uncorrelated, and therefore, how much one experiences pleasant affect has little impact on how much they experience unpleasant affect. This research led to

considerations of the independent contributions of the hedonic (and cognitive) components of SWB (see also Bradburn, 1969; Bradburn & Caplovitz, 1965). The hedonic component is most often viewed as the ratio of PA to NA over time (see Fordyce, 1988) and is considered to be an important component in the overall structure of SWB (Larsen & Eid, 2008; Larsen & Prizmic, 2008). Research investigating the characteristics of PA and NA, such as the intensity and frequency of affective experience (e.g., Diener, Larsen, Levine, & Emmons, 1985; Larsen & Diener, 1985), has demonstrated that it is the frequency, not the intensity, of affective experiences which has the greatest impact on overall SWB in a person's life over time (Larsen, Diener, & Emmons, 1985). The cognitive component (i.e., LS), on the other hand, is based on overall appraisals of QOL and thus is not typically susceptible to change due to short-term emotional reactions to life events. Therefore, LS is considered not only to be the more stable component (Eid & Diener, 2004) but also the key indicator of positive SWB (Diener & Diener, 1995). Interestingly, in most populations, PA, NA, and LS are moderately and sometimes highly correlated (Diener, Napa-Scollon, Oishi, Dzokoto, & Suh, 2000).

Measurement

Both the affective and cognitive components of SWB can each be assessed via self-report. Examples of the most common measures include the ► [Satisfaction with Life Scale](#) (Diener et al., 1985), the ► [Positive and Negative Affect Schedule](#) (Watson, Clark, & Tellegen, 1988), and the ► [Affect Balance Scale](#) (Bradburn, 1969). Techniques for assessing the intensity and frequency of PA and NA have also been developed (e.g., Larsen & Diener, 1985; Schimmack & Diener, 1997) along with ► [experience sampling](#) methods for assessing SWB in situ (Scollon, Kim-Prieto, & Diener, 2003). However, a more comprehensive assessment of SWB requires a multimethod approach (Diener, 1994; Diener & Eid, 2006). Methods used in a multimethod approach may include, but are not limited to, self-reports and peer reports; observational,

physiological, motivational, cognitive, and behavioral methods; and emotion-sensitive tasks (Larsen & Prizmic-Larsen, 2006; Lucas, Diener, & Larsen, 2003; Sandvik, Diener, & Seidlitz, 1993).

Determinants

There is no single determinant of SWB, but some conditions are necessary for high SWB such as positive mental health and positive relationships, but they are not in themselves sufficient to cause happiness. Research findings suggest that personality traits (e.g., positive and negative affect) and temperament factors (e.g., introversion and extroversion) account for most of the variance in SWB (Costa & McCrae, 1980; Diener, 1996; Emmons & Diener, 1985). However, other determinants include good social relations (Diener & Seligman, 2002), variability due to genetic contributions (Lykken, 1999), environment (Diener & Seligman, 2004; Diener & Suh, 1999), employment (Diener, Nickerson, Lucas, & Sandvik, 2002; Lucas, Clark, Georgellis, & Diener, 2004), marriage (Lucas, Clark, Georgellis, & Diener, 2003), age (Diener & Suh, 1998), culture (Diener, Suh, Smith, & Shao, 1995), and individual characteristics (Diener, Diener, & Diener, 1995).

Consequences

According to Diener and Diener (1996), most people are happy. In fact, cross-national data has shown that the average level of SWB is above the neutral point throughout the world (Diener & Diener, 1996). Individuals with positive SWB have consistently been shown to report high LS, as well as satisfaction across multiple life domains (e.g., marriage, income, physical health), positive emotions, increased mental health, and a longer life (Lyubomirsky, King, & Diener, 2005). Indeed, cross-sectional, longitudinal, and experimental data have all shown that positive SWB precedes diverse positive personal, behavioral, psychological, and social outcomes (see Lyubomirsky et al., 2005 for a review). Happy people are more extroverted, social, active, healthier, and enjoy more positive relationships, and their pleasant mood fosters

creative thinking (Fredrickson, 2001; Larsen & Eid, 2008). Indeed, happiness may be the ultimate goal of being human.

Cross-References

- ▶ [Affect Balance Scale](#)
- ▶ [Anxiety](#)
- ▶ [Experience Sampling](#)
- ▶ [Happiness](#)
- ▶ [Intelligence](#)
- ▶ [Introvert/Introversion](#)
- ▶ [Life Satisfaction](#)
- ▶ [Mood](#)
- ▶ [Negative Affect](#)
- ▶ [Positive Affect](#)
- ▶ [Positive and Negative Affect Schedule \(PANAS\)](#)
- ▶ [Satisfaction with Life Scale \(SWLS\), an Overview](#)
- ▶ [Self-Esteem](#)
- ▶ [Spain, Personal Well-Being Index; Application with People Aged 50 Years and Older](#)

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Subjective Well-Being in ASEAN

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Definition

ASEAN

The Association of Southeast Asian Nations (ASEAN) was established on August 8, 1967, in Bangkok by the five original member countries: Indonesia, Malaysia, the Philippines, Singapore, and Thailand. It is now a 10-member organization comprising the original founding members, Brunei Darussalam, Cambodia, Lao PDR, Myanmar, and Vietnam. As of 2011, the ASEAN region has a population of about 592 million, a total land area of 4.4 million square kilometers, a combined gross domestic product of almost US\$ 1,500 billion, and a total trade of about US\$ 1,500 billion ([Selected Basic ASEAN Indicators](http://www.aseansec.org/stat/SummaryTable.pdf), <http://www.aseansec.org/stat/SummaryTable.pdf>).

Description

Overview

Issues relating to ► [subjective well-being](#) in the five founding members of ASEAN, using data from the 2004, 2006, and 2007 AsiaBarometer surveys, will be reported and discussed here. Although individual ASEAN countries may have studies on subjective well-being, there are very few studies that have systematically discussed these issues across various ASEAN countries. This research is timely as ASEAN works toward a vision of “ASEAN as a concert of Southeast Asian nations, outward looking, living in peace, stability and prosperity, bonded together in partnership in dynamic development and in a community of caring societies” ([ASEAN](http://www.aseansec.org/64.htm), <http://www.aseansec.org/64.htm>).

Subjective well-being research is concerned with individuals’ subjective experiences of their lives and “the underlying assumption is that well-being can be defined by people’s conscious experiences – in terms of hedonic feelings or cognitive satisfaction” (Diener & Suh, 1997, p. 191). Hence, empirical research on subjective well-being has focused on cognitive and affective measures, including ► [happiness](#), ► [enjoyment](#), ► [satisfaction](#), accomplishment, and ► [quality of life](#) (e.g., Cramer, Torgersen, & Kringlen, 2004; Diener & Suh, 2000; Pichler, 2006; Shin & Rutkowski, 2003; Trzcinski & Holst, 2008). We explored various aspects of subjective well-being by having the ASEAN residents evaluate how happy they were, whether they were enjoying life, and if they felt a sense of achievement. To gain better insights into their subjective well-being, the impact of four demographic variables (gender, age, education, and income) and five non-demographic variables (religiosity, national pride, satisfaction with the personal life, satisfaction with the interpersonal life, and satisfaction with the public life) on happiness, enjoyment, and achievement was also examined.

Method

Data Sources

The datasets used for the analysis were from the AsiaBarometer project, a regional opinion survey

conducted in a broader East Asia, encompassing East, Southeast, South, and Central Asia. The survey questionnaire focused on the daily lives of ordinary people in ► [Asia](#) and had nine clusters of questions, which ranged from living conditions and quality of life to political consciousness and social issues. These formed a fairly consistent core for the various annual surveys. The datasets from the 2004, 2006, and 2007 surveys were utilized, focusing on five ASEAN countries: Indonesia, Malaysia, the Philippines, Singapore, and Thailand (see the following sources for background information on these countries: “[CIA- The World Factbook – Indonesia](#)” www.cia.gov/; “[CIA- The World Factbook – Malaysia](#)” www.cia.gov/; “[CIA- The World Factbook – Philippines](#)” www.cia.gov/; “[CIA- The World Factbook – Singapore](#)” www.cia.gov/; “[CIA- The World Factbook – Thailand](#)” www.cia.gov/).

Variables Used in Analysis

Several key indicators of subjective well-being were chosen to present a holistic perspective of how people in these countries felt about their quality of life, namely, happiness, enjoyment, and ► [achievement](#). Together, these indicators provided a fairly parsimonious conceptualization of subjective well-being. Happiness was measured according to responses to the question “All things considered, would you say that you are happy these days?” Respondents indicated if they were “very unhappy,” “not too happy,” “neither happy nor unhappy,” “quite happy,” or “very happy” on a scale of 1 (for “very happy”) to 5 (for “very unhappy”). Enjoyment was measured by the question “How often do you feel you are really enjoying life these days?” with responses such as “often,” “sometimes,” “rarely,” and “never.” Achievement was measured with the question “How much do you feel you are accomplishing what you want out of your life?” They indicated their sense of achievement as “a great deal,” “some,” “very little,” or “none.”

Regression analyses were conducted to examine how demographic and non-demographic factors contributed to the subjective well-being of people in ASEAN. The three indicators of

subjective well-being were used as dependent variables. There were a total of nine independent variables. Four were demographic variables and five were non-demographic variables (religiosity, national pride, satisfaction with the personal life sphere, satisfaction with the interpersonal life sphere, and satisfaction with the public life sphere).

The four demographic variables used for analysis were age, gender, education, and gross household income. There were three education levels – namely, “low” (no formal education or elementary/middle school/junior high school qualifications), “medium” (with high school, high school level/vocational/technical school, or professional/technical qualifications), and “high” (with university/graduate qualifications). These were used for Indonesia, the Philippines, Singapore, and Thailand. The exception was Malaysia, which grouped those with professional/technical school qualifications as having high education. Similarly, there were three levels of gross annual household income, which varied across the countries. For Indonesia, “low” income meant the respondent’s household earned less than 7.2 million rupiah, “medium” income households earned 7.2–12 million rupiah, and “high” income households earned more than 12 million rupiah. For Malaysia, “low” income would be those earning 10,000 ringgit or less, “medium” income would be those earning 10,001–30,000 ringgit, and “high” income would be those earning 30,001 ringgit and more. For the Philippines, the income levels were “low” (60,000 pesos or less), “medium” (60,001–100,000 pesos), and “high” (more than 100,000 pesos). For Singapore, “low” income earners had S\$2,000 or less, “medium” income earners had S\$2,001–S\$4,000, and “high” income earners had S\$4,001 and more. For Thailand, “low” income would be those earning 5,000 baht or less, “medium” income would be 5,001–14,999 baht, and “high” income would be 15,000 baht and more. [Table 1](#) presents the profiles of respondents who were surveyed in 2004, 2006, and 2007.

There were 16 life satisfaction domains which were grouped as follows: (1) personal life sphere (comprising satisfaction with standard of living,

Subjective Well-Being in ASEAN, Table 1 Profile of respondents in ASEAN countries

Demographics	Indonesia		Malaysia		Philippines		Singapore		Thailand	
	2004	2007	2004	2007	2004	2007	2004	2006	2004	2007
Gender										
Male	50.0	43.1	49.2	49.7	50.0	49.4	44.8	45.8	49.2	47.6
Female	50.0	56.9	50.8	50.3	50.0	50.6	55.2	54.2	50.8	52.4
Age										
20–29	31.5	36.0	30.9	33.2	28.7	27.6	22.5	19.7	23.6	25.0
30–39	33.0	30.5	29.2	25.0	28.0	26.6	28.6	27.7	26.2	26.7
40–49	22.1	19.8	24.0	22.0	24.8	20.4	29.5	28.3	28.1	23.6
50–59	13.4	9.1	15.9	13.5	18.5	15.9	19.4	17.2	22.1	15.7
60–69	0.0	4.6	0.0	6.3	0.0	9.5	0.0	7.0	0.0	9.0
Education										
Low	58.6	61.3	38.6	41.7	20.7	33.0	20.7	18.5	73.4	58.4
Medium	36.0	33.1	48.5	43.9	53.6	40.3	62.2	63.3	17.9	15.1
High	5.4	5.6	12.9	14.4	25.8	26.7	17.3	18.2	8.7	26.5
Marital status										
Never married	8.1	17.7	28.3	28.3	23.6	16.5	26.8	25.7	19.3	21.7
Married	87.8	75.6	67.4	67.4	71.9	77.5	68.0	69.7	72.1	71.1
Widowed	2.1	4.3	3.0	3.0	3.2	3.9	2.0	1.6	1.6	4.3
Divorced	2.0	2.4	1.3	1.3	1.4	2.4	3.2	2.9	7.0	2.9
Gross annual household income										
Low	35.8	22.7	26.3	20.4	28.1	43.4	31.5	27.8	34.2	6.0
Medium	38.8	42.0	47.9	53.8	32.3	27.3	38.2	38.0	43.4	47.0
High	25.4	35.3	25.8	25.8	39.6	29.3	30.3	34.2	22.4	47.0
Total	800	1,000	800	1,000	800	1,000	800	1,038	800	1,000

household income, ► [health](#), ► [education](#), and job), (2) interpersonal life sphere (comprising satisfaction with housing, friendships, neighbors, family life, leisure, and spiritual life), and (3) public life sphere (comprising satisfaction with public safety, environment, ► [welfare](#), and democratic system). The personal life sphere comprised domains that influenced a person's sense of subjective well-being in terms of being healthy, being employed, and possessing sufficient financial resources. The public life sphere contained domains that contributed to a pleasant living environment in society. The interpersonal life sphere highlighted the various relationships that give emotional strength to a person (i.e., one's spouse, family, friends, neighbors, and religious community). National pride was assessed by the question "How proud are you of being (of a particular nationality)?" For religiosity, respondents were asked to indicate how often they prayed or meditated.

Results

Happiness

Table 2 shows the percentages of respondents who indicated their level of happiness and the mean scores. A lower mean, calculated based on the survey responses, indicated greater happiness. In 2004 which is the base year for all countries, the means indicated that generally the respondents for the five ASEAN countries were happy. The Malaysians were the happiest, followed by the Singaporeans, Filipinos, Indonesians, and Thais. In 2006/2007, the means had a wider spectrum when compared to 2004. The Filipinos overtook the Malaysians as the happiest people. Singaporeans and Thais were in the middle. The Indonesians were the unhappiest; they had grown more unhappy compared to 2004. Singapore also had a slight dip in happiness, compared to earlier years. However, there was an improvement for the other three countries.

Subjective Well-Being in ASEAN, Table 2 Level of happiness

	Very happy (a)	Quite happy (b)	Neither happy nor unhappy	Not too happy (c)	Very unhappy (d)	Mean score on scale
Indonesia						
(2004)	15.4 %	70.5 %	5.8 %	8.1 %	0.2 %	2.07
(2007)	13.0 %	53.4 %	25.3 %	7.7 %	0.6 %	2.30
Malaysia						
(2004)	25.6 %	61.6 %	9.6 %	3.5 %	0.1 %	1.91
(2007)	32.9 %	55.3 %	7.9 %	3.9 %	0 %	1.83
Philippines						
(2004)	32.1 %	42.7 %	15.1 %	8.7 %	1.3 %	2.04
(2007)	38.8 %	47.1 %	9.7 %	3.9 %	0.4 %	1.80
Singapore						
(2004)	27.9 %	53.1 %	13.1 %	4.5 %	1.4 %	1.98
(2006)	27.5 %	51.1 %	15.4 %	5.2 %	0.9 %	2.01
Thailand						
(2004)	21.3 %	56.9 %	14.1 %	6.3 %	1.3 %	2.09
(2007)	22.7 %	57.9 %	15.5 %	3.6 %	0.3 %	2.01

Subjective Well-Being in ASEAN, Table 3 Levels of enjoyment (2006/2007)^a

	Often (a)	Sometimes (b)	Rarely (c)	Never (d)	Mean score on scale
Indonesia	30.4	52.9	15.3	1.4	1.88
Malaysia	45.4	44.9	8.9	0.7	1.65
Philippines	35.9	51.9	11.7	0.5	1.77
Singapore	34.3	54.2	10.0	1.5	1.79
Thailand	40.4	47.8	11.4	0.4	1.72

^aSurvey for Singapore was conducted in 2006, all others in 2007

Enjoyment and Achievement

Aside from happiness, other aspects of subjective well-being such as enjoyment (Table 3) and achievement (Table 4) were also examined. A lower mean indicated higher levels of enjoyment or achievement. As mentioned previously, Malaysians were generally very happy in 2007 while the Indonesians were the least happy. This was also reflected in the response to the question on enjoyment. In Table 3, the enjoyment means showed that Malaysians enjoyed life the most while the Indonesians the least. However, the poor sentiment and lower levels of enjoyment did not deter the Indonesians to reflect that, on balance, they actually accomplished the most. Singaporeans, on the other hand, were ranked low in their enjoyment and achievement although they had higher happiness scores. As these responses were based on respondents'

perceptions, the patterns emerging from them could reflect different interpretations of happiness and enjoyment and different levels of expectations in terms of achievement.

The Impact of Demographic and Non-demographic Factors

The results of the regression analyses will be discussed, according to country.

Indonesia

The combined effects of demographic and non-demographic factors on happiness, enjoyment, and achievement were significant (the R-square for the multiple regression ranged from 0.144 to 0.215 and the *F*-values ranged from 12.831 to 20.872, $p = 0.000$; see Table 5). None of the demographic variables were significant in explaining why Indonesians were happy.

Subjective Well-Being in ASEAN, Table 4 Levels of achievement (2006/2007)^a

	A great deal (a)	Some (b)	Very little (c)	None (d)	Mean score on scale
Indonesia	25.4	59.0	14.0	1.6	1.92
Malaysia	23.7	58.1	16.2	2.0	1.96
Philippines	23.6	51.4	20.6	4.4	2.06
Singapore	16.9	59.1	20.7	3.2	2.10
Thailand	9.4	65.5	16.9	8.2	2.24

^aSurvey for Singapore was conducted in 2006, all others in 2007

Subjective Well-Being in ASEAN, Table 5 Determinants of happiness, enjoyment, and accomplishment: Indonesia

Independent variables: demographic variables	Dependent variable: happiness ^a	Dependent variable: enjoyment ^a	Dependent variable: achievement ^a
Constant	0.832 ($p < 0.000$)	0.965 ($p < 0.000$)	1.120 ($p < 0.000$)
Age	0.052	0.119 ($p < 0.001$)	0.023 ($p < 0.028$)
Gender	0.066	-0.001	0.043
Education	-0.006	-0.030	-0.047
Household income	0.004	-0.086 ($p < 0.020$)	-0.072
Satisfaction with personal life	0.354 ($p < 0.000$)	0.212 ($p < 0.000$)	0.278 ($p < 0.000$)
Satisfaction with public life	-0.115 ($p < 0.000$)	-0.046	0.004
Satisfaction with interpersonal life	0.193 ($p < 0.000$)	0.239 ($p < 0.000$)	0.055
How proud are you of being Indonesian?	0.064	0.064	0.064
How often do you pray or meditate?	-0.059	-0.074 ($p < 0.033$)	-0.045
R-square	0.215	0.201	0.144
F-value	20.872 ($p < 0.000$)	19.125 ($p < 0.000$)	12.831 ($p < 0.000$)

^aFigures shown are standardized coefficients. Figures in bold indicate significance at $p < 0.05$

Instead, satisfaction with their personal and interpersonal lives contributed to their happiness, but dissatisfaction with their public life decreased this happiness. Demographically, older Indonesians, those with lower income and who were less religious, enjoyed life more. Satisfaction with their personal and interpersonal lives also contributed to their enjoyment of life. For accomplishment, older Indonesians and those who are satisfied with their personal lives had a greater sense of achievement.

Malaysia

The combined effects of demographic and non-demographic factors on happiness, enjoyment, and achievement were significant (the R-square for the multiple regression ranged from 0.137 to 0.254 and the F -values ranged from 8.886 to 19.109, $p = 0.000$; see Table 6). Being male and deriving satisfaction from their personal and interpersonal lives contributed to

Malaysians' happiness. Demographics did not explain why the Malaysians enjoyed life, but satisfaction with their personal and interpersonal lives did. As for accomplishment, having high incomes did not help in boosting Malaysians' sense of accomplishment, but satisfaction with their personal and interpersonal lives did.

Philippines

The combined effects of demographic and non-demographic factors on happiness, enjoyment, and achievement were significant (the R-square for the multiple regression ranged from 0.169 to 0.211 and the F -values ranged from 14.216 to 18.697, $p = 0.000$; see Table 7). Education seemed to adversely affect the Filipinos' happiness. Similar to the Indonesians and the Malaysians, the satisfaction from their personal and interpersonal lives contributed to the Filipinos' happiness. These variables also positively affected their enjoyment of life.

Subjective Well-Being in ASEAN, Table 6 Determinants of happiness, enjoyment, and accomplishment: Malaysia

Independent variables: demographic variables	Dependent variable: happiness ^a	Dependent variable: enjoyment ^a	Dependent variable: achievement ^a
Constant	0.492 (<i>p</i> < 0.041)	0.586 (<i>p</i> < 0.005)	1.375 (<i>p</i> < 0.000)
Age	0.039	0.042	-0.055
Gender	-0.085 (<i>p</i> < 0.032)	-0.038	-0.015
Education	0.023	-0.031	-0.008
Household income	-0.069	-0.068	-0.134 (<i>p</i> < 0.004)
Satisfaction with personal life	0.272 (<i>p</i> < 0.000)	0.154 (<i>p</i> < 0.004)	0.183 (<i>p</i> < 0.001)
Satisfaction with public life	0.026	0.013	-0.012
Satisfaction with interpersonal life	0.251 (<i>p</i> < 0.000)	0.283 (<i>p</i> < 0.000)	0.147 (<i>p</i> < 0.009)
How proud are you of being Malaysian?	-0.023	0.065	0.090
How often do you pray or meditate?	0.004	0.006	-0.002
R-square	0.254	0.212	0.137
F-value	19.109 (<i>p</i> < 0.000)	15.088 (<i>p</i> < 0.000)	8.886 (<i>p</i> < 0.000)

^aFigures shown are standardized coefficients. Figures in bold indicate significance at *p* < 0.05

Subjective Well-Being in ASEAN, Table 7 Determinants of happiness, enjoyment, and accomplishment: Philippines

Independent variables: demographic variables	Dependent variable: happiness ^a	Dependent variable: enjoyment ^a	Dependent variable: achievement ^a
Constant	1.256 (<i>p</i> < 0.000)	1.216 (<i>p</i> < 0.000)	0.952 (<i>p</i> < 0.000)
Age	-0.048	0.033	0.019
Gender	-0.069	0.014	-0.012
Education	-0.115 (<i>p</i> < 0.006)	-0.130 (<i>p</i> < 0.002)	0.014
Household income	0.000	-0.055	-0.083 (<i>p</i> < 0.034)
Satisfaction with personal life	0.209 (<i>p</i> < 0.000)	0.244 (<i>p</i> < 0.000)	0.142 (<i>p</i> < 0.004)
Satisfaction with public life	-0.039	-0.053	0.010
Satisfaction with interpersonal life	0.214 (<i>p</i> < 0.000)	0.181 (<i>p</i> < 0.000)	0.331 (<i>p</i> < 0.000)
How proud are you of being Filipino?	0.059	0.017	-0.002
How often do you pray or meditate?	-0.007	0.019	0.021
R-square	0.169	0.187	0.211
F-value	14.216 (<i>p</i> < 0.000)	16.079 (<i>p</i> < 0.000)	18.697 (<i>p</i> < 0.000)

^aFigures shown are standardized coefficients. Figures in bold indicate significance at *p* < 0.05

However, like Malaysians, having high incomes did not boost the Filipinos' sense of accomplishment, but satisfaction with their personal and interpersonal lives did.

Singapore

The combined effects of demographic and non-demographic factors on happiness, enjoyment, and achievement were significant (the R-square for the multiple regression ranged from 0.152 to 0.291 and the *F*-values ranged from 10.795 to 24.903, *p* = 0.000; see Table 8). Similar to the Indonesians

and Thais, none of the demographics explained Singaporeans' happiness. Like the aforementioned three countries, satisfaction with personal and interpersonal life contributed to Singaporeans' happiness. However, unlike these countries, Singapore was the only country in which their sense of national pride contributed much to their happiness. This, together with the satisfaction with their personal and interpersonal lives, also contributed to Singaporeans' enjoyment of life. Younger Singaporeans and those with lower income had greater sense of accomplishment. Those satisfied

Subjective Well-Being in ASEAN, Table 8 Determinants of happiness, enjoyment, and accomplishment: Singapore

Independent variables: demographic variables	Dependent variable: happiness ^a	Dependent variable: enjoyment ^a	Dependent variable: achievement ^a
Constant	0.040	0.855 ($p < 0.000$)	1.904 ($p < 0.000$)
Age	0.018	-0.040	-0.096 ($p < 0.024$)
Gender	-0.037	-0.030	-0.076
Education	0.041	-0.055	-0.053
Household income	-0.007	-0.036	-0.156 ($p < 0.000$)
Satisfaction with personal life	0.276 ($p < 0.000$)	0.193 ($p < 0.000$)	0.225 ($p < 0.000$)
Satisfaction with public life	0.069	-0.001	0.017
Satisfaction with interpersonal life	0.213 ($p < 0.000$)	0.189 ($p < 0.000$)	0.059
How proud are you of being Singaporean?	0.149 ($p < 0.000$)	0.151 ($p < 0.000$)	0.124 ($p < 0.000$)
How often do you pray or meditate?	0.027	0.036	-0.009
R-square	0.291	0.177	0.152
F-value	24.903 ($p < 0.000$)	13.029 ($p < 0.000$)	10.795 ($p < 0.000$)

^aFigures shown are standardized coefficients. Figures in bold indicate significance at $p < 0.05$

with their personal life and had a sense of national pride felt positively about their happiness, enjoyment, and achievement.

Thailand

The combined effects of demographic and non-demographic factors on happiness, enjoyment, and achievement were significant (the R-square for the multiple regression ranged from 0.197 to 0.240 and the F -values ranged from 18.853 to 24.212, $p = 0.000$; see Table 9). Similar to the Indonesians, none of the demographics explained the Thais' happiness. However, unlike the Indonesians and the Malaysians, satisfaction with all three spheres of life (personal, public, and interpersonal) contributed to the Thais' happiness. Also, unlike the Indonesians but like the Filipinos and the Malaysians, none of the demographic variables had an impact on the Thais' enjoyment of life, but satisfaction with their personal and interpersonal lives did. However, unlike the Indonesians, the Filipinos, and the Malaysians, age, education, and income had negative effects on the Thais' sense of accomplishment. Younger, less educated, and lower-income Thais felt they had a sense of achievement. Those who were satisfied with their personal, interpersonal, and public lives felt happier, enjoyed life, and had greater sense of achievement. Those who were satisfied with their public life were happier.

Discussion

Summary of Key Findings

Generally, the respondents for the five ASEAN countries were rather contented. The Malaysians were the happiest, followed by the Singaporeans, Filipinos, Indonesians, and Thais. While Malaysians and Singaporeans were almost as happy in 2007 and 2006, respectively, compared to 2004, the Philippines had the largest improvement in their happiness mean. Thailand also had a slight increase. However, Indonesia suffered a decline in their happiness mean, making them the unhappiest lot in 2007.

In terms of other aspects of subjective well-being, such as enjoyment and achievement, the Malaysians who were generally happy enjoyed life the most, while the Indonesians who were generally unhappy enjoyed life the least. Interestingly, the Indonesians felt that they had accomplished the most, despite their happiness and enjoyment scores being below the other countries. Ironically, Singaporeans had higher happiness scores but felt that they had not achieved or enjoyed much.

Demographic and non-demographic factors contributed differently toward the general well-being of people in ASEAN. The four demographic factors played significant roles in explaining the well-being of ASEAN people either singly or in combination. Age contributed

Subjective Well-Being in ASEAN, Table 9 Determinants of happiness, enjoyment, and accomplishment: Thailand

Independent variables: demographic variables	Dependent variable: happiness ^a	Dependent variable: enjoyment ^a	Dependent variable: achievement ^a
Constant	1.098 (p < 0.000)	1.079 (p < 0.000)	2.403 (p < 0.000)
Age	0.056	0.030	-0.158 (p < 0.000)
Gender	-0.043	-0.057	-0.059
Education	-0.061	-0.035	-0.106 (p < 0.006)
Household income	-0.029	-0.067	-0.118 (p < 0.002)
Satisfaction with personal life	0.201 (p < 0.000)	0.299 (p < 0.000)	0.245 (p < 0.000)
Satisfaction with public life	0.120 (p < 0.003)	-0.074	-0.039
Satisfaction with interpersonal life	0.261 (p < 0.000)	0.252 (p < 0.000)	0.186 (p < 0.000)
How proud are you of being Thai?	-0.063	-0.006	-0.031
How often do you pray or meditate?	-0.014	-0.020	-0.050
R-square	0.240	0.226	0.197
F-value	24.212 (p < 0.000)	22.107 (p < 0.000)	18.853 (p < 0.000)

^aFigures shown are standardized coefficients. Figures in bold indicate significance at $p < 0.05$

toward Indonesians' enjoyment and achievement (older Indonesians enjoyed life more and felt they had achieved more), while it contributed negatively toward Singaporeans' and the Thais' sense of achievement (older Singaporeans and older Thais had a lower sense of achievement). Gender was only significant in the case of Malaysian males who were happier compared to their female counterparts. Education had a negative impact on the happiness and enjoyment of the Filipinos (the more educated Filipinos were less happy and enjoyed life less) and a negative impact on the Thais' sense of achievement (the more educated Thais felt they had achieved less). Income had a consistently negative impact on achievement for all countries except Indonesia (the higher income groups in these countries felt they had achieved less) and a negative impact on enjoyment for Indonesia (the higher income Indonesians enjoyed life to a lesser degree). Generally, demographic factors seemed to play a lesser role in impacting the happiness aspect of well-being for people in ASEAN. Enjoyment and achievement were more affected by these factors.

The five non-demographic factors exerted an interesting impact on the well-being of people in ASEAN. Satisfaction with personal life contributed significantly to all three aspects of well-being (happiness, enjoyment, and achievement) across all five ASEAN countries.

The pattern for satisfaction with interpersonal life was slightly different. While satisfaction with interpersonal life contributed toward happiness, enjoyment, and achievement for Malaysians, Filipinos, and Thais, it only contributed toward happiness and enjoyment for the Indonesians and the Singaporeans. Satisfaction with public life had no significant impact on the well-being of Malaysians, Filipinos, and Singaporeans. However, this factor had a negative impact on Indonesians' happiness but a positive impact on the happiness of the Thais. National identity had no significant impact on all aspects of well-being for all countries except Singapore, where it contributed positively toward all three aspects. Religiosity had no significant impact on all well-being aspects for all countries except for Indonesia, where it negatively impacted enjoyment. Generally, satisfaction with personal life had the most salient impact on all aspects of well-being, followed by satisfaction with interpersonal life and satisfaction with public life. The less salient factors were national pride (only for Singapore, in all three aspects) and religiosity (only for the enjoyment of Indonesians).

Implications

The findings revealed the varying influences of demographic and non-demographic variables on the subjective well-being of residents in the five

ASEAN countries. While the impact of demographic variables on happiness and enjoyment may be muted across the countries, their effect on achievement was more pronounced. Household income was rather significant in the effect of demographic variables on achievement. Interestingly, higher incomes did not necessarily lead to a greater sense of achievement. Given the emphasis that ASEAN countries have placed on economic growth and prosperity, this was surprising. While people had higher incomes, they might not feel they had accomplished much given their rising expectations, increasing ► [stress](#) levels, and faster pace of life. In order to mitigate such undesirable effects, governments and policy makers should be aware of the impact of accelerated economic growth on their residents' overall quality of life.

For the non-demographic variables, satisfaction with the personal life sphere had the most widespread impact on the ASEAN residents' happiness, enjoyment, and achievement. These domains mainly pertained to one's economic welfare and access to resources. Governments and policy makers should continue to ensure that the conditions necessary for sustainable employment and resource-building are present. This could be challenging for ASEAN countries with large rural populations, who may not have easy access to education and healthcare as compared to urban residents.

The interpersonal life sphere featured prominently for Indonesia and Singapore (for happiness and enjoyment) and for Malaysia and Thailand (for happiness, enjoyment, and achievement). Only the people in the Philippines were not significantly influenced by this sphere. Governments and policy makers should ensure that the social networks of family, friends, and the wider community are strengthened despite increasing urbanization and mobility of residents. It is also important to create and maintain avenues for leisure, ► [social interaction](#), and engagement with various levels of society.

Finally, for Singaporeans, since national identity plays an important role in subjective well-being, policy makers should continue to encourage and foster feelings of solidarity

among its residents through various nation-building programs. However, this patriotic fervor should be tempered with an understanding for the need for regional cooperation and identity (such as in the case of ASEAN).

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Subjective Well-Being Indicators

- [Subjective Indicators](#)

Subjective Well-Being Measure

► [Satisfaction with Life Scale \(SWLS\), an Overview](#)

Subjective Well-Being, General Theory

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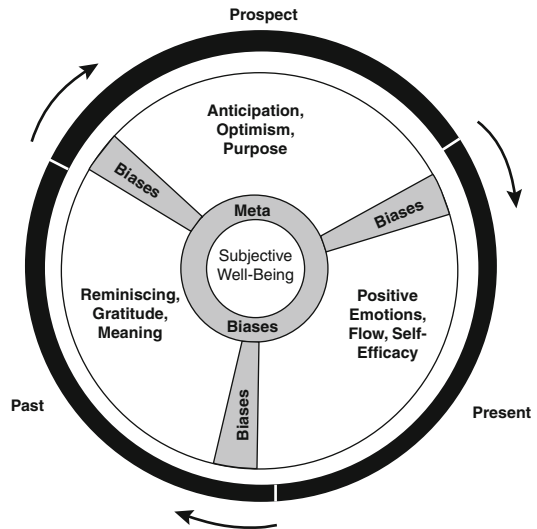
Definition

The 3P Model is a temporal model of ► [subjective well-being](#) (SWB) proposed by Adoree Durayappah in her 2011 paper *The 3P Model: A General Theory of Happiness*. The 3P Model is a parsimonious, unifying theory, which accounts for, as well as unites, disparate theories and measurements of ► [happiness](#). It categorizes the components of happiness under the temporal states of the present, the past, and the prospect (Future). The model indicates how each state is important to a global evaluation of subjective well-being and how each state is distinct yet connected to the other states. Additionally, the model explains how measures of happiness are affected by cognitive biases (e.g., Peak-End Rule, impact bias, Retrospective Bias), which factor into evaluations of the temporal states, and meta-biases (e.g., temporal perspectives), which factor into global evaluations of life satisfaction.

Description

Thoughts in Present, Past, and Prospect

The first step in the 3P Model denotes identifying the fundamental elements of happiness. These elegantly simple building blocks (as illustrated in [Fig. 1](#)) typify the three states of time: past, present, and prospect (future). These temporal components are distinct elements (Pavot, Diener,



Subjective Well-Being, General Theory, Fig. 1 The 3P Model of the components of happiness (Durayappah, 2011)

& Suh, 1998), but when viewed collectively, the result is a global evaluation of subjective well-being (SWB). As seen from [Fig. 1](#), during the temporal stages, happiness embodies varied forms. Some of these forms are more meaningful and lasting than other forms (i.e., short-term versus long-term constructs). Various measures of SWB reflect short- and long-term influences to differing degrees (Kozma, Stone, & Stones, 2000).

Present

► [Moods](#) and emotions represent affect, which characterizes people's online (in the moment) evaluations of events (Diener, Suh, Lucas, & Smith, 1999). Present affect can be positive or negative and researchers should measure these two independent factors separately (Bradburn & Caplovitz, 1965). Stallings, Dunham, Gatz, Baker, and Bengtson (1997) supplied that the experience of daily pleasurable events related to pleasant affect and the experience of daily undesirable events related to unpleasant affect.

One form of happiness in the present leads to a greater ► [satisfaction with life](#) over ► [pleasure](#) in the present: engagement (Peterson, Park, & Seligman, 2005), also known as ► [flow](#)

(Csikszentmihalyi, 1990). Flow can be described as mindfulness – the state of being completely lost in the present without worry of the future evaluation of the event. Another form of meaningful happiness in the present is ► [achievement](#). Davidson (1994) distinguished between pre-goal attainment and post-goal attainment positive affect. He uncovered that more pleasure comes from the progress towards a goal, which results in greater increases in prefrontal cortex activity, than the ephemeral high from the actual achievement of the goal, which results in the reduction of the prefrontal cortex activity. Related to achievement is ► [self-efficacy](#), which Bandura (2000) defined as one's belief in his/her ability to succeed in specific situations. As one possesses more self-efficacy in a particular area, one is more likely to work towards goals and challenges in that domain than to avoid them.

Past

Kahneman and Riis (2005) called it a basic tenant that individuals only keep the memories of experience; thus, lives are viewed from the perspective of the remembering self. Happiness from the past temporal state refers to happiness obtained from thoughts of and feelings about the past. Components of happiness in the past run the range of temporary feelings of pleasure to more meaningful forms of happiness. A rather short-term form of happiness that can develop into significant happiness with habituation is savoring the past, known as reminiscing. Bryant (2003) studied how pleasure in the present can be generated, intensified, and prolonged through reminiscing about past positive events after the event transpires, and additionally how reminiscing aids in developing the ► [self-concept](#). Fallot (1980) stated that positive reminiscing could also give one a sense of temporal continuity. Park, Peterson, and Seligman (2004) discussed how ► [gratitude](#) connects one happily to the past. Gratitude can contribute either to pleasure or to life satisfaction (Peterson, Ruch, Beermann, Park, & Seligman, 2007) when performed inveterately. A more lasting form of happiness in the past comes from a sense of meaning. The 3P Model includes meaning in

the past temporal state because a sense of meaning is the ability to understand one's own experiences, themselves, and the world around them (Steger, Kashdan, Sullivan, & Lorentz, 2008). Research by Moran, Tirri, Ulisses, and Bundick (2009) yielded that having a sense of meaning in one's life correlated with life satisfaction by 0.41.

Future

A future temporal focus is important to SWB (Pavot et al., 1998). The future component of happiness contains forms of happiness ranging from anticipation, to goals, to purpose. First, Bryant (2003) showed how people could generate and amplify pleasure before an upcoming event through anticipation. Next, Austin and Vancouver (1996) showed that individual behavior is best understood by looking into people's typical aspirations. Emmons (1986) found that having goals, making progress towards the goal, and a lack of conflict among the goals predicted SWB. Brunstein (1993) showed that a higher level of commitment towards a goal contributed to higher SWB. Third, Snyder (2000) espoused the importance of hope to life satisfaction. Current findings demonstrated that a positive outlook could influence how an individual copes with negative events (Scheier and Carver 1985; Lazarus et al. 1980; Seligman, 2006). Finally, having a purpose represents one important component in the future state. Moran et al. (2009) found that having a purpose in one's life correlated with life satisfaction by 0.46. Boyle, Barnes, Buchman, and Bennett (2009) noted that a greater purpose in life is associated with a reduced risk of all-cause mortality among community-dwelling older persons.

Temporal Assessments

As seen from Fig. 2, measurements of happiness are logically categorized in the same temporal states: experience measures happiness in the present, evaluation measures happiness in the past, and expectation measures happiness in the prospect state. A list of examples of constructs and measurements in each temporal state are featured in Table 1 below.

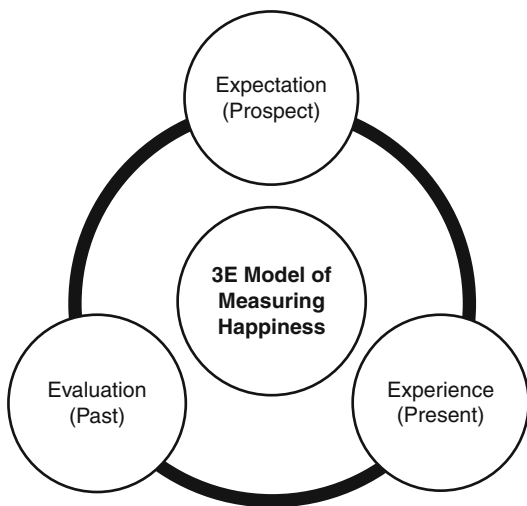
Experience

This category of measurement appraises moment-to-moment happiness. Kahneman (2000) referred to an assessment of experience as the sign and intensity of affective/hedonic experience at a given moment in time, which is known as momentary utility. Within the present state, many forms of evaluation offer themselves, including the experience sampling method (Csikszentmihalyi, 1990), assessment of positive and negative affect with the PANAS (Watson,

Clark, & Tellegen, 1988), and the daily reconstruction method, which takes the form of evaluation but is actually used to access the moment (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). To assess an aggregation of momentary utility, one can use the U-index, which measures the amount of time an individual spends in an unpleasant state (Kahneman & Riis, 2005).

Evaluation

In evaluation, the individual is measuring an event or sequence of experiences based on reflection. Kahneman (2000) included two types of utility that fall into evaluation: evaluation of a utility profile and remembered utility. Kahneman stated that evaluation of a utility profile is an observer’s judgment about the overall utility of an experience, whereas remembered utility is a subject’s own global evaluation of a past experience. The ► Satisfaction with Life Scale, SWLS, measures global evaluation of the past (Diener, Emmons, Larsen, & Griffin, 1985). Notably, just as components of temporal states can include proximal versus distal components, likewise measurements of SWB can reflect short- and long-term influences in different degrees (Kozma et al., 2000). Kahneman and Riis (2005) placed much emphasis on evaluation since SWB concerns the remembered self, when one must consider the question: how satisfied am I with my life as a whole?



Subjective Well-Being, General Theory, Fig. 2 The 3E Model of the measurements of happiness for the study of subjective well-being (Durayappah, 2011)

Subjective Well-Being, General Theory, Table 1 Examples of measurements in each temporal state (Durayappah, 2011)

Present		Prospect		Past	
Construct	Measurement	Construct	Measurement	Construct	Measurement
Affect (PA/NA)	PANAS (Watson, Clark, & Tellegen, 1988)	Anticipation	Savoring Beliefs Inventory (Bryant, 2003)	Happiness	Happiness Measure (Fordyce, 1988)
Experienced utility	ESM, DRM (Csikszentmihalyi, 1990; Kahneman et al., 2004)	Goals	Orientation of Life Goals scale (Roberts & Robins, 2000)	SWB	SWLS (Diener et al., 1985)
Unpleasantness	U-Index (Kahneman & Riis, 2005)	Purpose	Purpose in Life subscale (Ryff, 1989)	Meaning	Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006)

Expectation

This category measures the utility gained from thinking about future events. As is the case with the other temporal states, these measurements can be short-term or long-term components of happiness. Bryant (2003) refers to one short-term component as anticipation – looking forward to a good event. Other measures can assess an individual's positive outlook on the future, such as ► **optimism**. Other assessments focus on long-term components of happiness within the prospect stage. These can include components such as one's sense of purpose in life (Ryff, 1989) and life goals (Roberts & Robins, 2000).

Cognitive Biases

Happiness can be derived through thoughts of the present, past, or prospect, but when thoughts of a current experience are compared to thoughts about the past or the future, oftentimes those two sets of thoughts are not equivalent. The reason for the discrepancy originates from cognitive biases. Cognitive biases are patterns of errors in judgment that occur in particular situations. Biases stem from heuristics (rules of thumb), designed for individuals to make quick decisions by relying on simple rules rather than considering all of the factors (Kahneman, Slovic, & Tversky, 1982). These cognitive biases factor into evaluations of happiness. Biases exist between all temporal states (as illustrated in Fig. 1).

Biases Between Temporal States

Discrepancies exist between judgments of happiness of each temporal state. This model demonstrates that obstacles prevent information from transferring unchanged from one temporal state to another. As seen from Fig. 1, between each temporal state resides a channel. These channels represent cognitive biases. Psychologists have researched many of these biases between temporal states. Kahneman (2000) described psychological rules that influence evaluating past utility while Gilbert (2006) demonstrated distortions looking forward:

- **Biases Between Experience and Evaluation (Present and Past):** That is, Diener, Wirtz, and Oishi (2001) discussed the “James Dean

Effect”: a wonderful life that ends abruptly is rated more positively than a wonderful life with additional mildly pleasant years (the addition of a less intense ending to the wonderful life).

- **Biases Between Evaluation and Expectation (Past and Prospect):** That is, the tendency to overestimate the magnitude and generality of the positive or negative feeling generated by an event when predicting future events (Brickman, Coates, & Janoff-Bulman, 1978).
- **Biases Between Expectation and Experience (Prospect and Present):** That is, a prediction of a person's initial reaction to a new situation is incorrectly used as a proxy to forecast the long-term effects of that situation (Kahneman, 2000).

Meta-Biases

Figure 1 demonstrates that not only do biases exist between temporal states, but also one specific type of biases exists along the circumference of the core of the circle, where SWB is evaluated. This type of bias is called a meta-bias but also has been called a trait-level bias, external circumstance, or a bottom-up factor (Diener et al., 1999). Schwarz, Strack, Kommer, and Wagner (1987) suggested that people access domain-specific information when evaluating specific life domains but rely on heuristic cues when evaluating their SWB as a whole. These heuristic cues can stem from meta-biases such as:

- **Personality:** Kahneman and Krueger (2006) described how measures of temperament and personality typically account for much more variance of reported life satisfaction than do life circumstances (e.g., measures of psychological depression are highly correlated with life satisfaction).
- **Temporal Salience:** Schwarz and Strack (1991) showed how evaluations of global well-being and life satisfaction could be significantly affected by minor changes in the wording of a question or how one feels at the time of evaluation.
- ► **Adaptation:** ► **Adaptation** affects not just SWB evaluations but also individual temporal evaluations. Research on adaptation has

shown that individuals adapt quickly to positive and negative changes eventually returning to a baseline level of happiness (Brickman & Campbell, 1971; Kahneman, 1999; Lykken & Tellegen, 1996).

- **Cultural Biases:** Schimmack, Oishi, and Diener (2002) showed that Japanese-American students report lower levels of well-being than white American students in retrospective (evaluative) reports but equivalent levels in momentary (experiential) reports.

Key Points and Implications of the 3P Model

1. Since not all of an individual's waking thoughts concern the present (Klinger & Cox, 1987), future and past thoughts as well as future and past selves must be considered in the definition of what it means to be happy. Thus, the model builds on the temporal states of the past, present, and prospect.
2. Within each temporal state, long-term measures as well as short-term measures are to be considered (e.g., within the prospect stage, one must consider happiness derived from one's sense of purpose as well as pleasure derived from one's desires).
3. Bryant (2003) suggested that happiness is concerned not just with the ability to feel pleasure but also with the capacity to regulate pleasure, find it, manipulate it, and sustain it. The framework of this general model builds on managing and maximizing happiness (as well as minimizing unpleasantness) as it morphs through time.
4. Cognitive biases (e.g., peak-end rule, impact bias, and retrospective bias) stymie the ability to maximize and maintain pleasure from one temporal state to the next as well as the ability to minimize and curtail ► [pain](#).
5. SWB is evaluated by the maximization of happiness in each temporal state; however, meta-biases (e.g., personality) account for variations in global assessment and cumulative assessments of SWB in all the temporal states.
6. The framework inhabits a cyclical model in which evaluations of the present influence past

evaluations that affect future evaluations, which, in turn, factor into present evaluations and so on.

7. Adaptation is the shift from events in the cognitive present to the cognitive past (e.g., a widow might not have adapted to the death of a spouse 2 years later because that loss occupies current thoughts).

Discussion

The 3P Model recognizes the importance of adaptation in the sustainability of happiness. This model is flexible enough to account for cultural differences because the model does not stress the components of happiness but simply that the components that lead to happiness must permeate across all temporal states. King, Eells, and Burton (2004) concluded that there are many paths to a well-lived life. Because happiness is subjective, many components of happiness will differ due to personality, culture, and values. An objective definition of happiness represents one that, as Myers and Diener stated, breaks the ► [hedonic treadmill](#) by producing sustainable happiness.

The 3P Model of Happiness draws upon existing theories and current research to create a parsimonious, general model of happiness. The 3P Model uses time (past, present, and prospect) as the basic component of happiness and posits that, in order to sustain and amplify happiness, a network of happiness must grow within and through temporal states. The 3P Model evidences the notion that happiness is a temporal component, for one not only desires to pursue happiness (prospect) but also to experience it (present), as well as protect our previously acquired happiness (past).

This model is advantageous over other frameworks for a few reasons. Firstly, this model serves to unite top-down and bottom-up theories of happiness by showing how objective and subjective factors account for the evaluation of subjective well-being. Secondly, this model incorporates personal preferences towards components of happiness and temporal preferences to create individually meaningful happiness that remains

relevant as the individual's preferences evolve and change. Thirdly, this model includes clear implications for the theoretical definition of adaptation and recommendations for curbing it in order to sustain and even amplify happiness. Finally, the 3P Model implies that a happy event in one's life is meaningful when it is meaningful not just to the current self but also has meaning for the past self and future self. Human lives can be evaluated temporally (who I was, who I am, who I will be), the 3P Model allows happiness to be evaluated in the same manner.

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Subjective Well-Being, Psychopathology, and Physical Health in Adolescents

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Synonyms

[Dual-factor model of subjective well-being](#)

Definition

► [Subjective well-being \(SWB\)](#) and psychopathology represent two distinct aspects of mental health. Both positive (i.e., SWB) and negative (i.e., psychopathology) indicators of mental health are empirically linked to physical health. Physical health may be operationalized in numerous ways, including daily physical functioning, health-related behaviors, and chronic health conditions.

Description

The traditional model of wellness places mental health/► [happiness](#) on a continuum with psychopathology, each being at opposite ends. Yet, many researchers assert that the absence of disease is not an adequate criterion to describe a person as

mentally healthy and particularly not as possessing high or even average levels of happiness or optimal adjustment. Therefore, in contrast to a one-dimensional view of mental health, a more encompassing view would define psychopathology and mental health as separate yet interrelated constructs (Wilkinson & Walford, 1998). The dual-factor model of mental health posits that the integration of positive as well as negative indicators of well-being into health assessment yields a more comprehensive picture of functioning. Findings from Greenspoon and Saklofske (2001) and Suldo and Shaffer (2008) have demonstrated that assessment of SWB in addition to psychopathology provides a more comprehensive representation of mental health and helps differentiate important aspects of life functioning, including physical health. However, nearly all studies to date have examined one dimension of mental health (i.e., aspects of either psychopathology or SWB) in relation to physical health.

Studies of psychopathology and physical health among youth have demonstrated significant relationships between internalizing and externalizing mental health symptoms and physical health problems such as obesity and acute or chronic illness. Mechanic and Hansell (1987) first explored the relationship between psychopathology and physical health with a longitudinal study of high school students. At both time points, symptoms of depression were moderately, negatively correlated with good physical health at two time points, and a moderate, positive relationship was also found between health complaints and depressive symptoms. This study provided initial evidence that self-reported health problems were associated with one aspect of mental health, namely, depression. Links between psychopathology and another physical health indicator – obesity – were established via another longitudinal study among adolescents (Pine, Cohen, & Brook, 1997). Specifically, adolescent conduct disorder predicted higher adult BMI. This line of research has been extended to chronically ill samples of youth as well. Findings from a large-scale study in Norway demonstrate a stronger likelihood for symptoms of psychopathology among chronically ill youth versus their “healthy” peers

(Hysing, Elgen, Gillberg, Lie, & Lundervold, 2007). In a smaller study, adolescents with epilepsy reported significantly higher levels of internalizing psychopathology (i.e., depression, anhedonia, and social ▶ anxiety) as compared to healthy adolescents, matched on several demographic characteristics (Baker, Spector, McGrath, & Soteriou, 2005). Each of the aforementioned studies has demonstrated a significant link between negative indicators of mental health (i.e., psychopathology) and physical health. These findings have been replicated within both general samples of youth and those with chronic health conditions. However, studies that have examined psychopathology inform only one dimension of the link between mental and physical health. Attending to positive indicators of mental health (i.e., SWB) provides a vital piece of understanding whether “happier” youth are also “healthier” youth.

Studies on how physical health and positive indicators of mental health (e.g., SWB) relate are relatively scarce. One large-scale investigation of an indicator of SWB as related to daily physical functioning yielded significant links. Zullig, Valois, Huebner, and Drane (2005) asked a large statewide sample of adolescents (ages 13–18) to rate their perceived ▶ life satisfaction in the domains of self, ▶ family, friends, living environment, school, and overall, as well as their perceived health-related ▶ quality of life (HRQOL). To assess HRQOL, adolescents reported the number of poor physical health days and days of limited activity in the past month as well as provided a rating of their general health from poor to excellent. Adolescents who had lower overall and domain-specific life satisfaction scores reported more days of poor physical health, more days of limited activity, and lower ratings of health. Thus, adolescents tended to be more dissatisfied with life when their perception of health quality was low, highlighting the significant connection between positive appraisals of one’s life and daily physical health among youth. Hexdall and Huebner (2007) examined a sample of pediatric oncology patients ages 11–21 across several dimensions including life satisfaction, hope, and affect. Contrary to hypotheses, patients’ life satisfaction (as measured by the MSLSS and SLSS)

and positive and negative affect levels (as measured by the PANAS-C) were comparable to that of healthy children of similar ages, matched on age and gender. These findings are consistent with previous literature indicating that levels of SWB are fairly stable across time, although temporary fluctuations in response to ► **life events** may occur (Headey & Wearing, 1989). Patients included in this study had received a diagnosis of their illness (a form of leukemia or lymphoma) at a mean of 38 months prior to participating, and therefore any decreased impact on SWB may have stabilized at the time data were collected. On the other hand, relatively small sample sizes may have reduced power to detect significant group differences in SWB. An additional investigation using a larger sample of patients is necessary in order to draw more definitive conclusions.

Few studies to date have included both positive and negative indicators of mental health (i.e., anxiety and life satisfaction) in relation to perceived physical health in youth. First, among a large sample of Kuwaiti adolescents, a positive, moderate relationship between physical health and life satisfaction was indicated (Baroun, 2006). Of note, both constructs were measured via one self-report item developed by the researchers, scaled from 0 (*very low*) to 10 (*very high*). In addition, anxiety was inversely, moderately correlated with physical health. While the magnitude of the relationship with physical health was similar for life satisfaction and anxiety ($r = .28$ and $-.24$, respectively), comparisons of these mental health indicators to physical health should be made carefully due to limited support for the psychometric properties of either of the indicators used to measure physical health and life satisfaction. To demonstrate the importance of examining SWB separately from the absence of psychopathology, recent researchers have highlighted differences in outcomes among youth with similar levels of psychopathology but different levels of SWB (Suldo & Shaffer, 2008). A sample of middle school students completed self-report measures of both SWB and psychopathology. These mental health assessments were used to categorize

students into various mental health groups and then compare their educational, social, and physical functioning, measured via both self-report and objective data such as school records. Results demonstrated the importance of SWB as a significant correlate of all three areas of functioning, separate from that of psychopathology. Specifically, between two groups of youth both reporting low levels of psychopathology, those with average to high SWB reported significantly better educational, social, and physical health outcomes than youth with low SWB. Even among the other youth reporting some symptoms of psychopathology, those with higher SWB reported better functioning across all three domains assessed. A follow-up analysis by this same group of researchers demonstrated that the SWB construct of positive affect explained the most unique variance in physical health of youth ($\beta = .25$), when compared to both internalizing and externalizing psychopathology (Shaffer-Hudkins, Suldo, March, & Loker, 2010). Collectively, these results substantiate the importance of attending to SWB as a separate mental health construct in youth by demonstrating its significant links to physical functioning.

In sum, previous research consistently suggests links between both positive and negative indicators of mental health and physical health among youth. Measurement across studies has varied considerably, and few studies have included aspects of both psychopathology and SWB in a single investigation of physical health. Many facets of the relationship between adolescent's physical health and mental health have yet to be investigated, particularly when mental health is conceptualized as two separate constructs of SWB and psychopathology. Conclusions regarding the mental-physical health relationship could be strengthened by examining broader aspects of physical health. For instance, in addition to subjective self-perceptions, objective factors such as BMI, days absent from school due to illness, and health-related behaviors could be analyzed to serve as more objective indicators of physical health.

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Subordination-Reactivity and Health

- [Marital Conflict and Health](#)

Subsample

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Definition

The term *subsample* has two usages, a narrow technical one specific to the literature on survey design and a more general one as merely a subset of a data sample. This entry discusses the second, which is likely to be the most relevant to a general readership. The first is covered in the entry on ► [subsampling](#).

Description

In its general meaning as a subset of the sample observations, a subsample is typically of interest because the data vary according to some qualitative characteristic. Recognizing the role of this qualitative heterogeneity, so that subsamples of the data should be distinguished by it, is often crucial to drawing correct inferences.

In a notable example (Bickel, Hammel, & O'Connell, 1975), data on graduate admissions at the University of California at Berkeley showed a higher rate of admission for male applicants. Departmental subsamples revealed, however, that females tended to apply to the more popular programs to which admission was more competitive. The higher female rejection rate overall was found to be attributable to the higher rejection rates in the departments to which women disproportionately applied, and suggestions of gender discrimination were found to be unwarranted. Recognizing that departments vary in their rejection rates, so that admissions data should be analyzed as departmental subsamples, was the key to correct inference.

It is easy to think of characteristics by which a sample may vary qualitatively. In studying data

on people, it might be appropriate to distinguish subsamples of male versus female, or those who live in urban versus rural areas, or who graduated from high school or not. In studying workers, the researcher might wish to distinguish between employed and unemployed, or white collar and blue collar, or skilled and unskilled, or full-time and part-time. In studying firms, the researcher might wish to distinguish subsamples by industry or between manufacturing and services.

Admittedly, whether a feature is best captured qualitatively or quantitatively may be a matter of choice by the researcher. In studying data across countries, some researchers may find it useful to distinguish qualitatively between developed and underdeveloped countries (defining developed countries to be, say, the OECD subsample), while others may prefer to treat level of development quantitatively, measured perhaps by GDP per capita.

Because the potential importance of qualitative heterogeneity is ubiquitous to statistical analysis, and because statistics encompasses a vast array of methods, the precise manner in which subsamples are treated varies with the application. However, a tool that is often fruitful is to define a so-called dummy variable D_i (also called an indicator or binary variable) that distinguishes the characteristic by taking on 0–1 values. For example, male–female observations might be distinguished by defining the dummy variable to take on the value 0 for male observations and 1 for female. The values 0 and 1 are, of course, arbitrary, and the substantive inferences yielded by statistical techniques are (or should be) invariant to this arbitrary choice, but it often facilitates interpretation.

The analysis can be illustrated with the most common statistical technique: regression analysis. Labor economists study the determinants of workers' wages by estimating regression equations that specify wages to be a function of quantitative variables such as years of education, say

$$\log WAGE_i = \alpha + \beta EDUC_i + \varepsilon_i$$

The dependent variable is conventionally specified in logarithmic form because the

distribution of wages is usually well approximated as lognormal.

A researcher wishing to distinguish male–female subsamples could introduce the previously defined dummy variable as an additional regressor:

$$\log WAGE_i = \alpha + \beta EDUC_i + \alpha_1 D_i + \varepsilon_i$$

The effect of this is to permit the intercept to shift across the subsamples: the intercept is α for male observations (when $D_i = 0$) but $\alpha + \alpha_1$ for females (when $D_i = 1$). Labor economists virtually always find α_1 to be negative and statistically significant, indicating that females earn significantly less than men even when other factors such as education are controlled for.

This role for the dummy variable can be extended in several ways. It can be used to shift the slope coefficient β as well as the intercept α and similarly for the slope coefficients on additional explanatory variables that may appear in more general specifications. Other dummies can be introduced to capture other qualitative characteristics. And multiple dummies can be defined to distinguish among multinomial rather than binary characteristics, for example, to distinguish seasonal influences. This flexibility makes dummy variables among the most useful tools of applied regression analysis. For an introductory treatment with numerous empirical examples from economics, see Stewart (2005, Chap. 10).

It is useful to distinguish this meaning of the term subsample from several related but distinct problems, each of which has its own well-developed literature. These are mentioned here in order to differentiate them from the elementary treatment of subsamples that has been discussed so far.

Stratification. As they have been defined, the role of subsamples in the analysis of the data is unrelated to the sampling process by which the data have been obtained. In the wage equation, for example, the regression disturbance would typically be specified as identically and independently distributed across the observations i . This reflects the collection of the data by simple

random sampling, in which all sample drawings share a common probability of being drawn, although more complex sampling structures – such as autocorrelation in time series data – are not precluded. In any case, notwithstanding the heterogeneity associated with the qualitative characteristic, the data are assumed to have been obtained from a homogeneous sampling process, the most basic such process being simple random sampling in the case of cross-sectional data.

By contrast, stratification is a data collection strategy in which the data consist of subgroups and the probabilities of sample drawings vary across the subgroups, although they are common within a subgroup. Consider a survey of urban and rural households. If the views of urban households are thought to be more homogeneous than those of rural households, it may be desirable to sample proportionally fewer urban households so that any one urban household has a lower probability of being selected than any one rural household. Although they might loosely be called subsamples, such subgroups are properly termed *strata*. Statistical agencies often use stratification to collect survey data so as to yield maximum information at minimum cost. Stratification is covered in all textbooks on survey sampling and design. For a treatment set within the context of econometric methods, see Cameron and Trivedi (2001, Chap. 24).

There are other respects in which subsamples can differ from strata. Whereas strata necessarily consist of mutually exclusive groups of observations, this need not be the case with subsamples. For example, one can speak of rolling (i.e., overlapping) subsamples of time series data.

Pooled Data. Although subsamples are distinguished by some qualitative characteristic, they nevertheless relate to data over some common unit of observation, be it people, firms, countries, or otherwise. In contrast, pooled data refers to data collected across more than one observational dimension. The most common case is where cross-sectional data are observed over time, such as census data collected every decade. Although it might be tempting to refer to a single census as a subsample of the larger data set, this use of the term fails to acknowledge the

pooled structure. A special case of pooled data, of great importance in empirical research, is *longitudinal* data in which the same cross-sectional units (people, firms, countries) are tracked over time (see Cameron and Trivedi (2001, Sec. V)). The term *panel data* varies somewhat in its usage but is typically used as a synonym for either pooled or longitudinal data.

Sample Selection. As discussed above, the treatment of subsamples takes the characteristic distinguishing them to be given (in the terminology of economics, exogenous) in relation to the behavior under study. For the most part, people do not choose to be male or female, for example, it is predetermined in relation to whatever phenomenon, such as their wage, is the subject of study.

The situation is rather different if membership in a sample is the outcome of choice (in the terminology of economics, is endogenous), that is, if people *self-select* into groups as a response to considerations such as the incentives they face. When membership in the sample under study is the result of self-selection, it may be important to treat this in the analysis.

Consider the wage equation. It is estimated over the subsample of workers who are employed, because wages are not observed for unemployed workers. But employment status is probably related to the explanatory variable education: lower-education workers are more likely to be unemployed. Thus, the available sample for which wages are observed, employed workers, consists disproportionately of higher-education workers. Estimating the wage equation without treating this sample-selection effect tends to underestimate the true benefit of education to earnings. Methods for treating sample selection have been pioneered by, most notably, James Heckman. For a treatment set within a survey of related methods, see Cameron and Trivedi (2001, Chap. 16).

Qualitative Responses. Sometimes membership in a subsample (such as being employed or unemployed), instead of being incidental to the phenomenon under study (such as the wage), is the phenomenon under study. What factors determine whether someone is employed or

unemployed? That is, membership in a subsample is the outcome of behavioral choice, and it is this behavior that is the subject of study. As other examples, the researcher might be interested in what factors determine how someone votes, whether a bank approves a loan, whether a woman joins the labor force, or whether someone works after high school or continues with their education.

Studying the determinants of such behavioral choices is the subject of *qualitative response* models, also called *discrete choice* or *qualitative-dependent variable* models.

There are several kinds of qualitative responses: binary (loan approved or denied), count (number of physician visits per year by a patient: 0,1,2,...), categorical (commuter transportation mode: 1 = car, 2 = train, 3 = bus, etc.), and ordered categorical (level of education: 1 = no high school, 2 = high school, 3 = some postsecondary, 4 = university degree, etc.). Each has a class of statistical models associated with it; see Cameron and Trivedi (2001, Chaps. 14, 15, and 20).

Rare Events. Research combines elements of qualitative response models and stratification. Suppose the researcher is interested in studying the determinants of a rare event, such as state collapse, war, terrorist attack, the outbreak of rare diseases, or financial crises. This is a qualitative-dependent variable problem in which it is membership in the subsample that is the phenomenon under study. However, because the event occurs infrequently, a simple random sample will typically include so few instances of the event that conventional statistical analysis is problematic. Instead it is best to oversample (draw disproportionately more observations on) the rare event. These oversampled observations are selected precisely because they include the “qualitative response” (the rare event) under study. That is, the researcher is engaged in response-based sampling, the statistical implications of which must be treated in the analysis.

For a concise introduction to rare events research, with useful references, see Lowe (2005).

Discussion

These literatures indicate that the term *subsample* can appear in a wide range of contexts, with widely varying implications for the appropriate analysis of the data.

Cross-References

► [Subsampling](#)

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Subsampling

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Synonyms

[Multistage sampling](#); [Two-stage sampling](#)

Definition

Subsampling refers to collecting data in two or more stages at successive levels of observation. In collecting data on urban households, we might begin with a first stage of identifying a randomly selected group of cities and then, as a second stage, sample households randomly within those cities. In studying crop yields, we might begin by selecting farms randomly and then, within those farms, sample smaller acreages. In an opinion

survey of university students, it would be natural to begin by choosing some universities and then sampling students within them. The first stage of sampling (in these examples, cities, farms, or universities) is called the primary subsample, the second (households, acreages, or students) the secondary subsample. The idea can obviously be extended to more than two stages: for example, sampling first cities, then blocks within the cities, and then households within blocks.

Description

The topic is often found under the synonyms two-stage sampling or multistage sampling. Although in principle various sampling schemes (ways of selecting the observations) can be used at each stage, in practice, some stages often use *cluster sampling*, a cluster being simply a convenient or natural grouping of the next level of observation. Farms are the natural cluster of the acreages of which they are composed; city blocks are convenient clusters of the households within them.

This entry describes briefly why subsampling might be a desirable data collection strategy.

In general, a researcher can ask: How should data be collected so as to obtain the most useful information at least cost? This is the subject of *survey sampling and design*, a field within statistics.

Fundamental to statistical inquiry is the notion of a *sample* of data drawn from a population. The population (sometimes called the universe) is the totality of all measurements that would in principle be of interest in connection with the phenomenon under study; however, this totality is unavailable because it is impossible or excessively costly to obtain. *Statistical inference* refers to using the limited information represented in the sample of data to infer (learn about) features of this unobservable larger population. Important aspects of statistical inference, familiar to any student of statistics, include using the sample data to estimate key features of the population, called parameters; constructing confidence intervals on the parameters or testing hypotheses about them; and prediction.

For data to be most informative about the underlying phenomenon of interest, it should in some sense be representative of the population. The reference standard for this representativeness is *simple random sampling*, meaning that the drawings are taken purely at random from the population so that each member of the population has an equal probability of being drawn. In the examples of the opening paragraph, the alternative can be imagined the data from a single stage: sampling urban households randomly from the population of all such households, or acreages from the population of all acreages under cultivation of the crop, or students from the population of all university students.

However, there are situations, of which these are examples, in which simple random sampling is not the most efficient way of maximizing the information in the sample. To establish this rigorously in terms of the underlying mathematics, textbooks often begin by demonstrating with *stratified sampling*, a sampling technique in which the data are collected in a way that reflects heterogeneity in the population.

It is easy to think of examples of heterogeneous populations: people are male or female, households may be urban or rural, and adults married or unmarried. Such mutually exclusive subpopulations are called *strata*. In *stratified random sampling*, the data are sampled randomly within strata, but probabilities may be unequal across strata. For example, if proportionally fewer urban dwellers are sampled than rural dwellers, then any one urban dweller is less likely to be drawn than any one rural dweller, even though all urban dwellers have the same probability of being drawn.

It can be shown that, when the population is heterogeneous, stratified sampling yields more precise estimates of parameters than does simple random sampling, thus establishing the larger truth that alternatives to simple random sampling are often of interest to survey researchers. Subsampling is one of those alternatives. Indeed, notice that stratified sampling can be interpreted as a subsampling design. In our opening examples, the cities, farms, or universities of the primary subsample can be interpreted as strata. To the extent that they are heterogeneous (cities may

be large or small, inland or coastal, have a major sports franchise or not, etc.), it may be appropriate to sample differently within them. Thus, stratified sampling can be viewed as a special case of subsampling generally.

Under what circumstances different subsampling techniques may be most informative and cost-effective is the subject of the technical literature on survey design, of which there are many excellent book-length treatments, both introductory and technical; Cochran (1977) is one classic text. Introductory treatments tend to focus on stratification and cluster sampling. For an exposition that is explicit in treating these as special cases of subsampling generally, see Jessen (1977, Chap. 9).

Cross-References

- ▶ [Inference, Statistical](#)
- ▶ [Survey Research](#)

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Subscales

- ▶ [Facets of Quality of Life of Older Adults, International View](#)

Subsistence Activities

- ▶ [Subsistence in the Arctic](#)

Subsistence Economy

- ▶ [Subsistence in the Arctic](#)

Subsistence in the Arctic

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Synonyms

[Informal economy in the Arctic](#); [Subsistence activities](#); [Subsistence economy](#); [Traditional way of living](#)

Description

Several recent studies confirm that the subsistence lifestyle is still part of the prevailing lifestyle in large parts of the Arctic (see e.g., ACIA, 2004, Arctic Human Development Report, 2004, the two ECONOR reports (Glomsrød et Aslaksen, 2006; Glomsrød et Aslaksen, 2009) the Survey of Living Conditions in the Arctic (SLiCA) (Poppel et al., 2007; Krse et al., 2008) and the ASI report – a follow-up to the Arctic Human Development Report (Arctic Social Indicators (ASI) 2010). They also confirm the existence of traditional subsistence activities (hunting, fishing, reindeer herding, and gathering berries) as a part of a “mixed economy” that is also based on cash employment (Wolfe & Walker, 1987).

The concept of the “mixed economy” reflects the socioeconomic reality that no peoples’ or communities’ livelihood is based solely on subsistence activities but to some degree rely on paid work and thus indicates an interdependency of subsistence and market economies in the Arctic.

Defining subsistence activities and the subsistence economy makes it necessary to distinguish these activities from the market economy depending on whether the outcome of the hunting, fishing, herding, or gathering activities are:

- For own/household use, as gifts to/from family/friends and others (*subsistence economy*)

- For sale at a local market, to institutions, or to private customers with no automatic registration of transactions (*the informal economy*)
- For sale to local or nonlocal distributors (*market economy*) (Rasmussen, 2005, 2007)

The definition of “subsistence” varies over time and between regions (see, e.g., Aslaksen et al., 2009).

In order to quantify the value of Arctic subsistence activities in regional and national economies, the following activities must be examined: hunting, whaling, fishing, herding, animal husbandry, gathering, and trapping.

Sources of data on subsistence are diverse and include case studies of small communities, administrative registers of regional wildlife management, and regional and national statistical data on licenses, quotas, catches of different species, and sales to processing plants. Other sources include harvest monitoring, government studies, species-specific studies, socioeconomic impact assessments, claims statements, ► [food security/nutrition studies](#), combined register and survey data, community profiles, and comparative circumpolar studies. Some regions of the Arctic are rich in administrative data from public registers, e.g., Russia up to the collapse of the Soviet Union, and Greenland, where very detailed wildlife harvest records have been registered for more than 200 years.

Since the late 1950s, the Canadian Government has carried out a number of Area Economic Surveys, yielding data on local resources, game-catch statistics, and land-use maps. In Canada, harvest surveys are usually required in association with land claims documentation and implementation. In Alaska, harvest studies are usually conducted in association with management of subsistence rights. In 1978, the Subsistence Division of the Alaskan Department of Fish and Game began studies that, like the Canadian studies, intended to establish baseline studies of subsistence resource use. Reports have since been published on wild resource harvest and use; seasonality of fishing, hunting, and gathering; methods of harvesting and processing; harvest levels; sharing and trading of subsistence foods; cultural and economic values associated with

subsistence; trends in resource use patterns; and resource issues that need resolution.

The Saami traditional settlement area includes the North of Norway, Sweden, and Finland and the Kola Peninsula in Russia. The national statistical offices of the Nordic countries publish population statistics based on census and population registers in each country, and recently Statistics Norway has published more detailed statistics about the living conditions of the Norwegian Saami.

Some of the subsistence activities listed above have been registered but generally not systematically over time, and the activities are in the Arctic – as in other regions of the world – most often not included in the regional and national accounts. When subsistence activities are not counted and an economic value not estimated, they are also not included in official statistics. This lack of visibility (in economic terms and official statistics) makes it often difficult to have subsistence activities recognized.

To illustrate how the household in the mixed subsistence and cash economy works as a microenterprise, a household production model was developed for use in the Survey of Living Conditions in the Arctic (Usher, Duhaime, & Searles, 2003). The model illustrates how Arctic households organize productive activities and allocate the factors of production (land, labor, capital) in order to optimize income flows from both the market (public and private sectors) and subsistence spheres of the economy. The model captures both monetary and non-monetary production and consumption within the household.

The significance of subsistence activities goes beyond the economic aspects (income, production, and consumption, including the value of the harvest and of the “factors of production,” e.g., hunting equipment). Not least the following aspects are important:

- *Nutritional aspects* (contributing to the diet of the household, the nutritional value of the diet, and the food security)
- *Social aspects* (including intergenerational transfer of knowledge expressing the social order and kinship)

- *Cultural aspects* (including principles of sharing and community relations)
- *Identity aspects* (including identity markers: values and activities related to subsistence such as language, food, relations to the land, hunting skills, and traditions)
- *Integration aspects* (the interrelationship and integration of the market economy and subsistence activities)

(Poppel, 2006; Poppel & Kruse, 2009)

The international core questionnaire applied in the Survey of Living Conditions in the Arctic offers opportunities to examine the importance of a mixed cash- and harvest herding based economy to living in the Arctic; relationships between traditional hunting, fishing, and herding activities and activities in the market economy sector; the respondents' satisfaction with the actual composition of the different activities; the preferred composition of activities; and the relationship of these activities to the overall well-being of the individual (Kruse et al., 2008).

Analysis based on the SLiCA data supports the hypothesis that the mixed economy is not only a matter of necessity but also a matter of choice. Further analysis of the SLiCA data at the individual level states that whether a person is satisfied or not with the combination of production activities he/she pursues matters a lot to the satisfaction with life as a whole: Only one-in-ten of the Greenland and Alaskan Inuit who are very dissatisfied with their own combination of production activities are very satisfied with their life as a whole compared to five in ten of those are very satisfied (ibid).

Cross-References

- ▶ [Indigenous Health Disparities](#)
- ▶ [Indigenous Knowledge](#)

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Substance Abuse

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Synonyms

Addiction; Alcohol abuse; Alcoholism; Drug abuse; Drug addiction; Problem drinking

Definition

Substance abuse refers to intoxicant use that interferes with a person's ability to function in major areas of life, is excessive or harmful, or that deviates from accepted norms.

Description

Substance abuse is both a clinical and colloquial term. In clinical use, substance abuse is the less serious of two diagnostic categories put forward in the American Psychiatric Association's *Diagnostic and Statistical Manual of* ▶ *Mental Disorders, Text Revised (DSM IV-TR)*, under the major heading of substance use disorders. A diagnosis of substance abuse includes one or more of the following indicators resulting from intoxicant use in a 1-year period: (1) recurrent trouble with law enforcement, (2) interpersonal problems, (3) failure to fulfill major role obligations, and the use of substances in hazardous conditions (2000, pp. 198–199). Loss of control over one's use, increased tolerance to the effects of a substance, and withdrawal symptoms from a substance are not factors in an abuse diagnosis. Substance dependence differs from substance abuse in that it accounts for physical symptoms of addiction such as tolerance, withdrawal, and loss of control. A previous or current diagnosis of substance dependence supersedes an abuse diagnosis.

In more common usage, *substance abuse* is less clearly defined. It can be used to describe

a range of intoxicant-use behaviors and is generally synonymous with terms such as drug abuse, addiction, alcohol abuse, alcoholism, problem drinking and the like. For instance, treatment publications from the Center for Substance Abuse Treatment [CSAT] not only use substance abuse as a blanket term for both the abuse and dependence *DSM* categories but also to acknowledge that the general public, policy makers, and treatment professionals all use the phrase to describe heavy and/or destructive intoxicant use (Center for Substance Abuse Treatment [CSAT], 2005, p. xvii). Substance abuse can also describe non-maladaptive, but legally prohibited or culturally inappropriate, use of a given substance. For instance, violating a doctor's instructions on the use of a prescription medication, underage alcohol consumption, using intoxicants to deal with emotional difficulty, *binge* drinking, or any use of criminalized intoxicants may all be referred to as *substance abuse*.

What constitutes substance abuse, and the perceived cause of that abuse, is both historically and culturally contingent; it can and does change over time. For instance, heavy alcohol consumption in the colonial United States was considered healthy and normal; an individual's frequent intoxication was not viewed as abuse or a sign of addiction, but was considered an act of free will and a sin born of a love of pleasure. Today, largely as the result of scientific studies on alcoholism and the influence of groups such as Alcoholics Anonymous, similar behavior is considered a symptom of a disease characterized by compulsive use beyond the control of the afflicted individual (Conrad & Schneider, 1992).

Moreover, perceptions of substance abuse differ within and between cultures. Often, in a given culture, the intoxicant preferences and use-practices of socially dominant groups tend to set the standard for *normal use*, while the intoxicant preferences and use-practices of marginalized and/or less powerful groups are often labeled deviant and abusive, leading to institutional efforts (e.g., criminalization of a particular intoxicant) to control the intoxicant use of these groups (Provine, 2007). Substance use preferences and use-practices can also serve as flash

points in conflicts between entrenched and emerging social groups. For example, the alcohol use of German and Irish immigrants to the United States was both an area of conflict in the drive toward prohibition and a reflection of the larger conflict between growing populations of immigrants and those with nativist sentiments (Gusfield, 1986; Pegram, 1998).

Cross-References

- ▶ [Addiction, An Overview](#)
- ▶ [Deviance](#)

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Substance Abuse Counseling

- ▶ [Counseling](#)

Substantive Democracy

- ▶ [Conceptualizing Democracy and Nondemocracy](#)

Substitute or Alternative Care

- ▶ [Care, Foster](#)

Substitution Treatment for Opiate Dependence

- ▶ [Methadone Treatment for Opiate-Dependent Persons](#)

Subtle Prejudice

- ▶ [Prejudice](#)

Suburbanization

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Synonyms

[Scattered settlements](#); [Urban dispersion](#); [Urbanization](#); [Urban sprawl](#)

Definition

Suburbanization is a term to describe the growth and spatial reorganization of contemporary city. The growth out of the compact city is the result of the flow of population, dwelling places, and commercial and industrial activities to new low-density settlements. Suburbs rise out of the historically defined borders of the city, but they often functionally depend on city through commuting.

Description

The development of transport and infrastructures has been the grassroots of modern

suburbanization since the last decade of the 1800s. The subsequent mass diffusion of automobile – first in the USA and then elsewhere – and the implementation of a wide road system allowed many wealthy families to move out easily from big, dirty, and overcrowded cities; so, they could enjoy all the aesthetic advantages of the countryside where suburbs were built. However, the real “explosion” of suburbanization occurred after the second World War: the baby-boomers generation set up a housing demand never seen before, and it occurred in the economic ferment of building trade and many other sectors. Different forms of suburbanization – gated communities and edge cities just to give a couple of striking examples – have progressively become very common trends that can be found in many urban regions all over the world (Fishman, 2003), with some local and national peculiarities of course.

Residential suburbanization is related to middle and upper-middle class flight to desirable areas. All these people are looking for the ownership of detached or semidetached houses located in a less crowded context. They consider these areas as places where living and raising children in the name of a *white flight* or a *flight from blight*, enjoying all the advantages of a typical urban way of life. In that regard, K. T. Jackson (1985) talks about “urban population deconcentration” to describe the migration of people out of the city. For American sociology, the suburb represents one side of the American Dream, and the suburban culture is often connected to distinctive ways of life. The idea of suburb as something which brings a *sui generis* way of life has been introduced since the urban studies of the 1950s–1960s, referring to standardized social and work patterns which are connected to middle class. Gans (1967) and Berger (1960) called the correlation between suburb and lifestyle into question, pointing out the substantial variations of age classes and life models in suburban areas.

Levittown is definitely the most famous embodiment of a suburb, a result of mass production of prepackaged dwellings and neighborhoods. It was made by two American brothers,

William and Alfred Levitt, who built about 17,000 houses lodging more than 80,000 people. Many critics to Levittown and other suburbs came from sociologists, urban planners, and architects.

Several sociological theories focus on the causes of suburbanization. Ecologists and many urban economists suggest that market development makes suburban settlements attractive. Urban land market is the mechanism that caused the outflow of commercial and residential activities that cannot afford a central location.

Other studies focus more on individual choices. Guest and Nelson (1978) suggest that suburbs appear more convenient than the city because of their new housing stock availability, their cheaper lots, and their good accessibility to highways and airports.

All these research approaches agree in stressing that resident population in the city is in average less wealthy than the suburban one; such trend can be found in many metropolitan regions, both in the USA and in Europe. At this purpose, a wide debate on natural suburban segregation is going on; such segregation seems to be disconnected from the residents’ stratification. The question is: is this natural segregation a free market result or can it be explained through political and institutional causes? A new concept, urban sprawl, has been recently introduced into sociological literature: this concept is used to define the trend of low-density spread settlements. The pattern of such settlements is highly energy-waster, and consequently, they are not sustainable due to their land use, transport, and mobility styles.

Equalizing *sic et simpliciter*, the concept of urban sprawl with the one of suburbanization is a mistake; however, these terms can be considered as synonymous in the description of the maybe irreversible spatial configuration that advanced societies are assuming.

John R. Logan (1992) gives two striking examples on the equivocal nature of the concept of suburbanization: “[...]when small cities are enveloped by the expansion of larger cities, at what point shall they be considered suburbs, if at all?” and “as some cities extend their

boundaries outward, will newly settled areas not be considered suburban if they are within the new boundaries?" Many researchers, those Americans first, resort to some conventional parameters from Census Bureau for a complete and sharable definition of suburb: so, a suburban area is first of all a portion of a metropolitan area which is settled out of the central city. However, conventional concepts as "metropolitan area" and "central city" are constantly evolving; they cannot be fixed once for all. In order to focus on the concept of suburb, recurring to some measurable elements can be useful: the distance from the core of the city, the recency of settlement, the residential density, the ► [commuting](#) flows, and so on.

Cross-References

- [Commuting](#)
- [Urban Areas](#)
- [Urban Life, Quality of](#)
- [Urbanization](#)

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Successful Completion of Upper Secondary Programs

- [High School Completion Rates](#)

Suffering

- [Anxiety](#)

Suicidal Behavior

- [Sexual Orientation and Mental Health](#)

Sulfur Dioxide Emissions in OECD Countries

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Definition

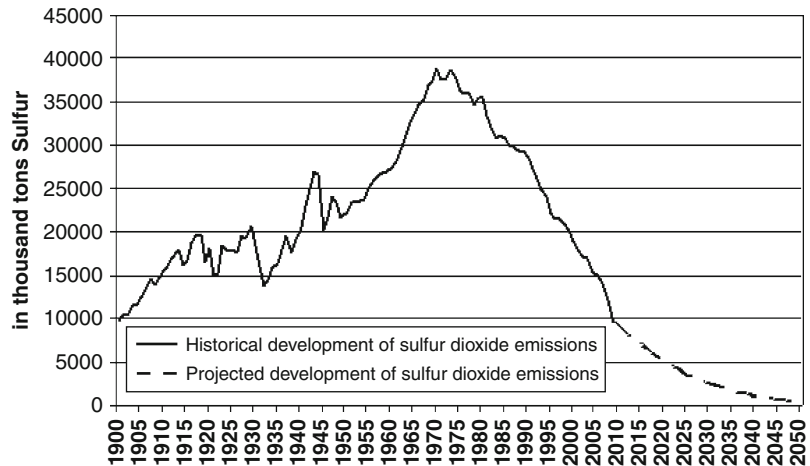
Sulfur dioxide (SO₂) is an invisible, highly reactive, and toxic gas. Once emitted in the atmosphere, SO₂ reacts easily with other substances to form harmful compounds, such as sulfuric acid, sulfurous acid, and sulfate particles. High emissions of SO₂ which are directly related to high atmospheric concentrations have several adverse consequences on human ► [health](#) and natural capital. Note that a very large part of global SO₂ is due to human activities. Most notably, the combustion of fossil fuels used in the industrial and power generating sectors generates sulfur dioxide emissions unless the sulfur compounds are removed before the combustion process.

Successful Aging (SA)

- [Elderly Activity and Engagement with Life](#)

Sulfur Dioxide Emissions in OECD Countries,

Fig. 1 SO₂ emissions in OECD countries.



The Organisation for Economic Co-operation and Development (OECD) is an international forum of rather developed countries officially born in September 1961 to stimulate economic growth and trade. Whereas the OECD originally had 20 member countries from ► [Europe](#) and Northern America, it consists of 34 member states in 2012. Alongside the world's most important industrialized countries, the organization now also includes emerging countries such as ► [Mexico](#), Turkey, and ► [Chile](#).

In a first step, this entry presents the historical development of SO₂ emissions in OECD countries, sheds light on the sociodemographic determinants of SO₂ emissions, and presents a future emission path based on existing regression analysis. In a second step, this entry presents evidence on the adverse consequences of SO₂ on ► [quality of life](#) and natural capital. It concludes with a discussion whether the historical development of SO₂ emissions in OECD countries had a positive or a negative impact on the ► [quality of life](#).

Description

Historical Development of Sulfur Dioxide Emissions

While global SO₂ emissions have increased with industrialization for the most part of the last century, they have started to decrease in recent

decades. This decline is the outcome of heterogeneous developments in different countries. Whereas emissions are still rising in many developing countries, the reduction of emissions in OECD countries led to the total effect that, by 2000, global emissions were about 25 % lower than the peak level observed in the 1980s. This means that the effect for OECD countries is even more pronounced than the global effect. By 2009, emissions in OECD countries amounted to approximately 25 % of their maximum emission levels in the 1980s. This is the result of a steady downward-sloping trend of SO₂ emissions in OECD countries (see continuous line in [Fig. 1](#)).

Determinants of Sulfur Dioxide Emissions

It is useful to know which determinants caused the given historical development of sulfur dioxide emissions (OECD, 2012). On their basis it is possible to forecast future levels of SO₂ emissions.

As mentioned above, emissions of SO₂ are induced to a large extent by man-made combustion of fossil fuels from stationary sources used in the industrial and power generating sectors. As such, three proximate factors actually determine national SO₂ emissions: total energy consumption, importance of fossil fuels with high sulfur contents in the process of energy generation (energy mix), and usage of end-of-pipe technologies. Since the beginning of the 1970s, more end-of-pipe technologies, such as flue-gas

desulfurization, have become available for SO₂ abatement at moderate cost. In contrast to the mitigating effect of technology, rising energy demand increases emissions of SO₂. Regarding the energy mix, the direction of the effect depends on countries' efforts to provide renewable energies with low sulfur dioxide emissions.

On the one hand, the proximate factors are linked to geographical aspects, e.g., climate conditions or resource endowments, and on the other hand, there exist political-economic factors, like environmental regulations or energy prices, that have an accompanying influence through the energy market. As such, they interact with the above-mentioned proximate factors.

From a sociodemographic perspective, it is possible to classify determinants that have indirect impacts on SO₂ emissions by affecting the proximate factors. These underlying sociodemographic factors such as population size, ► [population density](#), per capita income, ► [urbanization](#), ► [democracy](#), or population aging are identified by the STIRPAT (Stochastic Impacts by Regression on Population, Affluence, and Technology) and the EKC (environmental Kuznets curve) literature and used in econometric analysis as determinants for SO₂ emissions.

The literature on population size suggests that ► [population growth](#) per se does not affect emissions but only as such growth shapes the three proximate emission drivers. By treating the three proximate factors as endogenous variables, econometric analysis finds that population growth correlates positively with SO₂ emissions (see Menz & Kühling, 2011).

Prior work primarily finds ► [population density](#) to be negatively correlated with SO₂ emissions (see Selden & Song, 1994), perhaps reflecting lower transportation requirements and higher environmental preferences for densely populated areas.

Regarding the factor income, literature on the EKC argues that emissions rise with income in poor countries and decline with income in rich countries. That is, the income-pollution relationship takes an inverted U shape when plotted income per capita on the abscissa and SO₂ emissions on the ordinate (Dasgupta, Laplante, Wang,

& Wheeler, 2002). Following this argumentation and in accordance with Fig. 1, an EKC emerges for the historical development of sulfur dioxide emissions in OECD countries.

With respect to ► [urbanization](#) in developed countries, results suggest that higher urbanization rates correlate with higher emissions (Farzin & Bond, 2006). This finding is in line with the idea that urbanized areas emit more sulfur dioxide because they have higher energy intensities of income than rural areas, given that energy intensities of income correlate positively with urbanization. Concerning this matter, York (2007) confirms on the basis of energy consumption levels from 14 European Union member states that energy consumption is actually positively related to ► [urbanization](#).

Some studies reveal that higher ► [democracy](#) levels are associated with lower SO₂ emissions (see, for instance, Farzin & Bond, 2006). This association may be related to more effective dissemination of information, greater assertiveness of environmental lobbying groups, and/or more efficient public institutions in democratic societies.

Population aging may affect emissions of SO₂ both through a life-cycle dimension and through a cohort dimension (Menz & Kühling, 2011). That is, on the life-cycle dimension, societies with a higher share of individuals under the age of 15 are associated with lower emissions than those with a higher share in the range between 15 and 65 years. This result can be explained by lower energy consumption and higher air quality preferences of the junior population compared to the working-age population. In addition, countries with a large proportion of senior citizens (65 years of age and older) emit more sulfur dioxide given that energy consumption increases with age. On the cohort dimension, societies with a larger proportion of individuals born after 1960 tend to emit less SO₂. This finding likely reflects higher air quality preferences of cohorts born after 1960. In all, Menz and Kühling (2011) find that OECD countries' population aging between 1970 and 2000 was an emission-increasing factor, whereas the ongoing cohort replacement effect rather reduced emissions.

Projected Development of Sulfur Dioxide Emissions

The determinants of SO₂ emissions identified and discussed so far are regularly included in regression analysis to estimate their effects on SO₂ emissions. The coefficients estimated on the basis of historical data can be used, in combination with future trends of the determinants in order to forecast sulfur dioxide emissions. By using income projections (OECD/IEA, 2006), aging and population development prospects (UN, 2007) by regions up to the year 2050 as well as a quadratic time trend to account for technological progress, we compute a scenario for future emissions. This scenario results in a continuation of the steady downward-sloping trend of sulfur dioxide emissions in OECD countries up to the year 2050 (see dotted line in Fig. 1).

Interlinkages Between Sulfur Dioxide Emissions and Quality of Life

High atmospheric concentrations of SO₂ which are caused by high anthropogenic SO₂ emissions negatively impact the ► [quality of life](#) via several channels: adverse consequences for human health, decreased timber and agriculture yields, reduced visibility, accelerated depreciation of materials, and reductions in ► [recreation](#) services. By far, the most important channel via which high SO₂ concentrations reduce the ► [quality of life](#) is their impact on human ► [health](#) (Holland, Pye, Watkiss, Droste-Franke, & Bickel, 2005; Muller, Mendelsohn, & Nordhaus, 2011). There is ample evidence that high concentrations increase human morbidity and ► [mortality](#) rates due to the emergence of respiratory diseases and cardiac ailments (WHO, 2005). The World Health Organization (WHO) recommends that daily mean values of SO₂ concentrations should not exceed 20 µg per m³ to minimize negative ► [health](#) effects (WHO).

Owing to the decrease in SO₂ emissions mentioned above, mean SO₂ concentrations in most OECD countries are currently significantly below this threshold level recommended by the WHO. Due to the development of SO₂ emissions described above, the most pronounced decrease of SO₂ concentrations took place between 1980 and 2000. In ► [Germany](#), as one example for an

especially pronounced decline, mean SO₂ concentrations dropped from 131 µg per m³ to a value of approximately 10 µg per m³ during this period (OECD, 1999). In the USA, as one example for a less pronounced decline, mean SO₂ concentration during the same period dropped from approximately 30 µg per m³ to roughly 15 µg per m³ (OECD, 1999). Today, even in large cities such as New York, Berlin, London, Paris, or Tokyo, SO₂ concentrations only rarely exceed the threshold value of 20 µg per m³. However, note that SO₂ concentrations in less-affluent OECD countries such as ► [Mexico](#), Turkey, and ► [Chile](#) still exceed this threshold value.

Discussion

It is important to understand that the pronounced decline of SO₂ emissions over the last decades does not necessarily imply an increase in human ► [quality of life](#). Of course, less damage caused to the citizens' ► [health](#) states, higher timber and agriculture yields, better visibility, slower depreciations of materials, and increases in ► [recreation](#) services which went along with the decline of SO₂ concentrations had a positive impact on human ► [quality of life](#). Yet, these ► [air quality](#) improvements did not come without costs because SO₂ emission reductions in OECD countries mainly relied on the diffusion of specific abatement technologies. In the end, the monetary costs of these technologies have to be paid by the consumers. Thus, the budget available for the consumption of other goods decreases which in turn has a dampening effect on ► [quality of life](#). With respect to the historical reduction of SO₂ emissions in OECD countries over the last decades, the main question is consequently whether, in term of a ► [cost-benefit analysis](#), benefits outbalanced costs.

The monetary valuation of better ► [air quality](#) is a complex topic given very heterogeneous methodologies. However, with respect to air pollution with SO₂, there is broad evidence on the considerable monetary value of low SO₂ pollution. Even in 2000, after a significant amelioration of ► [air quality](#), the societal costs of sulfur dioxide pollution in the USA still amounted to approximately 184 billion US dollars (Muller

et al., 2011). For the European Union, even higher values have been reported (Holland et al., 2005). Recently, researchers also began to directly investigate the influence of high sulfur dioxide concentrations on ► [life satisfaction](#). To this end, they empirically related ► [life satisfaction](#) as stated in large surveys to sulfur dioxide emissions or concentrations controlling for various determinants of life satisfaction being usually included in ► [life satisfaction](#) studies (see Menz & Welsch, 2012 for a recent study and an overview of previous studies). The results were clear-cut: sulfur dioxide concentrations are significantly negatively correlated with ► [life satisfaction](#). The ► [life satisfaction](#)-reducing effect of SO₂ pollution seems to be considerable. To be more concrete, reducing SO₂ concentrations by 1 µg per m³ increases ► [life satisfaction](#) in the same way as an increase in annual income of approximately 0.5–1.5 % (see Menz & Welsch, 2012).

Calculating the costs of SO₂ emission reductions is methodologically less demanding. SO₂ emissions can mainly be reduced by lowering energy consumption or by decreasing the sulfur intensity of the energy mix. Turning to energy consumption, its reduction can be achieved by using more energy-efficient appliances, machines, or production facilities. Obviously, these more efficient energy users are often more expensive than their inefficient counterparts. Turning to the energy mix, a less sulfur intensive energy mix can be realized by installing additional desulfurization units, by abandoning low-priced fossil fuels with high sulfur content in favor of higher-priced combustibles with low sulfur content, and by increasing the share of renewable energies in the energy mix. The concrete costs of emission reductions depend on the concrete measures taken, the country under consideration, the state of technology, the regulatory regime, and the amount of emissions to be abated. Thus, it is hard to come up with a medium value for SO₂ abatement costs. Yet, there exist many studies investigating SO₂ abatement costs for one specific country and period of time given a certain regulatory regime. For example, SO₂ emissions in the USA decreased from

11,769,950 metric tons to a level of 7,421,538 metric tons between 1980 and 2000 (see Stern, 2005). The costs of this emission reduction of 4,348,412 metric tons amounted to approximately 35 billion US dollars (see Tietenberg, 2006).

Based on some ad hoc calculations on the development of concentrations in the USA between 1980 and 2000, we finally turn to the question whether the decrease in SO₂ emissions in OECD countries had a positive impact on human ► [quality of life](#). As mentioned above, the decline in emissions was accompanied by a decline of SO₂ concentrations from 30 to 15 µg per m³. According to the ► [life satisfaction](#) literature presented above, the resulting decline of 15 µg per m³ is equivalent to an increase in income by approximately 15 %. The Bureau of Economic Research holds available an easy-to-find US GDP figure for 1990: 5,800 billion US dollars. Using this value as a proxy for income, we calculate a monetary value of almost 900 billion US dollars for the air quality improvements between 1980 and 2000. This rudimentary calculation shows that benefits of past SO₂ emission reduction in the USA largely exceeded costs.

To conclude, the literature suggests that the observed SO₂ emission reductions in OECD countries during the last decades had a positive impact on human ► [quality of life](#). Recent studies even indicate that further emission reductions in OECD countries would still be welfare improving (EPA, 2010).

Cross-References

- [Preference-Based Measures of Health-Related Quality of Life](#)

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Sum of Pleasures and Pains

- ▶ [Happiness](#)

Sum of Squares

- ▶ [F-Ratio](#)

Summary Quality of Life Indices

- ▶ [Composite Index Construction](#)

Summum Bonum

- ▶ [Ubuntu: The Good Life](#)

Sunlight

- ▶ [Solar Energy](#)

Supercritical Fluid Extraction as a Green Technology

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Synonyms

[SCF extraction](#); [SFE](#)

Definition

Supercritical fluid extraction (SFE) is a physical process separation of one component (extract) from another (matrix) using a fluid in its supercritical state as the extracting solvent. In large scale, SFE is applied in the food, cosmetic, and pharmaceutical industries to obtain a desired extract (e.g., essential oils) or

remove unwanted material from a product (e.g., decaffeination). Carbon dioxide (CO_2) is the most used supercritical fluid, and SFE can be considered a green technology when the process is performed only with CO_2 , without cosolvents.

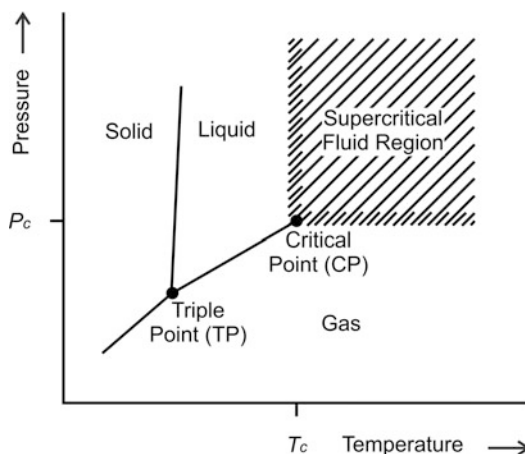
Description

Fundamentals

When a gas above its critical temperature is compressed to a pressure above its critical point, it does not liquefy. Instead, it reaches a supercritical state in which their properties may favor its use as a solvent. The critical temperature (T_c) and pressure (P_c) are unique to each pure substance, as demonstrated in Fig. 1.

Under supercritical conditions, some properties of the fluid are placed between those of a liquid and those of a gas: its density is similar to a liquid, its viscosity is close to those of gases, and its diffusivity is intermediate. Thus, supercritical fluid extraction (SFE) exhibits many operational advantages over traditional extraction methods, such as better transport properties, than liquids due to their low viscosity and relatively high diffusivity, which increases the diffusion through solid materials. Moreover, the high densities of supercritical fluids enhance their solvation power. By far the greatest advantage of using supercritical fluids is the possibility of modifying the density and, as a consequence, the solubility of the fluid by changing its temperature and/or its pressure (Raventós, Duarte, & Alarcón, 2002). In fact, extraction pressure is the most relevant process parameter, which can be used to tune the selectivity of the supercritical fluid. The higher is the pressure, larger is the solvent power and smaller is the extraction selectivity of a supercritical fluid.

Several solvents can be used as a supercritical solvent; however, the technical viability (critical properties), toxicity, cost, and solvation power determine the best-suited solvent for a specific application. Carbon dioxide is the most used solvent in supercritical operations due to being safe, nontoxic, and generally available at a reasonable



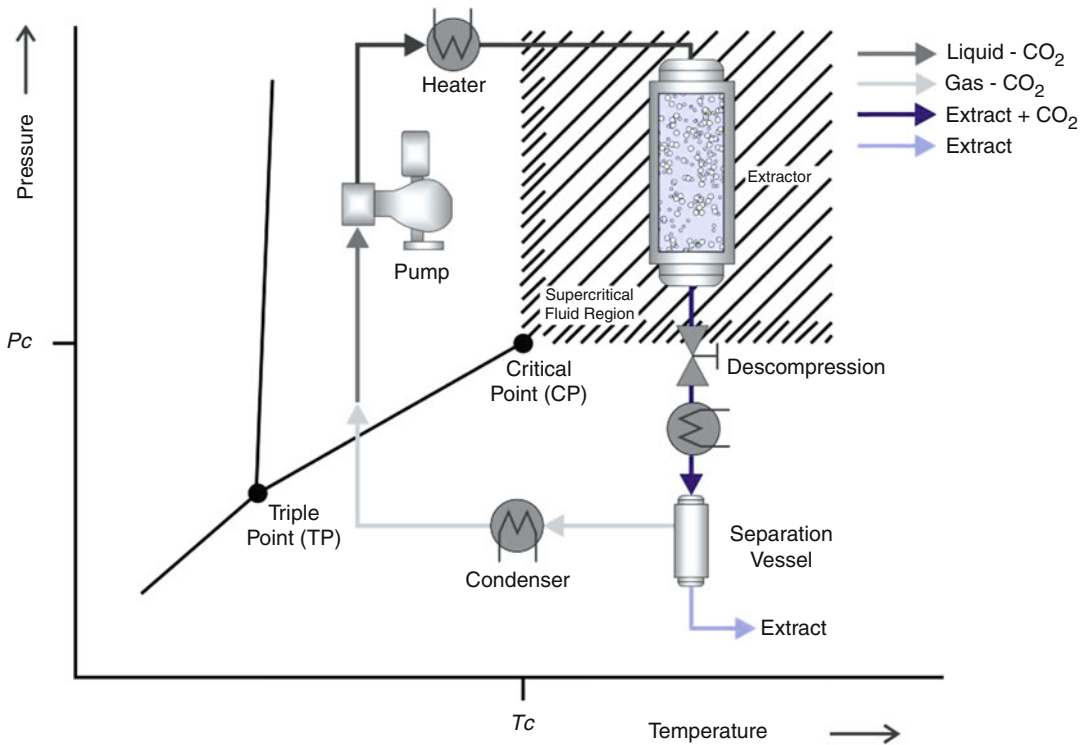
Supercritical Fluid Extraction as a Green Technology, Fig. 1 Phase diagram of a pure substance

cost. Nevertheless, other solvents have been investigated to supercritical applications, as propane, ethane, hexane, pentane, and butane.

The aspects that justify the fact that the carbon dioxide is the most widely used supercritical solvent are its moderate critical temperature ($31.3\text{ }^\circ\text{C}$) and pressure (7.38 MPa), when compared to other food-grade supercritical solvents, such as water. The use of supercritical CO_2 for extraction reduces significantly the need of organic solvents that could be potentially toxic and flammable, gives higher extraction yields, and avoids waste disposal problems. However, supercritical CO_2 is less effective in extracting more polar compounds from natural matrix due to its low polarity. To extract polar compounds, highly polar cosolvents, called modifiers, are used in small amounts with supercritical CO_2 . The solubility enhancement results from an increase in the density of the supercritical CO_2 added to the cosolvent mixture or intermolecular interactions between the cosolvent and the solute of interest (Brunner, 1994).

The Process

A SFE process consists of two steps: first, the extraction of the soluble components in a supercritical solvent and, lastly, separation of the extracted solutes from the solvent. The extraction of a specific group of compounds



Supercritical Fluid Extraction as a Green Technology, Fig. 2 Flow diagram of a supercritical extraction process from solids (Adapted from Rosa et al., 2009)

from a vegetal or animal matrix is the most common use for supercritical fluids. The flow diagram of the process is presented in Fig. 2.

Most of the development and industrial implementation in SFE has been performed on solid feed materials. In these cases, the material is charged into the extractor, CO₂ is fed to the extraction vessel, and the CO₂ with the extracted compounds is sent to one or more separators via pressure reduction valve. At reduced temperature and pressure, the extract precipitates in the separator, while the CO₂, free from extract, is recompressed and recycled to the extractor.

Process parameters in the extraction of solids can be related to raw material and operating conditions. The parameters related to raw material are particle morphology and size, moisture, cell destruction, and pelletization. The parameters related to operating conditions are pressure temperature, time, solvent flow, and solvent-feed ratio (Martínez & Vance, 2007).

Key equipment requirements include one or more high-pressure extractors, a series of flash tanks for the fractionation of the extract, a CO₂ condenser, a pump to compress CO₂, a CO₂ reservoir, and a CO₂ heater.

Commercial SFE equipments can be equipped with one or more extraction vessels, with volumes ranging from 10 to 2,000 L. SFE equipments generally operate in batch or semicontinuous mode. In the semicontinuous process, extraction is performed in one or more columns, while others are cleaned and filled with raw material, allowing the process to be conducted without interruptions after each extraction (Aguiar, Visentainer, & Martínez, 2012).

Applications

Although the properties of supercritical fluids are well known, they are as yet not fully exploited for industrial applications (Brunner, 2010).

The industrial application of SFE was started in Germany in the late 1970s, and the first unit constructed was a coffee decaffeination plant (Phelps, Smart, & Wai, 1996). Currently, the commercial use of supercritical technology has expanded to North America and Asia.

Since its first industrial application, the SFE has been used to process different food matrices. Well-known industrial applications of SFE of natural materials are decaffeination of coffee and tea, defatting of cacao, and production of extracts from spices, hops, nuts, fruits, and other natural materials (Bertucco & Vetter, 2001; Martínez & Vance, 2007). The latest SFE applications include supercritical extraction of sesame oil, cleaning of rice, cork treatment, and spent rubber tires (Brunner, 2010).

Cross-References

- ▶ [Waste Recycling](#)

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Supervisory Care of Children

- ▶ [Parental Time and Child Well-Being](#)

Support for Globalization Forces Index

- ▶ [Public Attitudes Toward the State in Asia-Pacific Region](#)

Support Group(s)

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Synonyms

[Peer support groups](#); [Psychoeducational groups](#)

Definition

A support group is composed of 6–12 people who meet periodically to obtain expert information and/or training and to share their experience and gain support from one another as a way of improving their coping and well-being.

Description

Unlike self-help, mutual aid (MASH) groups (see entry by Borkman), support groups are led or coled by professional practitioners such as

physicians, social workers, occupational therapists, and nurses who bring expert information and/or training to the group and facilitate group interaction and support. Different professionals may rotate from one session to another in order to present information on different topics, or one professional may educate or train the group on a consistent basis. Similarly, some support groups are “closed” in the sense that they have a fixed membership, whereas others are “open” allowing members to come and go depending on session topics and meeting schedules. There is much variability regarding the latter, some groups having no fixed termination date, but the majority setting out a schedule that prescribes the number, frequency, and duration of group sessions. Typically, support groups meet 6–12 times over a period of several months, with group sessions lasting about 2 h. The format is usually to begin with the curriculum devised by the professional group leader, followed by a block of time devoted to experience swapping and mutual support. With the rise in online and social networking communication, an increasing number of electronic or cyber support groups have appeared, making it easier for people in remote areas and those with mobility restrictions or social inhibitions to participate (Klemm et al., 2003; Rier, 2007). For example, SupportGroups.com alphabetically lists more than 200 groups that cover topics, from abuse to widowhood, and offers anonymity to the members who join.

There is a vast and still growing literature on support groups in the health field, particularly groups for people affected by a chronic illness and their families. Groups for family caregivers of relatives with dementia (Toseland & Rossiter, 1989) and for people affected by cancer, including their close associates (Gottlieb & Wachala, 2007), are among the most prevalent. The latter authors reviewed 41 studies of support groups for adults with cancer and their associates, concluding that these groups improve life quality and psychosocial functioning and that the participants gain knowledge about the disease and its treatment. However, there is no evidence of a survival advantage for participants; they live no longer than control or comparison group members.

Cancer support groups that meet for a longer period of time – a year or more – have a greater and more lasting impact on participants than the typical 6–12 week groups. This dosage effect can be attributed to the stronger personal relationships and greater trust that develop as a result of protracted interaction. Moreover, as relationships flower and group cohesion increases, the social comparison process becomes more influential because the participants come to see each other as similar peers and targets of comparison (Davison, Pennebaker, & Dickerson, 2000). Albeit covertly, they compare themselves to their peers in relation to the severity of their disease, the nature and intensity of their feelings, the effectiveness of their coping, the competence and compassion of the health professionals with whom they are involved, and a host of other targets of comparison. But since the process of social comparison is private, it is hard for the group leader to know whether members are benefiting from downward comparisons to those they perceive as worse off on a relevant dimension or whether they are disheartened by the upward comparisons they make to those they perceive as more fortunate or resilient than themselves (Helgeson & Gottlieb, 2000). Hodges and Dibb (2010) offer a compelling qualitative analysis of the complexity and diverse consequences of this process among the parents of children with Duchenne muscular dystrophy.

The high prevalence of online and face-to-face support groups, along with evidence of their usefulness, has spurred important investigations of the reasons why and the characteristics of people who join and people who decline invitations to participate, those who drop out along the way, and those who benefit most and least from support groups. We are beginning to learn that the joiners tend to be high utilizers of many human services, younger, female, socioeconomically advantaged, and cope more actively rather than avoidantly with stressors (Grande, Myers, & Sutton, 2006). They also have more positive attitudes toward help-seeking, are further from the time of diagnosis, and experience more cancer-specific problems (Bauman, Gervy, & Siegel, 1993). Men prefer a male, authoritative group leader who offers them information or skills

in a hospital or other institutional setting (Krizek, Roberts, Ragan, Ferrara, & Lord, 1999). Those who benefit most from support groups tend to have less support from their natural networks, form closer relationships with group co-participants, and gain a stronger sense of acceptance and understanding from their participation (Bell, Lee, Foran, Kwong, & Christopherson, 2010).

Support groups are not a universally attractive or effective mode of intervention for people grappling with the alarms and more enduring setbacks and adversity of life. It takes self-confidence, good social and expressive skills, time, and a willingness to confront the issues head-on and to join a group, and there is still no guarantee that it will meet one's needs. There is the risk that other participants will not be in the same boat or shipwreck and therefore will not be targets of identification and comparison. There is the hazard that the facilitator will not recognize when the group is demoralized and unsupportive or will not know how to restore or spur the process of mutual support. Yet despite these risks, many people are willing to place their faith in one another in the hope that they will reap rewards from a process of giving and getting the psychosocial provisions needed to withstand adversity if not to rise above it together.

Cross-References

- ▶ [Social Support](#)

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Support Measures

- ▶ [Family Intimacy Measures](#)

Support Network

- ▶ [Social Support](#)

Surgery/Ablation/Resection/Operation

- ▶ [Breast Cancer Patients, Surgery, and Quality of Life](#)

Surrogate Endpoint

- ▶ [Mediator](#)

Surrogate Endpoint Analysis

- ▶ [Mediation Analysis](#)
-

Surveillance and Crime

- ▶ [Impact of Housing Design on Crime](#)
-

Survey

- ▶ [Sample Survey](#)
-

Survey Administration

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Synonyms

[Questionnaire administration](#)

Definition

The act or process of systematic data gathering from a sample of entities for the purpose of constructing quantitative descriptors of the attributes of a larger population of which the entities are members.

Description

A survey, also known as a questionnaire, is used to collect data about respondent's opinions,

attitudes, preferences, behavior, demographics, or other aspects of his or her life. The data are then used to construct quantitative descriptors of the attributes of a larger population of which the respondents (sample) are members. Survey research has five generic phases, each of which can be complex and potentially time and resource intense (Edwards & Thomas, 1993). In the first phase, the research purpose and objective(s) is identified, and the most appropriate method for accomplishing the research objective(s) is selected. In the second phase, the survey instrument is developed and in the third phase, it is then administered. The fourth phase involves the analysis of the survey data and in the fifth phase, the research results are reported. The survey is systematic in that it follows a generic administration process, and each respondent receives the same information and little to no assistance or clarification from the survey administrator. Therefore, the "systematic" and "self-completion" attributes of survey administration distinguish the method from other ways of gathering information (Groves et al., 2009).

Survey administration (phase three) requires two general steps: respondent selection and survey distribution and collection. Among other considerations, the choice of respondents will depend on the purpose of the study, the availability of respondents, as well as the time and cost of obtaining data. In addition to the sampling issues handled elsewhere in the *Encyclopaedia of Quality of Life Research*, respondent selection guidance can be found in Kalton's (1983) *Introduction to Survey Sampling*. The most common survey administration mode is the traditional pencil and paper mail survey, but telephone, Internet, and face-to-face (i.e., in home or intercept) surveys are also commonly employed. To reliably use the survey method, researchers must understand and critically assess the advantages and disadvantages of alternative administration modes relative to the research objective(s).

Mail surveys involve sending an explanatory cover letter and a pen-and-paper survey to a specific person or address (Dillman, 2007). The advantage of the mail survey is that you do not need on-site survey administrators, and this

reduces the cost when compared to telephone or face-to-face surveys (i.e., postage vs. wage). Mail surveys may be more appropriate and yield better responses for sensitive topics because of the increased anonymity involved. Disadvantages include the potential of nonresponse due to the length or complexity of the survey or the participants' interest in the topic. The response quality may be compromised by bias and lack of control (e.g., skipped questions). The time required to administer a mail survey is typically eight to ten weeks, and this may be considered both an advantage and disadvantage (Czaja & Blair, 2005). Manual data entry is laborious and may be considered a disadvantage when compared with computer-assisted or Internet-based modes of data collection. Representative application examples include *The Swedish Health-Related Quality of Life Survey* (Brorsson, Ifver, & Hays, 1993), and recent studies on quality of life by Zebrack and Landier (2011) and Michalos and Kahlke (2010).

Telephone surveys require trained survey administrators to call a list of potential respondents in order to collect data. The advantage of this approach is that a majority of the population has land or mobile telephone service thereby reducing the potential for coverage error, but the caveat is that many numbers are unlisted (Groves et al., 2009). Response rates are usually between 40 % and 80 % (significantly higher than other modes) when repeated callbacks are used. Data quality is high when short and simple questions are used and the survey is no longer than 30 min (Czaja & Blair, 2005). The disadvantages include the high cost of training and overhead, long distance fees (Internet software such as Skype is now being used to eliminate this expense), monitoring equipment, data transcription, and the lack of visual cues for respondents, which paper surveys can provide. There is limited survey control and limited responses to open-ended questions, and nonresponse bias is difficult to establish (Czaja & Blair, 2005). *The American Time Use Survey* is a representative example of the administration of the telephone survey mode (US Bureau of Labor Statistics, 2011).

The Internet is increasingly used as a portal through which to survey the public regarding well-being, quality of life, and happiness. The advantages of *Internet survey* administration include low costs due to the elimination of printing, postage, and data entry; significant improvement in response speed over traditional mail surveys; ready access across time zones and geographic boundaries; and elimination/reduction of interviewer bias and incomplete responses (Bachmann, Elfrink, & Vazzana, 1999; Schmidt, 1997). Internet surveys can include complex skip patterns as well as visual aids such as pop-up instructions, drop down lists, pictures, video clips, animation, and audio (Fowler, 2009). Researchers seeking these advantages confront the problem of representativeness both in terms of coverage of the population (e.g., Internet penetration rates and accessibility) and capabilities for drawing random samples (Groves et al., 2009). Additional disadvantages include lower response rates compared to mail surveys, technical difficulties, Internet illiteracy, and limited control over who answers the survey. The length of the survey is also a disadvantage, in that researchers are typically advised to keep Internet surveys short (i.e., no longer than 15 min to complete) to avoid attrition and incomplete responses (Czaja & Blair, 2005).

Face-to-face surveys, also known as personal interview surveys, require an administrator to ask survey questions and record the respondents' answers. The advantages of this approach include higher response rates and data quality, low sampling frame bias and response bias, response control, ability to develop rapport with respondents, use of visual aids, and adjustment to the question order (Czaja & Blair, 2005). Face-to-face surveys are considered a best fit for open-ended questions as they yield more thorough and detailed responses over other survey administration modes. They may also be appropriate when respondent illiteracy is present as having an administrator read and record answers is considered advantageous (e.g., young children). The cost and time required to travel and administer the survey are considered to be the major disadvantages of this approach. The potential for

response bias and unwanted interviewer effects is also present. Access and safety have been reported as a potential disadvantage particularly when collecting data in areas with high crime rates (Czaja & Blair, 2005). The *British Household Panel Survey* (which includes questions about quality of life) collects data through face-to-face surveys of select individuals residing in a random sample of households (Institute of Social & Economic Research, 2011).

The advantages and disadvantages of each approach vary, but response rate challenges are common to all. Dillman, Smyth, and Christian (2009) recommend a tailored method for survey administration that greatly improves the potential for obtaining acceptable response rates. It requires the development of survey procedures that develop respondent trust, take into account the features of the survey situation, use mixed-mode administration when appropriate, and have as their goal the overall reduction of survey error. To reliably use a single-mode or mixed-mode strategy, researchers must understand and demonstrate the equivalency and complementarity or relative strengths of alternative modes (Dillman, 2007). Fowler's (2009) *Survey Research Methods*, Groves et al.'s (2009) *Survey Methodology*, and Czaja and Blair's (2005) *Designing Surveys: A Guide to Decisions and Procedures* are contemporary volumes that provide detailed guidance on designing and administering surveys.

Cross-References

- ▶ [Sample Size](#)
- ▶ [Survey](#)

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Survey Errors

- ▶ [Total Survey Error](#)

Survey of Health Ageing and Retirement in Europe (SHARE)

- ▶ [Oldest Old, Life Satisfaction, and Health](#)

Survey of Health, Aging, and Retirement in Europe (SHARE)

- ▶ [Immigrants in Israel](#)

Survey of Living Conditions in the Arctic: Inuit, Saami, and the Indigenous Peoples of Chukotka and the Kola Peninsula

► [SLiCA, Survey of Living Conditions in the Arctic](#)

Survey Research

Stephen Rule
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Synonyms

[Fieldwork](#); [Likert scale](#); [Margin of error](#); [Representative sample](#); [Response rate](#); [Sample size](#); [Stratification in survey research](#)

Definition

Much research is conducted by means of surveys, which comprise the collection of data from respondents, using face-to-face interviews, telephone interviews, or self-completion questionnaires that are returned online, via email, or by post. To ensure validity and generalization across the population being surveyed, respondents to a survey should form a representative sample of that population.

Description

Online and hard-copy resources describing and explaining the use of surveys to conduct research are abundant (e.g.,: [Babbie & Mouton, 2001](#); [Trochim, 2006](#); [Terre Blanche, Durrheim & Painter, 2006](#); [Survey Research Center, 2008](#); [Creative Research Systems, 2007](#); [Colorado State University, 1993](#); [QuestionPro, 2011](#)).

Pertinent to the conducting of quality of life research by means of a survey are a series of critical questions that require thought prior to execution. The appropriateness or otherwise of administering a research instrument (questionnaire) for self-completion versus by means of a telephone or cell phone or face-to-face interview should be determined by factors such as prevailing rates of adult literacy and extent of telephone or cell phone subscribership. Optimum choices would thus differ between a developing country such as Lesotho where face-to-face survey interview fieldwork would be required and a developed one such as Switzerland, where telephone or online surveys would be suitable.

Decisions need to be made with regard to the population being targeted and the sampling frame from which respondents will be selected. The latter may take the form of an address list, a telephone directory, or a population distribution map. The size of the sample should be of sufficient magnitude to facilitate the generalization of survey findings ([Durrheim & Painter, 2006](#)).

Unless the population is small (less than 300) and easily accessible, the likelihood is that a sample will be selected for the survey. A probability sample from a large population will invariably not be feasible owing to the budgetary implications of realizing this. Instead, the sample is likely to be stratified (by variables that may include geographical region and clustered within localities with the probability of selection being proportional to the population size of the locality). In some instances, known smaller components of a population (such as Indians in Africa) would be over-sampled and then down-weighted in the resultant survey dataset.

Within the clusters that are thus selected, households might then be selected systematically using a predetermined route interval, and individual respondents within households are best selected using a randomizing tool such as a Kish grid ([Kish, 1949](#)), to ensure appropriate representation of all ages and both genders.

Insightful alternative perspectives on conventional wisdom with regard to surveys are provided by Krosnick (1999). For example, it is widely accepted by social scientists that accurate survey results are dependent on representative samples and high response rates. However, (Krosnick's) examination of the literature found studies showing that low response rates do not necessarily yield less representative survey findings than do higher response rates (Visser, Krosnick, Marquette, & Curtin, 1996). Similarly, the common preference for closed-ended questions as being more reliable or valid than open-ended questions is challenged by some studies (Bishop, Hippler, Schwarz, & Strack, 1988; Presser, 1990).

Another accepted norm is that fieldworkers should not deviate from the text of the questions in a questionnaire in order to ensure comparability of responses. Nevertheless, Schober and Conrad (1997) have demonstrated that conversational interviewing allowing flexibility and spontaneous explanations to the respondent can actually enhance the quality of the data collected.

The design of questions to be used for survey research on quality of life tends primarily to be closed-ended, requiring the selection from a limited number of predetermined options or yes/no or Likert scale items (Murphy & Likert, 1938). Less common are open-ended questions, which require greater analytical sophistication and are used when new insights and perspectives are sought. Some research has shown that when points on a Likert scale are labeled in words (e.g., very satisfied or completely trustworthy) rather than numbers, data quality improves (Krosnick & Berent, 1990; Peters & McCormick, 1966).

In many instances, error occurs when respondents feel that they should provide socially acceptable responses to questions. However, it has been shown that overreporting of socially laudable behavior such as voting or attendance at religious services is not necessarily an intentional misrepresentation but often owing to memory lapse about actual behavior (Abelson, Loftus, & Greenwald, 1992).

Krosnick (1999) also reviews an extensive literature on how and why respondents satisfice rather than optimize their answers to survey questions, and he collates research on respondent acquiescence (i.e., the tendency to agree with statements in a questionnaire or to respond "yes" rather than "no" to a question is a common phenomenon in surveys). This phenomenon has been shown to occur more frequently among respondents with limited cognitive skills (Narayan & Krosnick, 1996), when a question is difficult to answer (Trott & Jackson, 1967), if the respondent has reached interview fatigue (Clancy & Wachsler, 1971), or in telephone rather than face-to-face interviews (Calsyn, Roades, & Calsyn, 1992).

Cross-References

- ▶ [Sample Frame](#)
- ▶ [Sample Survey](#)
- ▶ [Sampling Error](#)
- ▶ [Survey Administration](#)
- ▶ [Total Survey Error](#)

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Survey Research Practicum

► Detroit Area Studies (DAS)

Survey Responses with Insufficient Effort

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Synonyms

[Approaches to identifying IER](#); [Inconsistency approach to identifying IER](#); [Infrequency approach to identifying IER](#); [Insufficient Effort Responding \(IER\)](#); [Response pattern approach to identifying IER](#); [Response time approach to identifying IER](#)

Definition

Insufficient Effort Responding (IER) occurs when survey respondents fail to follow the instructions or answer survey items accurately due to a lack of ► [motivation](#) (Huang, Curran, Keeney, Poposki, & DeShon, 2012). Response patterns stemmed from IER can be random (Hough, Eaton, Dunnette, Kamp, & McCloy, 1990) or nonrandom (e.g., selecting the same response option repeatedly; Costa & McCrae, 2008), and the cause behind IER varies from unintentional errors (Schmitt & Stults, 1985) to intentional careless responding.

Description

IER can be a threat to the quality of self-reported data, yet systematic investigations of IER remained limited until recently. Huang et al. (2012) provided a comprehensive examination of the effectiveness of different methods in dealing with IER and advanced the understanding of IER's impact on measurement properties.

Huang et al. (2012) noted several approaches in the literature capable of identifying IER, including the infrequency approach (e.g., Beach,

1989), the inconsistency approach (e.g., Pinsonneault, 1998), the response pattern approach (e.g., Costa & McCrae, 2008), and the response time approach (e.g., Wise & Kong, 2005). The infrequency approach utilizes items that normal respondents are likely to provide the same answers to and selection of the infrequent response option indicates IER. For instance, Beach (1989) used the item “I was born on February 30th,” where indication of agreement to this statement would be flagged as IER. The inconsistency approach uses discrepancy in responses to detect IER. For instance, respondents providing inconsistent answers on repeated or similar items would be detected by this approach (e.g., Wilson, Harvey, & Macy, 1990). Certain response patterns, such as excessive consecutive identical responses, can be seen as a sign of IER. The response time approach relies on shortened response time due to the absence of cognitive processing to indicate the possibility of IER.

Despite the availability of different approaches for IER detection, Huang et al. (2012) noted the lacunae in the understanding of the effectiveness of these approaches as well as the impact of IER on scales’ properties. The authors conducted an experimental study and a survey study to (a) provide a comprehensive evaluation on these approaches, (b) examine the convergence and overlap among IER indices, and (c) investigate the influence of IER on measures’ psychometric properties.

Study 1

Huang et al. (2012, Study 1) compared four indices in IER detection (i.e., psychometric antonyms, individual reliability coefficients, long string index, and response time). They also evaluated the effectiveness of warning (see Dwight & Donovan, 2003) in deterring IER. Participants of the study were undergraduate students ($N = 380$) in a US university. Participants were asked to complete a 300-item personality survey (International Personality Item Pool; Goldberg, 1999) on the Internet, with all items rated on a five-point Likert scale (1 = very inaccurate; 5 = very accurate).

A total of 30 personality scales were included in the survey.

The inconsistency approach was operationalized with psychometric antonym and individual reliability. To obtain psychometric antonym (see Johnson, 2005), 30 pairs of items with the highest negative inter-item correlations in the sample were identified. Negative within-person correlations across the 30 pairs of items were expected in normal respondents. The within-person correlations were reverse-scored into the psychometric antonym index. Individual reliability was generated by separating the odd-numbered and even-numbered items on the personality scale, calculating separate scale scores accordingly, and computing a within-person correlation between odd half-scales and even half-scales. Given that normal respondents should yield high correlations on items from the same scale, IER was indicated by low scores on individual reliability. The response pattern approach was operationalized with long string index, where an excessive number of consecutive identical response options would signal IER, using cutoff recommended by Costa and McCrae (2008). For the response time approach, IER was identified by a shortened time recorded in completing the survey.

A 2 (First vs Second half of survey) \times 2 (Warning vs. Normal) \times 3 (Non-IER, Cautionary IER, and Outright IER) modified mixed design was used in Huang et al. (2012, Study 1). In the Warning condition, respondents were informed that IER could be detected and engaging in IER would result in loss of extra course credit, whereas the normal condition followed typical personality measurement instructions. Three IER conditions were applied prior to the second half of the survey, where participants were informed (a) to continue the survey (non-IER), (b) to engage in IER cautiously (Cautionary IER), or (c) to engage in IER without fear of any consequences (Outright IER).

A manipulation check based on open-ended answers of response strategies suggested that the IER manipulation was effective, with more IER in the Cautionary and Outright IER conditions

than in the non-IER condition. In order to examine the effectiveness of the IER indices, a mixed ► ANOVA was conducted to assess the within-person change in IER and between-person differences across conditions. Results confirmed that each of the indices (page time, psychometric antonym, individual reliability, and long string) indicated within-person change, between-person differences, as well as their interactions in IER. In other words, the four IER indices were sensitive to the differential rate of IER across manipulated conditions. In addition, the four indices highly correlated with each other, offering initial evidence of ► convergent validity. Furthermore, the use of warnings appeared to be effective in deterring IER, as indicated by the IER indices.

Given the literature and empirical evidence from the findings, Huang et al. (2012) developed three sets of cutoffs for the IER indices. Diagnostic statistics (Streiner, 2003) of specificity (proportion of cases that are correctly identified as non-IERs) and sensitivity (proportion of cases that are correctly identified as IERs) were calculated. Results showed that each of the IER index identified a moderate proportion of IER while falsely flagging a small proportion of non-IER cases. Based on the cutoffs, page time and psychometric antonym were shown to be more effective indicators of IER than the other indices (i.e., long string and individual reliability).

In general, results from Huang et al.'s (2012) Study 1 supported the effectiveness of the IER indices. The authors noted that page time and psychometric antonym appeared more effective than the other indices. In addition, the use of warnings in deterring IER was supported.

Study 2

Building upon the findings from Study 1, Huang et al. (2012) conducted Study 2 to (a) examine the convergence among the IER indices and (b) investigate the impact of IER on psychometric properties of scales. Three hundred forty-five undergraduate students in a US university participated in the online survey. Participants completed the same 300-item questionnaire under normal instructions. After the completion of the

survey, participants were asked to respond to three items assessing their effort ("I didn't pay much attention to what the questions actually meant," "I filled out the questions WITHOUT thinking about myself," and "I responded carelessly to the questions.") administered on a five-point Likert scale.

An ► exploratory factor analysis was conducted to examine the convergence among the continuous IER indices (excluding the dichotomously scored long string index). Results revealed a common underlying factor.

Huang et al. (2012) further investigated the influence of IER on three psychometric properties of scales: (a) facet-level item interrelatedness (► Cronbach's alpha; Cortina, 1993), (b) facet unidimensionality (► eigenvalues for the first two factors in exploratory factor analysis), and (c) factor structure of the ► Big Five personality factors in confirmatory factor analysis. The authors applied cutoffs developed in Study 1 to create ten trimmed samples where suspect IER cases were removed from the full sample.

For facet-level item interrelatedness, Huang et al. (2012) compared Cronbach's alphas of the 30 facets between the original and trimmed datasets, finding a significant improvement of alphas after the removal of IER cases identified by each of the indices. For facet unidimensionality, analysis of eigenvalues from 30 facet-level exploratory factor analyses revealed that dropping IER cases led to significant improvement in evidence of scale unidimensionality, as indicated by an increase in first factor eigenvalue and decrease in second factor eigenvalue. On the Big Five factor level, the authors conducted confirmatory factor analysis on each of the Big Five factors. Visual examination of fit indices showed a slightly better fit for the trimmed samples based on all but the self-report IER indices, compared to the full sample.

In general, Study 2 provided valuable information beyond Study 1 by showing a common underlying factor shared by the IER indices. In addition, findings from Study 2 demonstrated the expected benefit in improved scale psychometric properties from removing suspect IER cases.

Discussion

Huang et al. (2012) addressed two important gaps in the literature. First, after a systematic summary of approaches to detecting IER, the authors provided a comprehensive evaluation of IER indices in terms of their effectiveness in detection. Second, the authors demonstrated the potential benefit in detecting IER in surveys, as shown in improved scale psychometric properties.

Following the results of the two studies, Huang et al. (2012) recommended page time, psychometric antonym, and individual reliability for future application. Citing Swets' (1992) industrial-quality control decision-making context in the application of IER detection indices, the authors urged researchers and practitioners to set the cutoff at the extreme end of the distribution of an IER index to minimize falsely identifying normal respondents as suspect IER cases. Huang et al. (2012) acknowledged that properly motivating survey respondents should take priority but encouraged the routine examination of survey results for occasional aberrant IER responses.

Cross-References

- ▶ ANOVA
- ▶ Big Five Personality Traits
- ▶ Convergent validity
- ▶ Cronbach's alpha
- ▶ Eigenvalues
- ▶ Exploratory factor analysis
- ▶ Indicators, Quality of Life
- ▶ Likert scale
- ▶ Motivation

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Surveys on Sexual Issues

- ▶ Sexual Orientation and Mental Health

Survival Analysis

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Synonyms

[Duration models of survival](#); [Event history analysis](#); [Failure-time models](#); [Hazard rate models](#)

Definition

Survival analysis or event history analysis refers to statistical methods used to analyze the durations between finite numbers of discrete state transitions.

Description

Three essential concepts need to be defined in survival analysis: *state*, *event*, and *risk period*. States are the discrete outcomes of interest. As for ► [mortality](#), the states are obviously alive and dead; in the analysis of employment history, the states can be “employed” and “unemployed” or categories of occupational status, depending on the purpose of the study or the availability of variables interested in the data source. Events are transitions from a state of origin to a destination state. If an event is the first employment, the distinguishable origin states could be “in school,” “unemployed,” and “inactive.” The risk period is the time interval measured from the targets of study when they are at risk of experiencing the event to its occurrence.

The purpose of survival analysis is to unravel the causal relationships among events, understanding why some individuals are more likely to be exposed to certain events than others. Therefore, in the survival analysis model, the dependent variable is not the duration but the risk of experiencing of the first occurrence of

a potential event. It is expressed in the form of the hazard rate (sometimes it is called the transition rate).

Although predominantly the application of survival analysis lies in the study of the survival of humans and other living organisms, it has played an important role in facilitating researches in demography, economics, sociology, and psychology over the past two decades, thanks to the increasing collection and the availability of longitudinal data. The British Cohort Studies, the British Household Panel Surveys, the Panel Study of Income Dynamics, and the German Life History Study are among several well-known longitudinal data collected in the developed countries. Event histories provided in these data offer the information on the timings and durations of interested events, providing rich resources for studying the processes of changes. These histories are, most of the time, collected in a retrospective manner: Respondents were asked to recall the dates of events that have occurred within an observation period. From this, one can work out the durations and sequential order of these events. Because of this retrospective information on facts, the quality of event history data is subject to recall error. Dex (1991) gave a good overview of methods tackling this issue.

In studies underlying the ► [quality of life](#), a wide range of applications for survival analysis can be found (refer to (Mayer & Tuma, 1990)’s book for a comprehensive review):

1. Perhaps the most intuitive application of survival analysis on the study of ► [quality of life](#) lies in the field of medical and epidemiological research. The recovery process from illness, mortality rate, and the survival time after a treatment have been effectively analyzed using survival analysis (refer to (Kalbfleisch & Ross, 1980) for more such examples).
2. Survival analysis has helped demographers understand better about the marriage, divorce, and fertility behaviors: Its modeling is amenable to the introduction of explanatory variables such as individual characteristics and family backgrounds and is able to relate them to the timing of getting married, the hazard rate of divorce, and the timing of births

(Michael & Tuma, 1985; Sørensen, 1986; Diekmann, 1990; Wu, 1990). Of interest is how social and political changes contribute to the delay of family formation and fertility (Tuma & Huinink, 1990; Zhou, 1999; Huinink & Michaela, 2006).

3. In labor market research, event history data and the survival analysis make the study on unemployment flourish as they overcome the lacking of individual data on unemployment duration and the efficient method to analyze ► **unemployment** processes experienced in previous studies. Early notable works done by Heckman and others have centered on transitions between employment and unemployment as well as moves from unemployment to other different states such as enrolling in governmental job and training programs, reentering school, or retirement (Heckman & Borjas, 1980; Heckman & Singer, 1982, 1984; Hujer & Hilamr, 1990; Sørensen, 1990). Survival analysis has also been a useful tool in analyzing patterns of job transitions (Mayer & Glenn, 1986; Shavit, Judah, & Featherman, 1990).

Issues on Analyzing Survival Analysis

1. The most disputable issue on survival analysis is censoring. The frequently encountered type is *right censoring*—when targets of interest have not experienced the event at the end of observation period. In the example of divorce, the right censoring could be an individual with a marriage history of 6 years who is still married at the time of interview. We know this person did not divorce after 6 years of marriage, but we do not know whether or when he/she will divorce. The right censored observations can be dealt with the maximum likelihood method. Another rarely encountered type of censoring is *left censoring*—this occurs when some subjects have experienced the event before the observation period starts.
2. In event history data, it is often the case that there is information on values of certain covariates which change over time. Examples

of *time-varying covariates* are age, income, educational level, and marital or occupational status. Hazard models in survival analysis incorporate time-varying covariates and take account of prior history of these covariates (Blossfeld & Huinink, 1991).

Cross-References

- [Event History Analysis](#)
- [Mortality](#)
- [Quality of Life](#)
- [Unemployment](#)

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Suspense

► Anxiety

Sustainability

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Synonyms

Sustainable development

Definition

The concept of *sustainability* is difficult to define. It is an evolving, multifaceted, and controversial idea. There are hundreds of possible different definitions of *sustainability* and the term can therefore be used as a synonym of *sustainable development* as well as in opposition to it.

The various definitions have all focused on the human impact on the environment and on the balances of the earth's ecosystem. *Sustainability* thus means preserving the earth's capacity to "sustain," to "support" the weight of mankind, and *sustainable* is everything that allows us to pursue the goal of *sustainability*.

"What" and "how" to *sustain*, on what timescale, and "how" to achieve the goal of *sustainability* is, however, the subject of extensive discussion.

Description

In a more limited way, the definition of sustainability gets confused with the meaning of sustainable development (SD) and the two terms are used without distinction.

The term *sustainable development* appeared in 1980 in World Conservation Strategy (IUCN, UNEP, & WWF, 1980): *sustainable development* is that which:

- Is in reciprocal dependence with living resource conservation;
- Takes account of social and ecological factors, as well as economic ones; of the living and nonliving resource base; and of the long-term as well as the short-term advantages and disadvantages of alternative actions.

Our Common Future

In 1987, the WCED (World Commission on Environment and Development) gave it the best known definition, which, despite the limitations identified below, represented a shift of paradigm, officially including the concept in the international political agenda.

The Report *Our Common Future* (1987), written up by the WCED and also called the

Brundtland Report, from the name of its president, the Norwegian Gro Brundtland:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

The concept of needs, in particular the essential needs of the world’s poor, to which overriding priority should be given; and

The idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs.”

Usually, only the part of the definition in bold print is mentioned, but the part in italics and other statements in the report help to better interpret the meaning of this definition. According to the *Report*, the previous growth models have in fact failed the aim of spreading well-being and reducing inequalities between different countries: “no trends,... no programmes or policies offer any real hope of narrowing the growing gap between rich and poor nations” (WCED, 1987) p. xi, giving rise instead to a “spiral of poverty and environmental degradation” (WCED, 1987) p. xii, for which there is need of a new *form of growth*, “changing the quality of growth, meeting essential needs, merging environment and economics in decision making” (WCED, 1987) p. 49. The concept of SD—in its most often cited definition—is therefore an anthropocentric and optimistic concept: it only takes into account human needs, respect for the environment is aimed only at preserving the *ability to meet present and future needs*, and restrictions to growth do not exist, inasmuch as restrictions to the exploitation of the environment are only data from *the state of technology and social organization*.

Weak and Strong Sustainability

In short, according to other classifications, it is a *weak sustainability* (Neumayer, 2003): natural capital is considered only on the basis of its usefulness to mankind and can be replaced by human-made capital, because what matters is the sum of the two capitals. Proponents of *weak sustainability* fully accept the prospect of growth,

to the point that some even use terms such as *sustainable growth*, *green growth*, and *smart growth*.

In a broader sense, however, sustainability means taking into account the complexity of the interactions between nature and society, namely, of the influence of human action on the environment and of the environment on society.

In this second sense, sustainability is not necessarily linked to development or growth, which must come to terms with limits that cannot be surpassed. Therefore, the following can also be taken into consideration:

- Nonmaterial needs and values (happiness and well-being do not depend on material goods alone, but also on immaterial ones like relational and spiritual assets)
- Assets not associated solely with humans (e.g., the assets of all living beings, animal, and vegetable)

The conservation of natural capital is essential, however, and cannot be replaced by human-made capital: the natural assets that have come down to us must be passed on intact to future generations.

What needs to be *sustained* is the ability of the terrestrial ecosystem to absorb and compensate for the entropy produced by human activities. This is an idea of *strong sustainability* (Costanza & Daly, 1992).

Origin of the Idea of Development

The term *development* became popular after the Second World War, when the USA and the dollar acquired hegemony over the world economy. On 20 January 1949, the American president Truman (1949) made it the watchword of international policy in his inaugural address. The USA, he said, should help populations

“to produce more food, more clothing, more materials for housing, and more mechanical power to lighten their burdens.”

In a context marked by elements such as the Marshall Plan, the emancipation of European colonies in Africa, Asia, and the Middle East, and the competition between the United States and the Soviet Union, development was

understood as the progressive approach of *underdeveloped countries* to those that were more developed and as a primarily quantitative process, based on “more.”

As years went by, however, there were more and more signals of the environmental consequences caused by development. Rachel Carson’s book *Silent Spring* (1962) had a wide resonance in particular. Between the 1960s and 1970s, a new generation of environmental movements was born.

New Awareness of the Limits to Growth

Gradually, there was greater awareness of the damage that humanity was causing to the planet and, ultimately, to itself. Serious crises of civilization due to the overexploitation of natural resources had already occurred in the past, but had remained circumscribed. Now, instead, the problem is becoming increasingly global: a single species had become capable of changing the environment of the entire earth and the planet thus entered a new era, which Paul Crutzen, Nobel laureate for chemistry, christened *Anthropocene* in 2000 (Crutzen and Stoermer 2000).

Isolated voices were heard even in very distant times and the first predictive scientific analyses date to the nineteenth century. Among these is George Perkins Marsh’s seminal work *Man and Nature* (1864), distinguished by its systematic character. The turning point of the debate came in 1972 from *The Limits to Growth* (Meadows, Meadows, Randers, & Behrens, 1972), report commissioned by Aurelio Peccei and by Club of Rome to a working group at the Massachusetts Institute of Technology. The central thesis of the famous report, which was translated into dozens of languages and sold millions of copies, is that unlimited growth is not possible on a finite planet. In an economic system based on a constant increase of the GDP, the thesis appeared scandalous to many and provoked fierce debate and controversy.

Evolution of the Concept of SD and Sustainability

Following the Brundtland Report, there have been many attempts to define *sustainability* and

sustainable development, too numerous to list here: just a few years after the WCED, several dozen were already counted (Pezzey, 1992). The same group of organizations of 1980 (IUCN, UNEP, WWF), in 1991, defined *sustainable development* as “improving the quality of human life while living within the carrying capacity of supporting ecosystems.”

For some scholars and generally all the national and international institutions, *sustainability* and *sustainable development* are used interchangeably, while for others, the two terms are not absolutely synonymous. According to its critics, *sustainable development* is a vague concept, and not operational, for others political, and for still others, like the economist Herman Daly (1993, 2002), an oxymoron: it is development itself that is causing the growing consumption of renewable and nonrenewable resources, hence it cannot be sustainable.

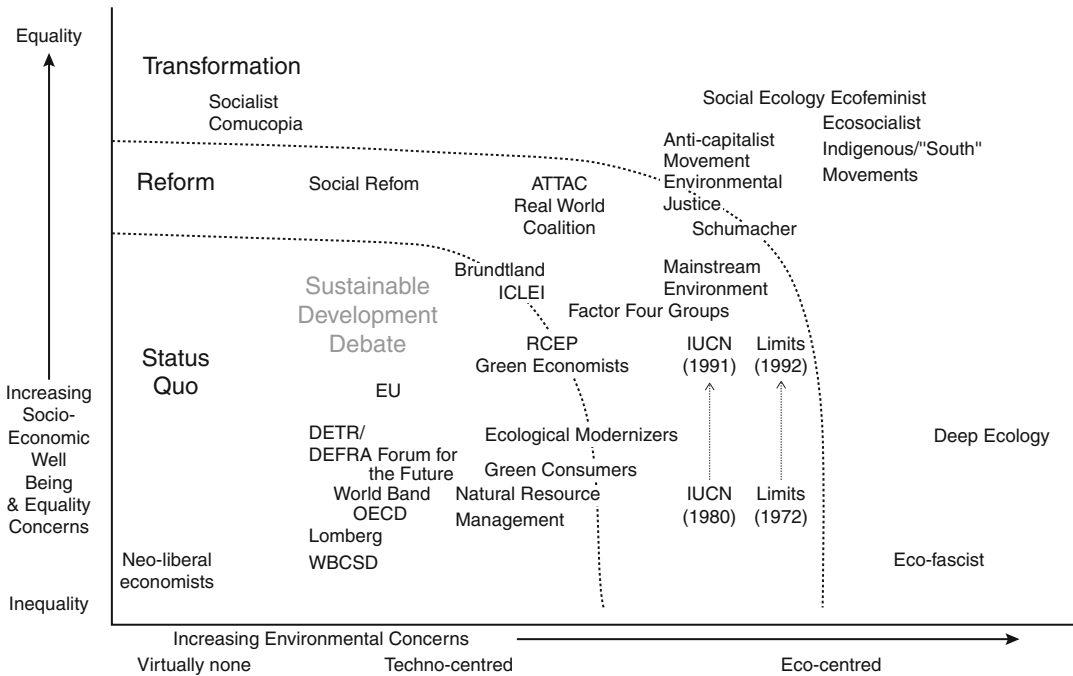
Moreover, the concept of *sustainability* gradually evolves as there is greater knowledge about of the changes that human action causes on the earth’s environment and awareness of the complexity of the multiple interconnections between society and environment.

The positions range from strong eco-centric to strong techno-centric, according to the classification proposed by O’Riordan (1989). Expanding on O’Riordan’s framework, Hopwood et al. (2005) trace a map of it distinguishing between those who advocate a more or less profound transformation of the socioeconomic system and greater fairness and those who tend to defend the status quo (Fig. 1).

Sustainability Science

Over the years, numerous initiatives have arisen to look for solutions to the problem of sustainability.

In 2001, the world congress “Challenges of a Changing Earth 2001” in Amsterdam, organized by the International Council for Science (ICSU), the International Geosphere-Biosphere Programme (IGBP), the International Human Dimensions Programme on Global Environmental Change (IHDP), and the World Climate Research Programme (WCRP), signaled



Sustainability, Fig. 1 Different approaches (Hopwood et al. 2005)

the birth of *sustainability science*, a new academic field that points the way toward a sustainable society. *Sustainability science* is characterized by an integrated approach to the global, social, and human systems.

The partnership between four international global environmental exchange research programs (IHDP, IGBP, WCRP, Diversitas) led to the ESSP (Earth System Science Partnership, www.essp.org), while the collaboration between the International Council for Science (ICSU) and the International Social Science Council (ISSC) resulted in the Earth System Visioning process (www.icsu-visioning.org). In 2011, the Visioning process in turn passed the baton to the Earth System Sustainability Initiative between ICSU, ISSC, and Belmont Forum.

The initiative hopes to see the involvement of a wide range of disciplines: "... addressing the Grand Challenges for global sustainability research requires stronger engagement of the social sciences, economics, health sciences, engineering and humanities, along with the natural sciences, so that an integrated response and solutions can be developed" (ESSI, 2011: 5).

Sustainability and Quality of Life

The sustainability debate has also led to numerous attempts to identify indicators of human pressure on the planet and on the use of resources, as well as show to construct indicators of sustainability. The Compendium of Sustainable Development Indicator Initiatives, for example, counts about 900 initiatives in this regard, from the local to the global level (last submission 1st November 2011 <http://www.iisd.org/measure/compendium/>).

The concept of *sustainability*, which profoundly affects the interrelationships between society and environment, is also closely linked to quality of life (QoL). On the one hand, there is no lack of environmental indicators among the indicators of QoL; on the other hand, sustainability indicators usually take into account social indicators. The assumption is that well-being and happiness are not possible if the environment is degraded, inasmuch as elevated human impact on the environment and the unsustainable use of resources are linked with growing threats to the health and safety of mankind, including social inequalities, loss of social capital, collective insecurity, conflict, and *disamenities* of various kinds.

Cross-References

- ▶ [Brundtland Commission \(World Commission on Environment and Development\)](#)
- ▶ [Consumption, Sustainable](#)
- ▶ [Developing Countries](#)
- ▶ [Development](#)
- ▶ [Ecological Footprint](#)
- ▶ [Fraser Basin Council Sustainability Reporting](#)
- ▶ [Indicators, Quality of Life](#)
- ▶ [Precautionary Principle](#)
- ▶ [Social Justice](#)
- ▶ [Social Sustainability](#)
- ▶ [Sustainable Development](#)
- ▶ [Sustainable Regional Development](#)

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Sustainability Assessment

- ▶ [BellagioSTAMP](#)

Sustainability Benchmarks of Fraser Basin by NGO

- ▶ [Fraser Basin Council Sustainability Reporting](#)

Sustainability Indicators for Liveable Flemish Cities

- ▶ [Flemish City Monitor](#)

Sustainability Indicators for the Fraser Basin in British Columbia, Canada

- ▶ [Fraser Basin Council Sustainability Reporting](#)

Sustainability Measurement

- ▶ [BellagioSTAMP](#)

Sustainability Measures for Fraser Basin, British Columbia, Canada

► [Fraser Basin Council Sustainability Reporting](#)

Sustainable Communities Movement

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Synonyms

[Biophilic cities](#); [Ecocities](#); [Ecopolis](#); [Healthy communities](#); [Livable cities](#); [Regenerative cities](#); [Resilient communities](#); [Transition towns](#)

Definition

The Sustainable Communities Movement is a diffuse, worldwide movement among citizens and governments to promote and implement the concept of sustainable development in the community context.

Sustainable development has been defined in many different ways, but at the heart of most definitions is the notion that an activity is sustainable only if it does not negate the ecological and social conditions of its own continuity over time. In ecological terms, this means that human (mostly economic) activities cannot overwhelm the capacity of local ecosystems to absorb waste and contaminants or deplete the store of resources that the activity depends upon. In social terms, sustainable development means that economic opportunities are fairly distributed among the population and that economic gains are used to ensure an adequate standard of living for all (e.g., in terms of education, housing, and healthcare). These requirements are seen as providing the social resources and stability

needed to support continuous economic activity. When these ecological and social conditions are met, it is hypothesized that economic activity can meet current needs without undermining the ability of future generations to meet their respective needs. The larger question, as to whether growth of any type can be sustainable in the long term given the limitations of planetary carrying capacity, is not directly addressed by the concept of sustainable development.

The concept of sustainable development can be applied to a wide variety of human activities, e.g., individual businesses, particular industries (such as forestry or fisheries), or national economies. Community sustainability refers to sustainable development in a community context, i.e., within human settlements. Here the main focus is on community processes that consume resources and produce wastes as well as the community conditions needed such that an adequate quality of life can be afforded to all residents. The key issues are thus land development, transportation, energy use, food availability, water management, housing, waste management, natural areas, public spaces, and the governance mechanisms that ensure an efficient use of resources and fair distribution of the costs and benefits of community development.

Many of these issues and activities are under the direct or indirect control of municipal governments, and this level of government is one of the main players involved in local community sustainability movements. Other key stakeholders at the local level include businesses, professional associations, academic institutions, labor unions, and a range of NGO and grassroots environmental, housing affordability, public transit, social justice, and antipoverty groups. Local sustainable community movements may be linked to state/provincial, national, or international programs and actors that promote community sustainability through education, research, advocacy, tool development, funding programs, policy development, or direct cooperation with local actors. Key international institutions include ICLEI – Local Governments for Sustainability (formerly the International Council for Local Environmental Initiatives), the United

Nations Human Settlements Programme (UN-HABITAT), Ecocity Builders and the Ecocity World Summits, and the World Urban Forum.

Description

History

The global SCM has its origins in the warnings about urbanization that were expressed at the 1972 United Nations Conference on the Human Environment in Stockholm, convened to deal with the perceived threat to the environment by human activity. In 1976, the United Nations convened Habitat I in Vancouver, as governments began to recognize the consequences of rapid urbanization, especially in the developing world. After the conference, the General Assembly adopted resolution 31/109 which took note of the report of the conference, the Vancouver Declaration on Human Settlements. The resolution called upon all organizations within and outside the UN system to support national efforts in the formulation, design, implementation, and evaluation of projects to improve human settlements.

The Brundtland Commission, formally the World Commission on Environment and Development (WCED), known by the name of its Chair Gro Harlem Brundtland, was convened by the United Nations in 1983 and published its final report *Our Common Future*, in 1987. The report popularized the term “sustainable development” and drew attention to the need to address issues related to rapid growth, environmental decay, inadequate housing, poverty, and inequality around the world.

Local Agenda 21 (LA21), a program that provides a framework for implementing sustainable development at the local level, was first described in *Agenda 21* – the global blueprint for sustainability that was accepted at the United Nations Conference on Environment and Development in 1992 (the Rio Earth Summit). Chapter 28 of Agenda 21 identifies local authorities as the sphere of governance closest to the people and calls upon all local authorities to

consult with their communities and develop and implement a local plan for sustainability – a “Local Agenda 21.” A 2002 survey found that more than 6,400 local governments in 113 countries had become involved in LA21 activities over a 10-year period (ICLEI, 2002).

Several writers have become identified with the SCM. For example, Mark Roseland in Vancouver, Canada, has published three editions of a guidebook on sustainable communities since 1992 (Roseland, 2012). Richard Register in Oakland, California, coined the term and has written extensively on “ecocities” (Register, 2006), while Paul Downton in Adelaide, Australia, uses the term “ecopolis” to refer to a city that “generates health and enhances sustainability” (Downton, 2009). Timothy Beatley in Charlottesville, Virginia, has written extensively on the subject of “green urbanism” and “biophilic cities” (Beatley, 2000, 2011). Finally, Herbert Giradet has written about “regenerative cities” that restore the “relationship between cities, their local hinterland and the world beyond” (Giradet, 2004, 2010).

Since the mid-1990s, the SCM has placed increasing focus on issues related to urban sprawl and automobile dependence. Peripheral development in both rich and poor cities and the exploding level of car ownership worldwide have placed enormous burdens on public infrastructure and natural systems (Newman & Kenworthy, 1999). These issues were raised at Habitat II, held in 1996 in Istanbul, Turkey, and expressed in the Habitat Agenda, which emerged from the conference. The SCM has responded to these challenges by advocating a Smart Growth agenda, i.e., bringing attention to the need for stronger regional planning and walkable, mixed-use neighborhoods with a range of transportation and housing choices (Smart Growth Network, 2006).

More recently, the SCM has dovetailed with the movement to address climate change and “peak oil.” The notion of “transition towns” has been put forward to describe how communities can wean themselves off cheap but unsustainable forms of energy (i.e., fossil fuels and nuclear power) and move toward renewable, locally

generated electricity and heating/cooling (Hopkins, 2008). The vision includes most of the elements at the center of the SCM, i.e., compact urban form, a focus on active transportation, conserving resources, local food provisioning, and green buildings, but imports the relatively new concept of “► resilience” into the mix of community sustainability concerns. The resilient community is ready to respond to dramatic changes in the environment – such as the changes in precipitation and temperature expected due to climate change – without sustaining a major collapse of its functions (Newman, Beatley, & Boyer, 2009).

Principles

Although the lack of a single center to the movement means that its principles are not always clearly articulated, a few basic principles appear to underlie the SCM:

- **Manage demand:** instead of meeting expected demand by increasing the supply of a community service (e.g., of roadspace, energy, waste facilities, potable water), look for ways to manage and reduce demand (e.g., through tolls, metering, public awareness, and efficiencies).
- **Assess costs and benefits on a life-cycle basis:** because many environmental and social initiatives have large up-front costs and bear fruit only in the long term, their feasibility should be assessed by comparing their costs and benefits to alternatives on a cradle-to-grave basis.
- **Address problems from a system point of view:** bring stakeholders together to look at community issues as a set of interconnected problems (e.g., sprawl involves land use, air quality, water quality, and transportation) and explore multifaceted solutions that will help solve more than one problem at a time (e.g., a green roof reduces the heat island effect, provides habitat, lessens energy consumption for heating and cooling, helps manage stormwater, and so on).
- **Prevent environmental damage:** instead of dealing with environmental impacts after the fact, steps should be taken to design and

implement systems that do not produce environmental impacts in the first place (e.g., low impact development that drastically reduces the amount of stormwater leaving a building site).

- **Involve the public:** public interest and involvement is a key characteristic of the SCM and is evident in the fact that many SCM initiatives originate from outside government and in the emphasis put upon public participation in government-led initiatives.
- **Help achieve social equity:** SCM initiatives often show sensitivity to their potential social impacts and steps are taken to modify programs in order to reduce risks to or enhance opportunities for vulnerable members of society (e.g., providing a basic amount of free water before billing begins).
- **Work with nature:** the SCM privileges solutions to community problems that work with or mimic natural process (e.g., using human waste as an input into agricultural production or using sunlight to generate electricity).
- **Restore natural processes:** many SCM initiatives are oriented around efforts to restore natural processes in a community setting (e.g., daylighting streams, revegetating river banks, restoring wetlands, reforesting streets).

Community Sustainability Initiatives

A wide range of initiatives can be seen as part of the SCM. They include initiatives to replace engineered infrastructure with green infrastructure to manage storm water, enhance the urban forest, build district heating/cooling systems, develop local renewable energy sources, undertake intensification projects, promote green building development, encourage urban agriculture, reduce waste, set up recycling and energy-from-waste projects, undertake neighborhood greening projects, invest in public transit and active transportation, discourage solo car usage, reduce greenhouse gas emissions from local sources, rehabilitate streams, wetlands, and other natural areas, and so on. Social and economic initiatives might include green jobs, local economic development, the creation of affordable housing, strengthening civil society,

building community democracy, and support for human rights and capacities.

The type of initiatives included under the rubric of the SCM tends to vary from one location to the next – there is no set program that a community must abide by in order to be identified as part of the SCM. Some initiatives work with existing community structures and processes in order to reduce impacts at the margin, while others are more radical challenges to the status quo and focus on self-sufficiency and disentanglement from centralized systems. Sustainable community initiatives also differ from the Global North to the South: as a general rule, initiatives in the North tend to focus on resource use and ecological system maintenance, while in the South, social justice and economic development aspects of community sustainability tend to receive more emphasis.

One result of the sustainable communities movement has been the widespread adoption of sustainable community plans (SCP). A SCP allows the community to address the myriad local sustainability issues in a holistic, systematic way and to find a widely accepted balance among economic, environmental, and social concerns. A SCP usually involves a visioning exercise, during which the public expresses its enduring values and long-term aspirations for the community, a strategic plan that embodies the vision and knits together the range of government agencies and community stakeholders into a series of immediate, medium-, and long-term actions, and a monitoring program based on community sustainability indicators. The SCP may be “home-grown” or based on a preexisting framework such as the Natural Step, Smart Growth, the Melbourne Principles, or ► [Local Agenda 21](#).

Measuring Community Sustainability

Given the diffuse nature of the SCM and the broad set of principles and initiatives that are undertaken under its rubric, it is not surprising that measuring community sustainability would pose special problems. How can the sustainability of one community be compared to that of another? One approach to this problem is

Ecological Footprint Analysis, which can be applied to communities to measure the amount of biologically productive land and sea area needed to regenerate the resources residents consume and to absorb their wastes (Wackernagel & Rees, 1998). Another approach – called the community genuine wealth framework – is to assess community sustainability by measuring stocks and flows of five capital assets: human, social, natural, built, and financial capital (for an example, see Anielski & Johannessen, 2009).

One of the key issues facing the SCM is moving from concepts and plans to implementation. In order to strengthen the link between concept and outcomes, many observers have pointed to the urgent need for metrics to measure changes on the ground as sustainability initiatives are implemented. Many cities around the world have undertaken sustainable community reports, employing a range of indicators to measure progress on environmental, social, and economic axes. The most ambitious indicator initiatives attempt to integrate the indicators into municipal decision-making structures in order to provide an ongoing reference framework to guide policy development and assess outcomes (Peck & Tomalty, 2002). Indicator frameworks can also be used to compare communities and rank them according to their sustainability, as has been done by academics and public information agencies (such as magazines) around the world.

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Sustainable Development

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Definition

“Sustainable development” and the related notion of “sustainability” express the idea that human civilization can organize itself in ways that promote ecological and social welfare far into the future. The United Nations-sponsored World Commission on Environment and Development, chaired by former Norwegian Prime Minister Gro Harlem Brundtland, produced the most commonly used definition in its 1987 report *Our Common Future*: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission, 1987). However, this definition has been criticized for being anthropocentric and for relying on the

difficult-to-define concept of “needs.” Other definitions refer to equally problematic concepts such as living within the planet’s “carrying capacity,” preserving “natural capital,” and redefining “growth.” Definitional difficulties aside, sustainable development can be seen as involving several core themes: (1) a long-term perspective on the development of human communities and societies, (2) a holistic approach to problem solving (e.g., seeking to simultaneously meet the “three E’s” of environment, economy, and equity), and (3) a proactive, engaged stance on the part of professionals and concerned members of the public, oriented towards meeting those long-term goals.

Description

The terms “sustainable development” and “sustainability” appeared for the first time in the early 1970s as a result of the rapid international expansion of environmental concerns and global perspectives during the preceding years. Rising worries about toxic chemicals, air and water pollution, nuclear power, and resource depletion were one motivating factor; another was a “small planet” perspective aided by the spread of photographs of the Earth from space programs. Roots of the sustainability concept, however, extend back to German “sustained-yield” forest management practices of the late nineteenth century (Worster, 1993), include traditions for managing common pool resources (e.g., Ostrom, 1990), and draw upon ecological philosophies such as Aldo Leopold’s holistic “land ethic” (Leopold, 1949).

The sustainability concept was mentioned for the first time in print in two books that appeared in 1972: *The Limits to Growth*, written by Donella H. Meadows, Dennis L. Meadows, Jørgen Randers, and William W. Behrens III, and *Blueprint for Survival*, written by Edward Goldsmith and Robert Allen (Goldsmith and Allen, 1972). The former volume, prepared by a team at the Massachusetts Institute of Technology (MIT), presented modeling that showed global systems crashing midway through the

twenty-first century if current trends of population, resource consumption, pollution (including carbon dioxide emissions), and loss of arable land remained unchanged. However, the authors stated that it would be possible to alter these trends “to establish a condition of ecological and economic stability that is sustainable far into the future” and argued that the sooner humanity chose this alternate track, the greater the chances of success (Meadows, Meadows, Randers, & Behrens, 1972, 24).

Environmental activists frequently applied the sustainability concept during the 1970s and 1980s to global and international development contexts, often focusing on energy and resource use topics. The concept received a major boost from the Brundtland Commission’s report *Our Common Future* in 1987 and the Rio de Janeiro United Nations Conference on Environment and Development in 1992. In the 1990s, many professions began asking how their fields might become more sustainable; new books and articles appeared in disciplines such as architecture, urban planning, food systems, water management, tourism, and economic development. In the 2000s, rising global concern about climate change fueled still stronger interest in sustainable development, and reducing greenhouse gas emissions became a primarily goal of sustainability planning.

Since its inception, the idea of sustainability has been interpreted in different ways by different sets of observers. A number of distinct viewpoints can be identified:

- *Mainstream environmental perspectives* – These writers have been primarily concerned with global environmental sustainability and resource limits, often without a strong critique of economic systems, inequities, value systems, or lifestyles. An example is the Brundtland Commission Report, which to its credit did emphasize the need for global equity, but did not critique existing concepts of continual economic growth (World Commission, 1987).
- *Deep ecology* – With roots in the writings of Aldo Leopold, this approach takes an ecocentric perspective, arguing that humans

should greatly reduce their numbers and impact on the planet and that human beings should be seen as a small part of much larger systems. Nature is assigned great intrinsic value, in contrast to the anthropocentrism of some more mainstream perspectives. Examples include Devall and Sessions (1985) and Naess (1989).

- *Technological optimism* – This perspective argues that sustainability needs can be met through technological, economic, or social improvements, based on the inherent creativity of human beings and human systems. It represents a contrarian point of view to “limits to growth” arguments, which writers such as Julian Simon (1981) sought to refute.
- *Environmental economics/ecological economics* – These related movements have sought to better incorporate environmental concerns into economic analysis and reasoning, although in the latter case, acknowledging separate, intrinsic environmental values that cannot be quantified in terms of economic value. Examples include Pearce and Barbier (2000), Costanza (1991), and Daly and Farley (2004).
- *Steady-state economics* – Championed by economist Herman Daly since the 1970s, this perspective calls for development of economies with a constant or reduced level of material throughput and emphasis on qualitative rather than quantitative dimensions of progress (Daly, 1973, 1977, 1996). This viewpoint is in strong contrast with traditional economic reliance on continual growth in material production and consumption. Advocates have sought to develop alternative indicators of social progress to GDP (gross domestic product), such as the Index of Sustainable Economic Welfare (Daly & Cobb, 1994) and the Genuine Progress Indicator.
- *Social justice/developing world perspectives* – This viewpoint emphasizes equity dimensions of sustainable development and frequently views core sustainability challenges as overconsumption in the developed world and economic imperialism. Advocates such as Vandana Shiva (2005) are often opposed to

economic globalization and the operations of international development agencies such as the World Bank.

- *Ethical/spiritual perspectives* – This approach views sustainable development as a challenge of ethics and moral growth and has been associated with efforts such as the development of the Earth Charter in 2000, first called for by the Brundtland Commission in 1987 (Earth Charter Associates, 2011).

Many tools to promote sustainable development have been developed over the past four decades. These include sustainability indicators (e.g., Maclaren, 1996); ecological footprint analysis (Wackernagel & Rees, 1996); the precautionary principle, which cautions followers against taking an action if that activity might produce social or ecological harm; and green development rating systems such as the LEED (Leadership in Energy and Environmental Design) system in the United States, BREEAM in Great Britain, and Green Globes in Canada. A wide variety of other professional tools are being adapted to serve sustainability goals in professions such as engineering, architecture, landscape architecture, urban planning, and public policy.

Governments at a variety of different scales (national, state/provincial, regional, and local) have developed sustainability plans of different sorts or have specifically incorporated sustainability goals into existing planning (e.g., Burke & Conroy, 2000; Johnson, 2008; Portney, 2003; Wheeler, 2013). Some businesses and nonprofit organizations have done the same. The effectiveness of such actions varies greatly, however, and some can be open to charges of cooptation or “green-washing.”

Discussion

Although initially often viewed as a fad or passing preoccupation, “sustainability” has proven a concept of enduring value that, as suggested earlier, encapsulates several themes important to many: a long-term perspective, a holistic approach to problem solving, and active

engagement. It is still a difficult concept to define and is used in different and sometimes contradictory ways by different constituencies. For example, some researchers and institutions emphasize “sustainability science,” and several academic programs and a journal exist using that name. However, other voices have cautioned (e.g., Capra, 1996) that traditional modernist scientific approaches that focus on mechanistic understandings of reality within isolated disciplines – called a “Cartesian paradigm” by some – have been a cause of sustainability problems or may tend to reinforce technological optimism that sees scientific breakthroughs as the solution to sustainability problems rather than fundamental changes in economics, lifestyles, value systems, or global distribution of resources. The sustainability concept, therefore, serves both as a ubiquitous label for alternative approaches to human development and as a battleground for alternative worldviews within current society.

Cross-References

- ▶ [Brundtland Commission \(World Commission on Environment and Development\)](#)
- ▶ [Ecological Footprint](#)
- ▶ [Indicators, Quality of Life](#)
- ▶ [Precautionary Principle](#)
- ▶ [Social Justice](#)
- ▶ [Sustainability](#)

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Sustainable Development Attitudes

- [Index of Attitudes Favorable Toward Sustainable Development](#)

Sustainable Development Behaviors

- [Index of Behaviors Favorable Toward Sustainable Development](#)

Sustainable Development Indicators

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Synonyms

[Community indicators](#); [Indicators of sustainability](#); [Indicators, quality of life](#)

Definition

Sustainable development indicators are statistics that are used to measure social equity, economic growth, institutional capacity, and environmental protection to ascertain the different dimensions and levels of sustainable development.

Description

With the endorsement by national governments in the 1992 United Nations Conference in Rio de Janeiro, the international action plan “Agenda 21” urges that “indicators of sustainable development need to be developed to provide solid bases for decision-making at all levels” (United Nations Commission on Environment and Development [UNCED], 1992: Chap. 40). However, different commentators and organizations have used the terms “sustainability” and “indicators” in different ways. Although indicators, in a simple way, can be defined as surrogates or proxy measures of some abstract, multidimensional concepts, the concept of sustainability is more difficult to pin down (Wong, 2006). Its interpretation is dependent on philosophical considerations that are influenced by

political, ethical, religious, and cultural factors (Bell & Morse, 1999; Campbell, 1996; Schaller, 1993). In general, there is a consensus that sustainability should encompass social equity, economic growth, institutional capacity, and environmental protection (e.g., Bell & Morse, 1999; UNDESA, 2007). Some of the most widely quoted definitions include:

- Meeting the needs of the present without compromising the ability of future generations to meet their own needs (UNCED, 1987)
- Improving the quality of human life while living within the carrying capacity of supporting ecosystems (IUCN/UNEP/WWF, 1991)
- To equitably meet developmental and environmental needs of present and future generations (UNCED [United Nations Commission on Environment and Development], 1992)

The United Nations Department of Economic and Social Affairs published a set of Indicators of Sustainable Development in 1996, which was subsequently updated in 2001 and 2007 (UNDESA, 2007). These indicators aim to serve as a framework of reference for countries to adapt and develop their own indicators to reflect their national conditions. These indicators originate from a work program of the United Nations Commission on Sustainable Development (CSD) in 1995. The 2007 CSD indicators consist of 96 indicators of sustainable development, of which 50 are regarded as core indicators. The CSD indicators are organized in 14 themes (with 44 subthemes): poverty, governance, health, education, demographics, atmosphere, land, oceans, seas, coasts, freshwater, biodiversity, economic development, natural hazards, global partnership, and consumption and production patterns.

In Europe, the European Commission has taken a lead toward harmonizing different local indicator sets through the European Common Indicators initiative ([European Commission's European Common Indicators](#)). This initiative involves a partnership of different stakeholders and organizations to find comparable data, develop better data collection methodologies, and gain a better understanding of sustainability in local communities across Europe. Ten

common local sustainability indicators have been identified through a bottom-up process, and the first set of data become available since autumn 2001. The European Common Indicators aim to help a local authority to begin the process of monitoring the quality of its urban environment. The 10 European Common Indicators are citizen satisfaction with the local community, local contribution to global climatic change, local mobility and passenger transportation, availability of local public open areas and services, quality of local ambient air, children's journeys to and from school, sustainable management of the local authority and local business, noise pollution, sustainable land use, and products promoting sustainability.

Sustainability indicators can be classified according to their functions and roles in the decision-making process (Schaller, 1993; Wong, 2006). Some sustainability indicators aim to provide a simple description of the current state of development (state indicators); others are used to diagnose and gauge the process that will influence the state of progress toward sustainability (pressure, process, or control indicators) or to assess the impact brought by policy changes (target or performance indicators) (Briggs, Kerrell, Stansfield, & Tantrum, 1995; Cannell, Palutikof, & Sparks, 1999). The initial CSD indicators were organized in a driving force, state, and response (DSR) framework (UNDESA, 2007), a variation of the pressure-state-response framework. The first CSD indicators were also grouped according to the dimensions of sustainable development: social, economic, environmental, as well as institutional. The DSR framework was discontinued in 2001 because it was not easy to establish the causal relationship among indicators, and the classification of indicators into driving force, state, or response was often ambiguous, which means that they are not addressing well the complex interlinkages among issues to inform policy. Since the second edition, CSD indicators have been organized along the four dimensions of sustainable development which provide a more flexible monitoring framework by connecting indicators with policy processes and targets.

Indicators can be aggregated to produce a single index value (Wong, 2006). The United Nations has for some years published the “Human Development Index” (UNDP [United Nations Development Programme], 2010) to measure the progress in developing countries, and the EUROSTAT (Eurostat [Statistical Office of the European Communities], 2001; Eurostat, 2001) is developing “Environmental Pressure Indices” to produce a composite index for each of the ten key identified areas of concern. This type of aggregated indices, primarily used at the national level, is not so helpful at regional and local levels to inform the progress of sustainable development. Hence sustainability indicator sets, comprising a broad range of indicators, are rapidly emerging in local communities across the world. This environmental agenda of Agenda 21 has not only brought with it a need to employ indicators as a key mechanism for assessing environmental impact and capacity but has also spurred local action and broadened concern to encompass the wider community based issues. Since then, sustainable development indicators have been emerged under different banners such as “sustainability indicators,” “quality of life indicators,” and “community indicators” (see Sawicki, 2002; Swain & Hollar, 2003). Some of the well-publicized community indicators projects include the Sustainable Seattle Project (2005), the Jacksonville Community Indicators Project (2005), [Willapa Indicators for a Sustainable Community Project](#), and the [Central Texas Sustainability Indicators Project](#) in the USA.

Discussion

The development of robust indicators is heavily reliant on the provision of a clearly defined theoretical framework of the concepts to be measured:

- The lack of a clear conceptual and theoretical framework to underpin the interrelationship between different factors to guide the selection of indicators raises the worry that indicators are developed in an ad hoc fashion without full consideration of the fundamental

principles of sustainable development. Also, there is a need to clarify the roles and functions of sustainability indicators and how they are used to influence policy making.

- The lack of appropriate data sources to operationalize the measurement of indicators has been a long-standing issue in indicators research. This tends to be more problematic when the spatial scale moves down from national to local level.
- Since there is not a single perfect measure of the complex concept of sustainability, sustainability indicator sets have been spawned at a number of different spatial levels. The concern is that these indicator sets are not necessarily compatible, and the diverse nature of these indicators makes it impossible to make meaningful benchmarking and comparison of progress across different spatial scales.
- The blossoming of sustainability indicator sets at the local level has provided flexibility for local communities to identify issues that reflect their particular concerns and circumstances. However, there is also an articulated fear that the failure of local communities to grasp the abstract concept of indicators and certain aspects of sustainability will lead to the sidelining of these components in the sustainable development agenda.

Cross-References

- ▶ [Community Indicators](#)
- ▶ [Indicators, Quality of Life](#)
- ▶ [Sustainability](#)

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Sustainable Development Knowledge

► [Index of Knowledge of Sustainable Development](#)

Sustainable Development Working Group, Arctic Council's

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Brief History

The SDWG is one of six permanent working groups [Other Arctic Council working group websites: ACAP (<http://www.arctic-council.org/index.php/en/acap>); AMAP (<http://www.amap.no/>), CAFF, (<http://www.caff.is/>); EPPR (<http://eppr.arctic-council.org/>); and PAME (<http://www.pame.is/>)] of the Arctic Council (<http://www.arctic-council.org>). A secretariat to support the activities of the SDWG was established in Ottawa, Canada, in late 2002 (<http://portal.sdwg.org>).

The Arctic Council was formally inaugurated by a Declaration, Sept 1996 (<http://www.arctic-council.org/index.php/en/about/documents/category/4-founding-documents#>).

The Council is a high-level intergovernmental forum to provide a mechanism to address the common concerns and challenges faced by the Arctic governments and the people of the Arctic. The main activities of the Council focus on the protection of the Arctic environment and sustainable development as a means of improving the economic, social, and cultural well-being of the peoples of the circumpolar north. The Council meets at the ministerial level biennially, and all decisions of the Council

and its subsidiary bodies are based on consensus. Senior Arctic Officials and subsidiary bodies meet more frequently to conduct the intersessional work of the Council.

The category of Permanent Participant provides for the active participation and full consultation with the Arctic indigenous representatives (<http://www.arcticpeoples.org/>) within the Arctic Council. Originally, there were three international indigenous peoples' organizations (the Inuit Circumpolar Conference (<http://www.inuit.org/>), the Saami Council (<http://www.saamicouncil.net/>), and the Russia Association of Indigenous Peoples of the North (<http://www.raipon.org/>)). The Aleut International Association (<http://www.aleut-international.org/>), the Arctic Athabaskan Council (<http://www.arcticathabaskancouncil.com/>), and the Gwich'in Council International (<http://www.gwichin.org/>) were admitted as Permanent Participants in the period 1998–2000. A number of non-Arctic states, intergovernmental and interparliamentary organizations and nongovernmental organizations have the status of Observers.

The Arctic Council Sustainable Development Program and working group were established, and Terms of Reference (<http://portal.sdwg.org/content.php?doc=31>) were agreed to, at the Ministerial meeting in Iqaluit, Nunavut, Canada, in September 1998. The Sustainable Development Framework Document (<http://portal.sdwg.org/content.php?doc=31>: SDWG Framework Document] was adopted by the Ministerial meeting in Barrow in 2000, outlining the elements of the SD Program and identifying six subject areas under the heading of sustainable development of special importance:

- Health issues and the well-being of people living in the Arctic
- Sustainable economic activities and increasing community prosperity
- Education and cultural heritage
- Children and youth
- Management of natural, including living, resources
- Infrastructure development

Activities/Major Accomplishments/Contributions

The Arctic Council Sustainable Development Working Group (SDWG)

The SDWG completed numerous projects in these and related fields (<http://portal.sdwg.org/content.php?doc=23>) in the period up to 2004. Since 2004, SDWG has developed more detailed work plans (<http://portal.sdwg.org/content.php?doc=31>) to guide its activities.

The SDWG has a very broad mandate for many of the socioeconomic and human dimensions of life in the Arctic. It therefore must take a strategic view of its priorities and project work, without losing the flexibility of a “bottom-up” approach that allows for new ideas and proposals to be explored and adopted where appropriate. The core of the SDWG is a portfolio of projects, dealing with a wide range of issues in human development in the Arctic. This work has not been conducted on the basis of any particular definition or theory of sustainable development but rather on the basis of practical interests and priorities of the Arctic states and Permanent Participants. All financial contributions by Arctic states for SDWG projects and activities, including operating the working group secretariat, are on a voluntary basis.

The projects are not managed directly by the SDWG but by groups of experts who report progress to the Group and seek comments and direction from the representatives of the Arctic states and Permanent Participants who constitute the SDWG. The projects vary in scope and are indicators of healthy progress on several practical undertakings that aim, directly or indirectly, to improve people's lives in the Arctic.

The SDWG has also engaged in activities other than these projects. For example, the SDWG has offered viewpoints on AMAP's Petroleum Hydrocarbons Assessment, PAME's Arctic Marine Strategic Plan, and the follow-up of the Akureyri Conference on Information and Communication Technology, which have contributed to those processes. The Capacity

Building Overview of the Arctic Council initiative, led by Canada, was been completed in 2004. The overview project plays an important role for the Council by providing a horizontal, thematic benchmark of current capacity building activities not only within SDWG but across all working groups.

A major achievement during the period 2002–2004 was the completion of the Arctic Human Development Report (AHDR) (<http://www.svs.is/AHDR/index.htm>). The AHDR provides an orientation to the human dimensions of the Arctic, an assessment of the basic systems, and an identification of a series of crosscutting issues. The purpose of the report was to identify and provide relevant policy insights of the authors on key issues, themes, and, in particular, trends that are of high importance and immediate concern to livelihoods and the welfare of people and societies in the circumpolar region.

AHDR II, a more comprehensive version of the initial report, is intended for completion in 2014.

A number of other SDWG activities have also contributed to a greater understanding of Arctic living conditions, including the Survey of Living Conditions in the Arctic (<http://portal.sdwg.org/media.php?mid=1203> and <http://www.arcticlivingconditions.org>), the Arctic Social Indicators projects (<http://www.svs.is/asi/asi.htm>), the Economy of the North Reports (2006 and 2008) (<http://portal.sdwg.org/media.php?mid=454> and <http://portal.sdwg.org/media.php?mid=1069>), and the EALAT project on reindeer herding, traditional knowledge, adaptation to climate change, and loss of grazing land (<http://portal.sdwg.org/media.php?mid=1204>), to name only a few.

Looking forward, the work of the SDWG can be expected to contribute substantially to the development of knowledge of the human dimension of the Arctic in the face of climate change and globalization. In a very short time, the preceptions of the Arctic have undergone a significant change from a remote, peripheral region to a mainstream geopolitical issue. The practical challenges for sustainable development

in this region relate to finding balance among the competing interests associated with the homeland, frontier, laboratory, and wilderness conceptualizations of the Arctic.

Cross-References

- ▶ [Arctic Human Development Report \(AHDR\)](#)
- ▶ [Arctic, Quality of Life](#)
- ▶ [ASI](#)
- ▶ [Circumpolar Indigenous Peoples](#)
- ▶ [Climate change, Arctic](#)

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Sustainable Governance

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Definition

The term “sustainable governance” can be used to refer to potentially lasting arrangements for collective decision making. More often the term is applied to collective decision-making arrangements that promote and facilitate progress towards sustainability both through their processes and through the resulting decisions. The latter version is broader and, arguably, includes the former.

Description

“Governance” is now often used to convey recognition that governments are not the only actual, and potentially legitimate and useful, bodies for decision making on matters of public importance. In contrast to “government,” “governance” includes several and perhaps many participating organizations and individuals – private sector and civil society bodies of many kinds as well as government authorities, all of them at various levels from the family and neighborhood to the planet. These diverse participants may act in concert or be more or less seriously in conflict. Inevitably, they influence each other in complex ways.

Although the term “governance” gained popularity in academic and public policy circles only in the past decade or two, the reality predates written history. The overlapping informal authority of community elders, healers, and warriors involved forms of governance. So did medieval roles of church and crown, merchant alliances, and craft guilds. Even in the more recent times when conventional political deliberations focused on the authority of governments, other bodies (corporations, organized religions, military institutions, unions, etc.) also wielded considerable power.

What is new, or at least at the center of attention in governance discussions today, is recognition that no government, however capable, can be expected to deal adequately with all the problems and expectations it faces and no combination of government and other power holders (including those of the economic market) can be trusted to act consistently in the public interest. Consequently, governance studies and applications often center on how best to engage multiple players at several scales in transparent and accountable approaches to collective ► [decision making](#) (Adger & Jordan, 2009; Lafferty, 2004; Lemos & Agrawal, 2006).

► [Sustainability](#) enters here because it represents long-term public interests that governments and other authorities have generally failed to deliver. While modern approaches to progress have delivered improvements on many parameters (most notably, overall ► [literacy](#) and ► [life expectancy](#)), at least three crucial measures point to deepening unsustainability and consequent vulnerability: Human demands on biospheric carrying capacity, including the chemistry that maintains climate stability, are apparently now beyond what might be sustainable and are growing quite steadily (MEA, 2005; WWF, 2010). At the same time, at least a billion people clearly do not have material sufficiency – the FAO (2008) estimates that about 925 million are malnourished. And most of the benefits of material growth go to those already very comfortable, not to those most in need; the richest 10 % get about 67 % of global income; the poorest 10 % get about 0.2 % (Milanovic, 2005). Governance

for sustainability is therefore governance of and for significant transition (Adger & Jordan, 2009; Kemp, Parto, & Gibson, 2005).

Considered from a global perspective, governance for sustainability means finding ways to cut energy and material demand significantly while ensuring enough for all. That requires at all levels major advances in efficiencies as well as in ► [equity](#), steps to decouple well-being enhancement from additional consumption, and much better understanding of how to fit economies into ecologies.

There is, not surprisingly, no widespread agreement on the priorities and pathways. But the current inclination to consider governance and sustainability as appropriate bedfellows indicates some awareness that the necessary transition will require collective action on intertwined problems and the engagement not merely of multiple authorities but also of all the communities and individuals who will need to be informed and contributing participants.

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Sustainable Lifestyles

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Definition

A collection of social practices perceived by the individual to be environmentally and socially responsible. This often encompasses concerns regarding the methods of travel (for work and leisure), the procurement and consumption of food, the management of household waste, and the involvement in local groups.

Description

There are two general ideals of those who aim to have a sustainable lifestyle: one is to minimize the impact they have on the environment, and the second is to make a positive contribution to a socially just world. A wide range of behaviors that can contribute to a sustainable lifestyle: methods of travel, levels of recycling in the home, energy saving in the home, reducing water use, organic gardening methods, ethical shopping, and involvement in social and political activities. People are likely to engage in these behaviors to different degrees, ranging from no engagement to full engagement (Gilg, Barr, & Ford, 2005). There are a number of reasons for this range in engagement in sustainable lifestyles, such as not believing the actions of one person can make a difference or conflicts between environmental and social priorities.

For some individuals, the impact of their lifestyle on the environment is more important than the impact on social concerns, and vice versa. Creating a world that is more socially equitable and just may result in people's actions not being seen as environmentally sensitive (Hobson, 2002), for example, choosing between buying locally produced food or contributing to the economic well-being of a farmer in

a developing country by buying their produce (Evans & Abrahamse, 2009). Perhaps the hardest choice people have to make is between consumerism (materialism) and sustainability. This is particularly evident in the UK and the USA where the governments of the 1980s actively encouraged the free market and the role of the consumer. An individual's desire for an object may outweigh their environmental and social concerns regarding that object (Cahill, 2001; Gatersleben, White, Abrahamse, Jackson, & Uzzell, 2010).

It has become apparent that encouraging the general public to move toward more sustainable lifestyles is a more complex process than just providing information so that people change their behaviors to be more responsible. Known as the rationalization process, this requires a certain amount of self-motivation by individuals and has tended to be the method used in government policy. However, it has been identified as expensive and, to a degree, unsuccessful. It may be possible to use community-based social marketing (McKenzie-Mohr, 2000) which aims to promote a change in behavior through tailored marketing to specific groups. In particular, the emphasis is on removing the psychological barriers that are preventing people from changing their behaviors. It is argued that this is more effective than top-down policy from government (Haq, Whitelegg, Cinderby, & Owen, 2008). If adopted by governments, it is thought that more individuals would try to change their lifestyles to become more sustainable (Jackson, 2005).

Breaking down the physical barriers to changing to a sustainable lifestyle is also considered to be important. Creating, and improving existing, road and public transport infrastructure to enable people to use environmentally responsible alternatives to the private car is a prime example. Housing design and construction appropriate for a country's climate can facilitate sustainable behaviors (e.g., high levels of insulation in cold countries, the use of photovoltaic panels to convert the energy from the sun to electricity). Residents in areas where recycling is collected from the home tend to recycle more than those who have to take it to a specific place,

a policy that governments can put in place to encourage sustainable lifestyles (Chance, 2009; Jenks & Jones, 2010; Noland & Thomas, 2007; Williams & Dair, 2007; Williams, Lindsay, & Dair, 2010).

Adopting a sustainable lifestyle is a difficult change to accomplish, particularly for those living in Western countries; however, individuals have shown it to be achievable while enhancing their quality of life.

Cross-References

- ▶ [Consumption, Sustainable](#)
- ▶ [Sustainability](#)
- ▶ [Sustainable Communities Movement](#)
- ▶ [Sustainable Development](#)
- ▶ [Sustainable Urban Design](#)

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The goal of sustainable regional development is to integrate these regional-scale networks into shared planning and development strategies.

Description

Contemporary regional development theories emphasize collaboration in the creation of multi-jurisdiction planning and development. Different scales of government work together to integrate land use, transportation, economic development, and infrastructure plans in an effort to achieve a shared vision of sustainability within the region. Through this process, the region is imagined as a “place,” defined by the economic, environmental, social, political, and cultural dynamics and contextual uniqueness, drawing from the collective assets of multiple territories within a defined space (Markey, Halseth, & Manson, 2008). Contemporary regionalism advocates creating a shared territorial imagination, moving away from polarizing political divisions. This shared territorial imagination draws upon existing untraded interdependencies and social capital that exist between firms and institutions that are culturally rooted and place-bound within the region (Scott & Storper, 2003). The region is consolidated into a place, defined by networks of economic, environmental, social, political and cultural connectivity (Wheeler, 2002). Hall and Stern (2009) describe this as the “process of becoming” as “the formation of new and shared regional identities, ‘structures of expectations’ and institutions” (p. 67). The process of creating regional boundaries, symbols and institutions is an expression of political, economic and social strategies to promote collaboration for planning and development and achieve shared social, economic and environmental objectives.

Sustainable Mobility

- ▶ [Sustainable Transportation and Well-Being](#)

Sustainable Regional Development

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Definition

Sustainable regional development applies principles of sustainability to development on a regional scale. Sustainable development integrates the need for balanced ecological, economic, and social objectives into the planning of human society. Regionalism specifies the scale at which this planning will occur. The scale is a socio-spatial organization of space, most commonly thought of as the hierarchical nesting of political organizations, such as local, regional, national, and international institutions. A region can be defined in many different ways. It can be defined by the different economic, social, or historic flows between adjacent communities or by defining a shared ecological system. Central to defining a region is the task of identifying the connecting social, economic, political, and ecological networks. These networks may be defined by economic activity, administrative boundaries, cultural territories, or ecological systems.

Cross-References

- ▶ [Sustainability](#)
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Sustainable Seattle

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Definition

Sustainable Seattle (S2) is a civic organization based in Seattle, Washington, USA, that is known for having created the world's first community quality of life indicators project with an explicit local sustainability orientation, in the early 1990s. The international reputation of S2 has been based not only on the successful production of three indicator reports in 1993, 1995, and 1998 but also for the process of community engagement through which it developed these reports and its success in gaining international notoriety. The 1995 report resulted in an "Excellence in Indicators Best Practice" award from the United Nations Centre for Human Settlements (UN-Habitat).

Description

The inception of Sustainable Seattle occurred at a forum organized in late 1990 by a nongovernmental organization visiting Seattle from Washington, DC. The keenest local participants in that forum continued to meet and, in an early phase of meetings, devised a plan to assemble a civic panel that would set measurable indicators

of sustainable community over the course of a 6-month process. This process led to the production of three successive sustainability indicator reports in 1993, 1995, and 1998 by volunteers and disseminating around the world both the reports and the processes underlying them. Following this, S2 has launched dozens of initiatives in its role as a "center for applied sustainability" or umbrella for sustainability-related initiatives regionally. Notable among these initiatives are a neighborhood indicators program (2004–2007), the B-Sustainable Information Commons (B-sustainable.org), and the Seattle Area Happiness Initiative.

For those working to define and improve community quality of life toward sustainable futures, the tool of the indicator project has become one of the most popular. Community indicator projects attempt to deepen measures of progress in the pool of human values, recognizing that how much we produce, what we pay, and how long we live do not, in and of themselves, determine the worth of our communities. Community well-being is also rooted and reflected in the nature, relationships, and quality of our lives. With its initial work in the early 1990s, Sustainable Seattle served as a lightning rod for the development of practice in community indicator projects able to enumerate a larger and more forward- and backward-looking set of values in social, environmental, and economic realms; and new dimensions of human responsibility and concern (Maclaren, 1996).

Sustainable Seattle's Indicators of Sustainable Community project was the first of its kind and remains one of the best-known attempts by a community group to measure a wide range of what it values most about local quality of life and sustainability. S2 has served as a model from which many community indicator studies have grown. The nonprofit research organization Redefining Progress conducted a survey of indicator organizations in 1998 and determined that over half (54 %) of the 170 indicator groups surveyed cited Sustainable Seattle as a motivator or model (Redefining Progress 2000). The S2 process was noted in the Bellagio Principles for Assessment of sustainability indicator projects (Hardi & Zdan, 1997).

Community indicator projects in the Seattle area have also taken off. Communities Count, a program of Seattle-King County Health Department, issued its first quality of life indicators report in 1994. The program now comprises a sizeable community of practice throughout King County. Other notable performance measurement efforts include King County's Benchmark Program and the Puget Sound Regional Council's trends program. There is now a surfeit of sustainability-related indicators available for consideration in the region, over 1,000 in a 2010 count. This situation, and the direct and indirect ties from S2 to these newer indicator projects, constitutes the local legacy of S2 (Holden, 2006; Miller, 1999).

While the practice of community indicators has grown in popularity since the early 1990s, evidence of the effectiveness of this work on improving decisions made that impact community quality of life remains scarce. Sustainable Seattle's Indicators of Sustainable Community project is emblematic of the citizen-based process model of effectiveness in indicators work. In an important exchange on this topic in the journal *Local Environment*, Brugmann (1997, p. 64) criticized Sustainable Seattle's failure to change formal city policy because of its independent nonprofit status, "without connection to major institutions, generally, and the City's strategic and statutory planning processes, specifically." Because of this separation, he referred to the overall effect of Sustainable Seattle's Indicators of Sustainable Community on local policies as "catalytic" at best, an effect he considered far from satisfactory. In a response, Pinfield (1997) put forth that Sustainable Seattle served a critically important role reducing uncertainty around sustainability by playing just such a catalytic role. By facilitating the wider diffusion of specific and locally relevant ideas and measures of sustainable development, S2 improved the quantity and quality of democratic debate and created the kind of regional knowledge that "influences as it becomes internalized in the shared understanding of a community" (Innes, 1990, p. 35) engaged in democratic debate.

The design of the organization's B-Sustainable Information Commons demonstrates these democratic, holistic commitments in its incorporation of complexity and sustainability systems theory as elaborated by Innes and Booher (2000) and Donella Meadows and her colleagues at the Sustainability Institute. The framework's most ambitious goal is to stimulate and manage "information flows" that will lead to collective understandings of emerging sustainability patterns. The intent of B-Sustainable is to empower sustainability advocates and practitioners with the information they need to take effective action – both independently and together. Whereas most indicator frameworks derive from a rational world model, sustainability systems theory and complexity theory posit that, in a complex and uncertain world, the need is for distributed intelligence based on experiential knowledge. In other words, social adaptation proceeds through learning-by-doing. In this context, indicator frameworks can facilitate shared understandings of emerging patterns, help coordinate action at all levels, and orient diverse, but interdependent, stakeholders toward common strategies. They blend the codified knowledge found in traditional frameworks with social learning processes (Sonntag, 2010).

Although S2 chooses to pursue its goal of advancing sustainable development through selecting and measuring a set of numeric indicators, the organization's intention is not so narrow. The intent of founding S2 members was to initiate and contribute to a citywide conversation about sustainable development that in time would lead to a new system of urban policy and practice. To S2, sustainability has been put into practice as a multifaceted idea. First, it is concerned with linkages among social, cultural, economic, and environmental issues, in that "decisions, actions, behaviors, and designs that cover the full range of consequences will most likely lead to more sustainable outcomes than those that only look at one dimension of concern." Second, S2 takes a diversity-based, collaborative, and inclusive approach to sustainability, arguing that "diversity in both ecology and culture promotes long-term stability by providing

flexibility” and that “sustainability calls for the elimination of poverty.” Third, some devolution of power in order to move toward sustainability is called for: “issues of equity (social, economic, environmental) cannot be resolved without fully inclusive and broad participation of an informed public, considering both today’s needs and the needs of future generations” (Sustainable Seattle, 1993).

The pioneering and ongoing work of Sustainable Seattle is testament to the reality that indicators, in and of themselves, are not enough to drive social change toward sustainable development. Instead, for indicators to be useful, they must be developed with the active participation of those who will use and learn from them, with a view to managing flows and the effective integration of information rather than simply generating new data, and with a contextually grounded and politicized action agenda.

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► [Community Indicators](#)

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Sustainable Society Index, Tool for Measuring Well-Being

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Synonyms

SSI

Definition

The Sustainable Society Index, SSI, measures the level of sustainability of a country or region. It covers sustainability in its broad sense, comprising human well-being, environmental well-being, and economic well-being. The SSI is calculated for 151 countries, covering over 99 % of the world population. Since 2006, the SSI is published every 2 years. The Sustainable Society Index – SSI.

Description

Introduction

The worldwide concern about ► [sustainability](#) is growing rapidly. People, more than politicians, are

worrying what will happen to our planet and all life that it supports in the near and distant future. Nevertheless, some people believe, or wish to believe, that technology will be the solution for every problem that may arise: do not worry that we continue putting our future at stake, since technology will come in time to our rescue (Fromkin, 2000). However, most others, scientists and common people, strongly emphasize the urgency to take appropriate measures before it will be too late.

To make progress toward sustainability, toward a sustainable society, one must know where one stands now and what the remaining distance to sustainability is. That requires measuring the actual level of sustainability of a society, a region, or a country. Across the years, many indexes have been developed for this purpose (Kerk, 2008a, 2010a). The most relevant ones are ► [Well-being of Nations](#), ► [Environmental Sustainability Index](#), Environmental Performance Index, Millennium Development Indicators, ► [Ecological Footprint](#), Index for Sustainable Economic Well-being, and Genuine Progress Indicator. All of them have their advantages as well as their shortcomings, the latter being no full coverage of sustainability aspects, no regular updates, or being too complicated and thus lacking transparency.

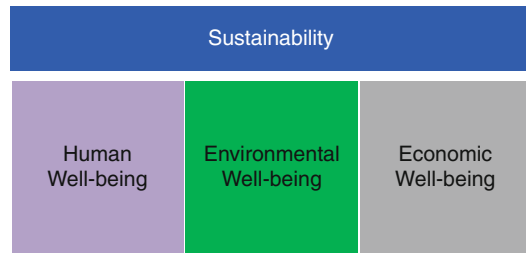
To meet the requirements of an index that measures the level of sustainability, a new index has been developed: the Sustainable Society Index, SSI.

Sustainability

In 1987, already 25 years ago, the World Commission on Environment and Development – chaired by the former Norwegian Prime Minister Gro Harlem Brundtland – has placed sustainability and sustainable development on the world agenda. The commission formulated the famous Brundtland definition (WCED, 1987). To avoid any possible misunderstanding, we have extended it by a third sentence, so it now runs as follows:

A sustainable society is a society

- That meets the needs of the present generation
- That does not compromise the ability of future generations to meet their own needs



Sustainable Society Index, Tool for Measuring Well-Being, Fig. 1 Three dimensions of well-being

- In which each human being has the opportunity to develop himself or herself in freedom, within a well-balanced society and in harmony with surroundings

Following this definition, the concept of sustainability comprises all three dimensions of well-being: human well-being, environmental well-being, and economic well-being (Fig. 1).

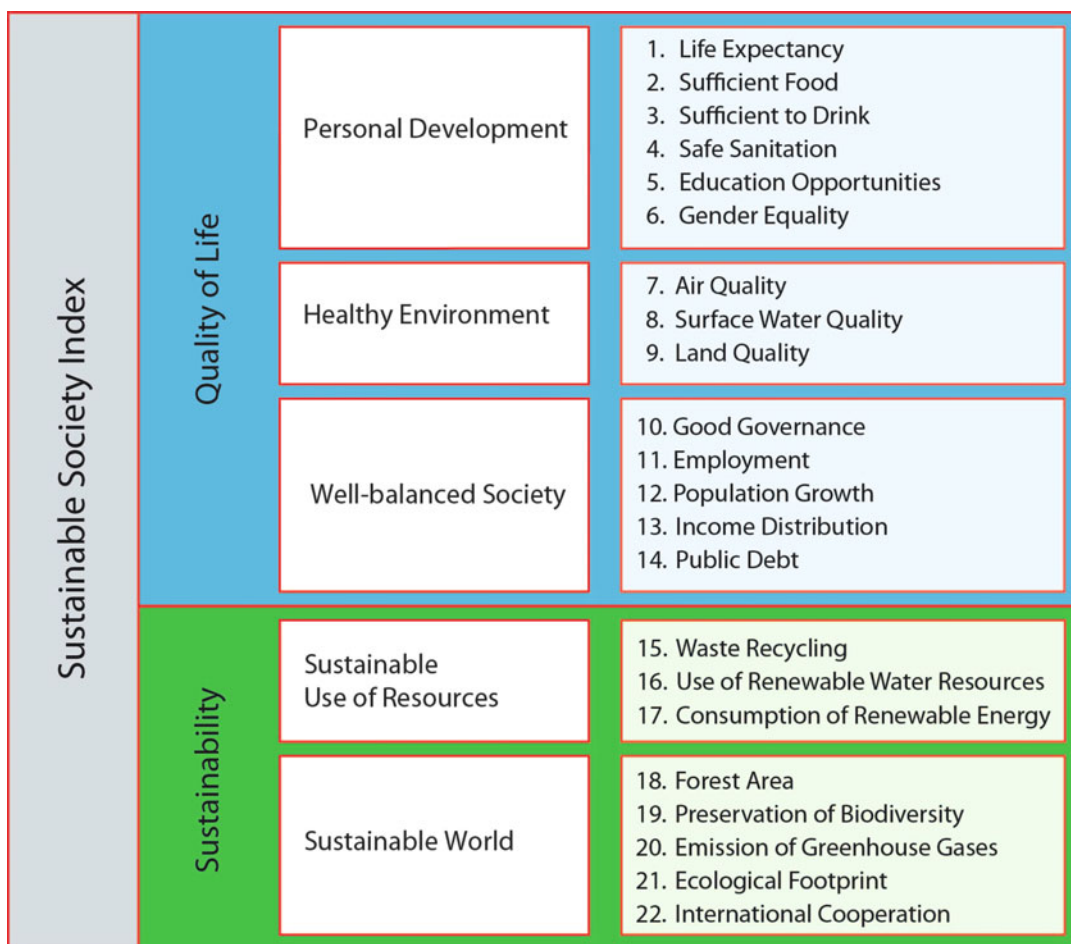
Human well-being without environmental well-being is a dead end; environmental well-being without human well-being makes no sense, at least not from the perspective of humans. Human well-being and environmental well-being are the goals to be met; economic well-being is a means to achieve these two goals.

Short History of the Sustainable Society Index, SSI

The Sustainable Society Index, SSI, has been developed (SSF, 2010) to measure a nation's sustainability along all three well-being dimensions. In 2006 the SSI has been published for the first time: SSI-2006. At that moment its framework focused on quality of life, human well-being, and sustainability, mainly environmental well-being.

The first update, SSI-2008, was also based on this framework (Fig. 2).

In 2009/2010 a thorough evaluation of the SSI has been done (Kerk & Manuel, 2010b). Next to the experiences gained by working with the SSI, the comments from many experts and users, as well as the Stiglitz report on the measurement of economic performance and social progress, played an important role (Stiglitz, 2009). This resulted in an improved framework, now explicitly comprising all three dimensions of well-being.



Sustainable Society Index, Tool for Measuring Well-Being, Fig. 2 Original framework of the SSI

The next update, SSI-2010, has been based on this revised framework. One year later the Joint Research Centre of the European Commission, JRC, has audited the SSI (Saisana, 2012). This resulted in a number of recommendations for further improvement, which all have been implemented in the SSI-2012. The overall conclusions of JRC are that (1) the improved framework of the SSI is conceptually coherent, (2) it meets the statistical requirements set by JRC, and so (3) the SSI is well suited to assess nations' development toward sustainability in its broad sense: human, environmental, and economic well-being.

Current Framework of the SSI

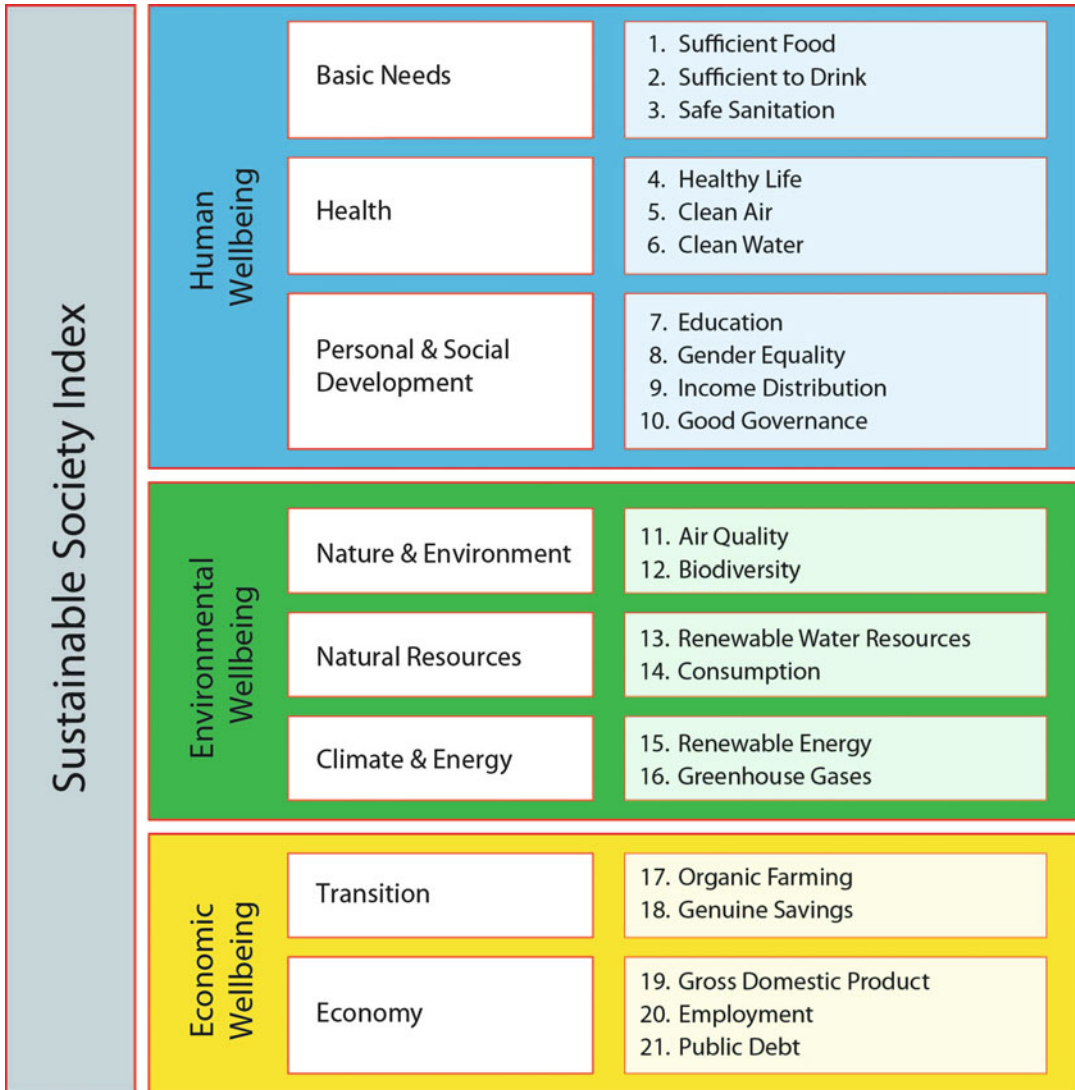
The current framework of the SSI explicitly comprises all three well-being dimensions. It consists of eight categories and no more than 21 indicators (Fig. 3).

These 21 indicators measure the level of well-being and of sustainability of 151 countries, covering over 99 % of the world population.

Calculation Methodology

Raw Data to Indicator Scores

The raw data of each of the 21 indicators are converted to indicator scores on a scale of 0–10. For this purpose calculation formulas are used,



Sustainable Society Index, Tool for Measuring Well-Being, Fig. 3 Current framework of the SSI

which may RTBB differ per indicator, taking into account the specific conditions of each indicator.

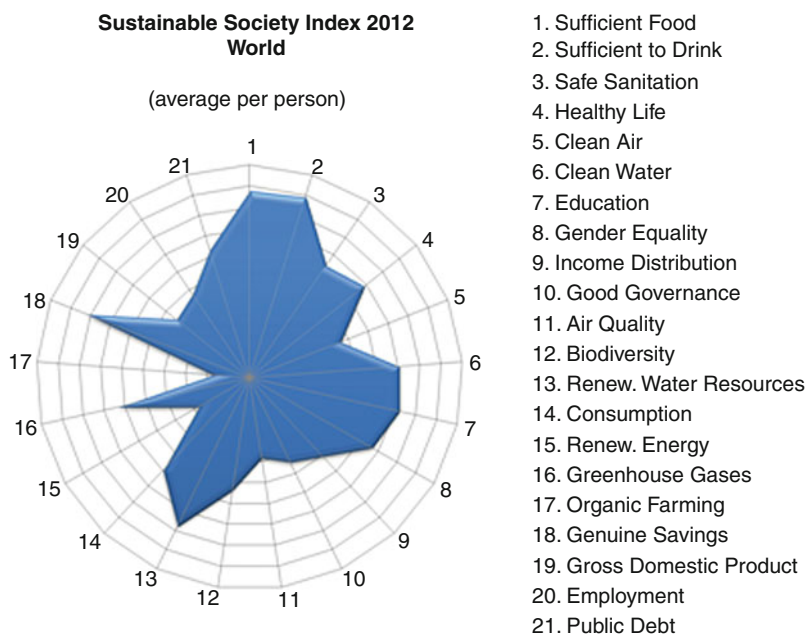
Aggregation

The scores of the indicators are aggregated into scores of each category, using the geometric average of the underlying scores. Contrary to a simple arithmetic average, the geometric average allows less compensation among the underlying scores: it is more suitable to take into account low scores. This is important in view of

the concept of strong sustainability, which allows no compensation. Weak sustainability on the other hand, allows compensation between the underlying values. Weak sustainability is heavily criticized since it allows for instance the compensation of low environmental well-being by high human well-being. This approach will never result in actual well-being and sustainability. Thus, the SSI uses the geometric average.

The scores of the categories are aggregated into well-being scores, also using geometric average.

Sustainable Society Index, Tool for Measuring Well-Being, Fig. 4 Indicator scores SSI-2012, world



Continuity of the SSI

The SSI is updated every 2 years. It is unavoidable that the framework – the indicators used or the way of calculation – will keep changing over time. The development of an index to measure complex matters, like well-being and sustainability, is an ongoing process. Moreover, data availability as well as reliability may change over years. Every time changes will be made to the framework of the SSI, all previous editions will be recalculated in accordance to the newest framework.

Main Results SSI-2012

World Totals

Indicator Scores See Fig. 4

The center of the web reflects a score of 0, i.e., no sustainability, the outer circle a score of 10, i.e., full sustainability.

N.B. All total scores, be it the world totals or the totals per region or per income class, are calculated as the average scores per person. So the number of inhabitants of a country has been taken into account.

The spider web shows at a glance that the world is far from sustainable. The best scores are for two of the basic needs: Sufficient Food and Sufficient to Drink. The scores of 8.80 and 8.88, respectively,

however, conceal the fact that a huge number of people – hundreds of millions – still have to stay alive without the daily minimum amount of calories and access to safe drinking water. It is remarkable that the score for Sufficient to Drink improved rather more – 8.30–8.88 – than for Sufficient Food – 8.67–8.80 – over the years between SSI-2006 and SSI-2012.

The minimum scores for the world as a whole are for Renewable Energy and Organic Farming. Looking at the spider web one sees at a glance which indicators need attention most urgently.

Well-being Scores See Fig. 5

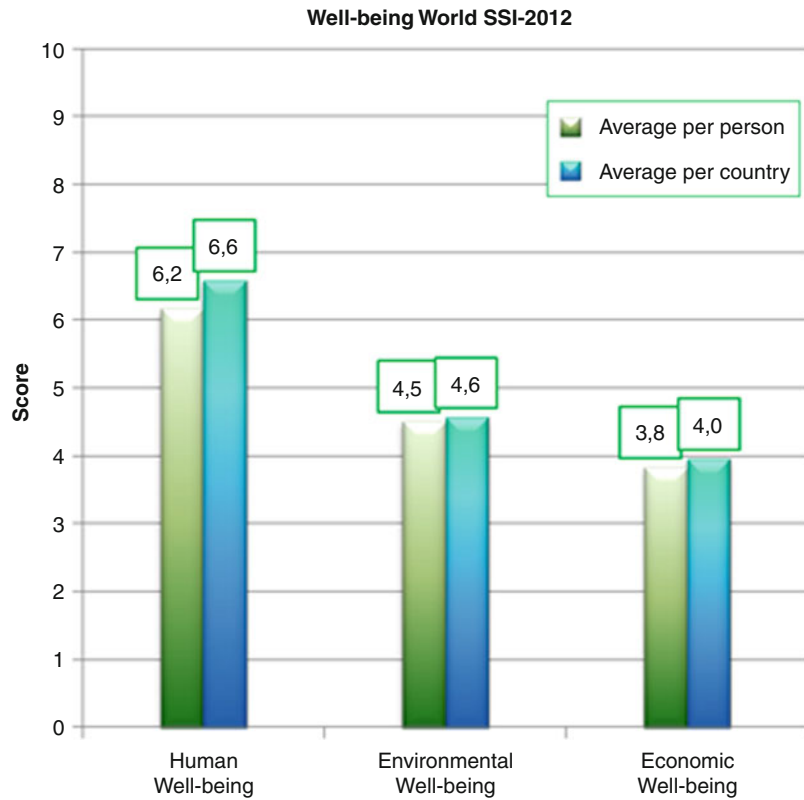
The level of human well-being is notably the highest one of the three well-being dimensions; economic well-being by far the lowest one.

By way of comparison the totals are presented as average per person as well as average per country. Notice that the differences are substantial, particularly for human well-being.

World Totals: Progress 2006–2012

Now that four editions of the SSI have been published, one can see to which extent progress has been achieved on the way toward a sustainable society.

Sustainable Society Index, Tool for Measuring Well-Being, Fig. 5 Well-being scores SSI-2012, world



Indicators: Progress

See [Fig. 6](#)

Thirteen indicators have made progress, seven are in decline, and one stayed equal. GDP has grown the most by far of all indicators, followed at some distance by Sufficient to Drink and Safe Sanitation.

In this period the unemployment rate has increased. It is not surprising that the indicator values of Greenhouse Gases and Renewable Energy are also in decline.

Well-being Dimensions: Progress

See [Fig. 7](#)

Human well-being has made a progress of 5.7 % in 6 years, from a score of 5.9–6.2. Environmental well-being was slightly in decline, by 1.4 %, whereas economic well-being increased by 2.6 %. Apparently, the strong increase of GDP per capita of nearly 24 % – by far the largest increase of any indicator – has been beneficial for human well-being but not for environmental well-being (Fig. 7).

Regional Totals

Quite another perspective is looking at regional differences. The scores for the three well-being dimensions are shown in the graphs below (Fig. 8).

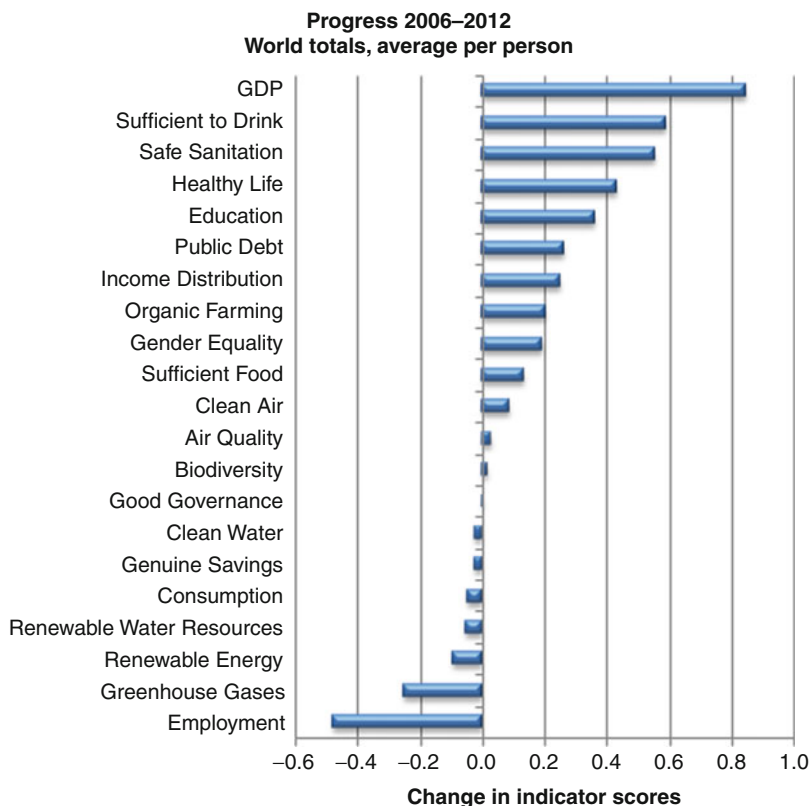
Not surprisingly, Europe (North, West, and South) and North America show the highest scores for human well-being. Africa (Middle, West, and East) has by far the lowest scores (Fig. 9).

The picture for environmental well-being is totally different from the one for human well-being. Africa is performing – comparatively – rather well. West and Central Asia, with many oil-rich countries; North America; and Oceania show the lowest scores (Fig. 10).

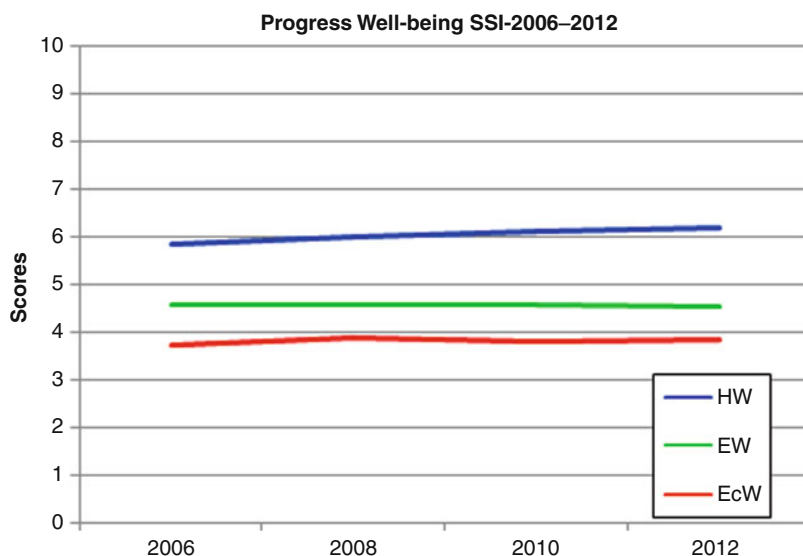
Economic well-being again presents a different picture, with lowest scores for West and Middle Africa and the highest scores for Oceania, Northern Europe, and Central America.

The data of the SSI offer many opportunities for assessing the well-being of countries, comparing countries among each other and numerous other investigations.

Sustainable Society Index, Tool for Measuring Well-Being, Fig. 6 Progress 2006–2012, indicators



Sustainable Society Index, Tool for Measuring Well-Being, Fig. 7 Progress 2006–2012, well-being



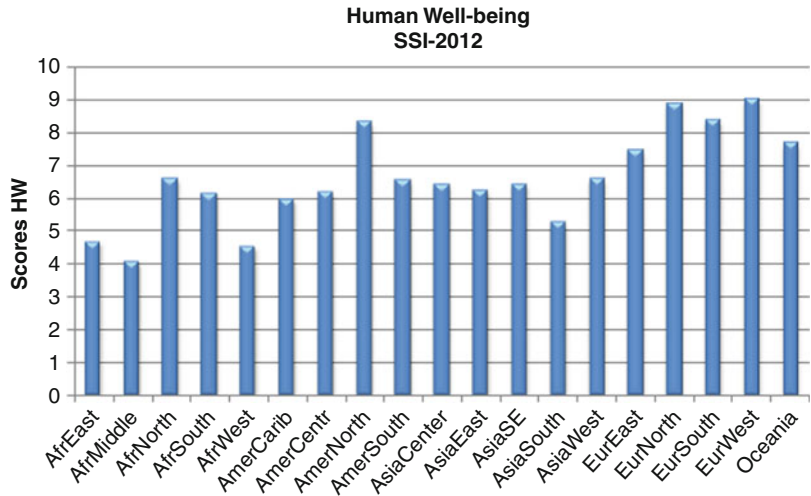
Scores per Income Class

One may wonder how the scores are divided by income class, according to the definition of income classes by the World Bank (2012) (Fig. 11).

On average higher income correlates with higher human well-being and lower environmental well-being. This is exactly what one would expect. That would mean – on average – that

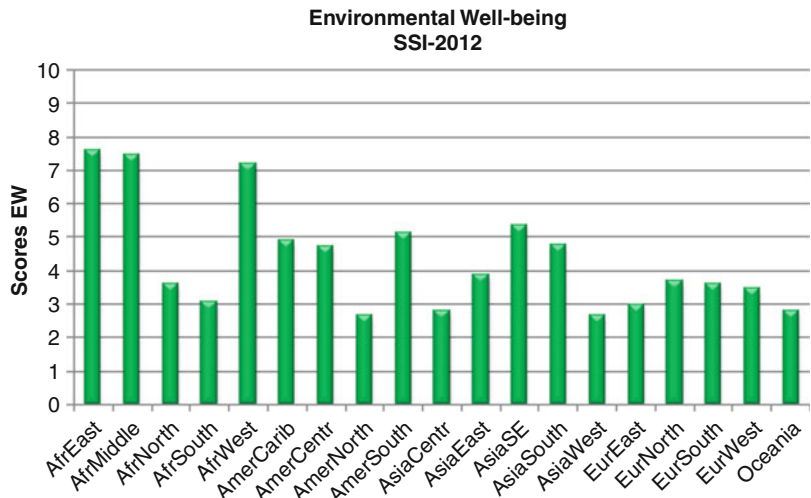
Sustainable Society Index, Tool for Measuring Well-Being, Fig. 8

Human well-being scores SSI-2012 per region



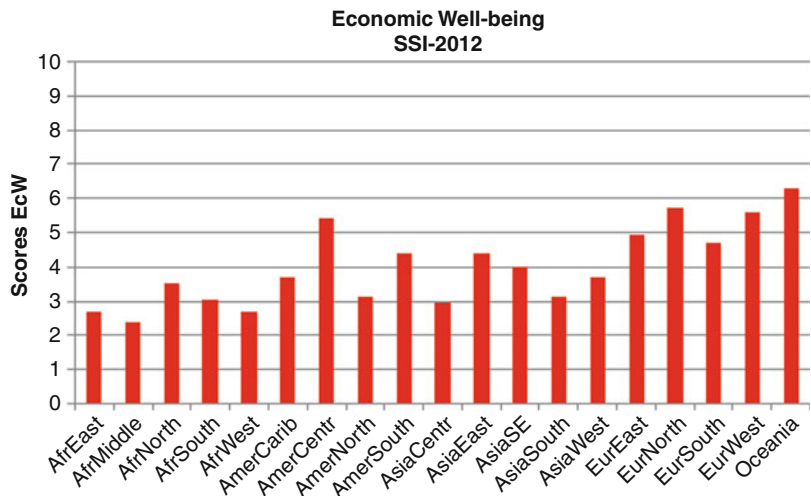
Sustainable Society Index, Tool for Measuring Well-Being, Fig. 9

Environmental well-being scores SSI-2012 per region



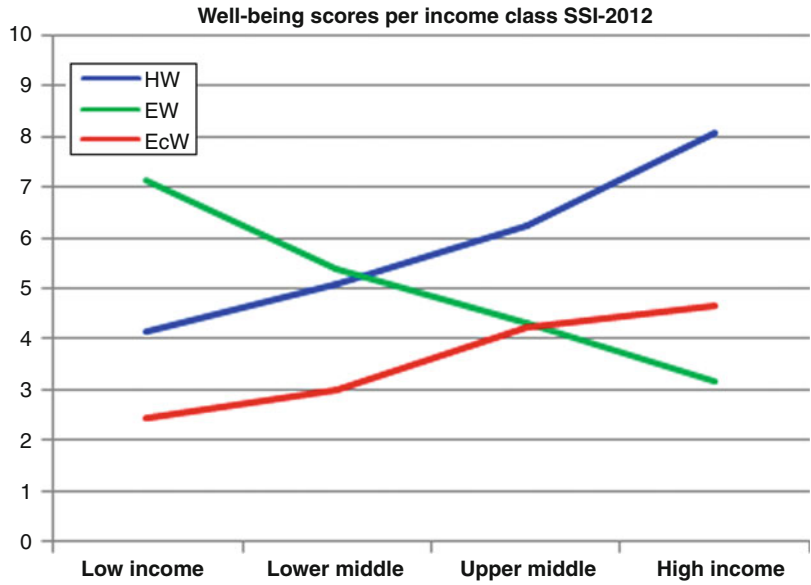
Sustainable Society Index, Tool for Measuring Well-Being, Fig. 10

Economic well-being scores SSI-2012 per region

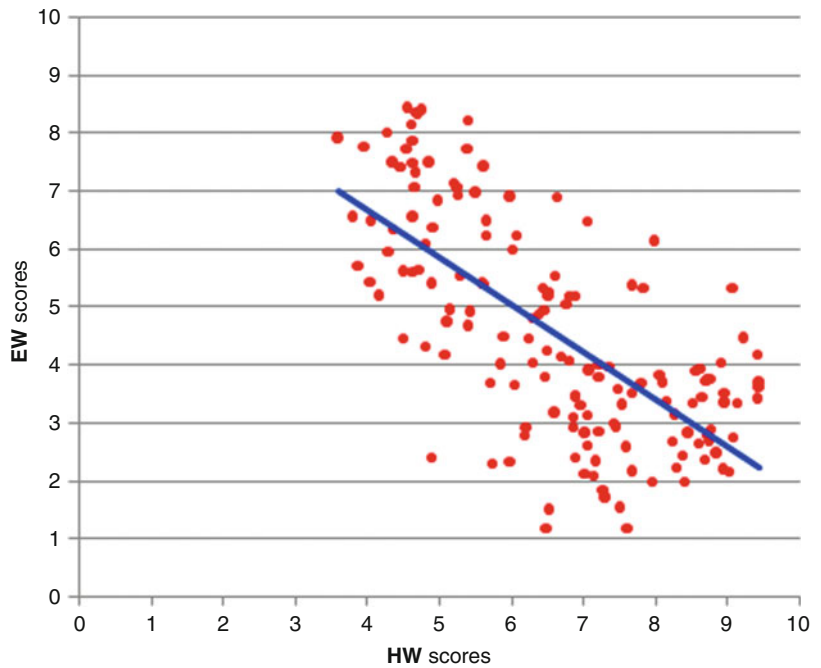


Sustainable Society Index, Tool for Measuring Well-Being,

Fig. 11 Well-being scores per income class, SSI-2012



Correlation HW - EW SSI-2012 all countries



Sustainable Society Index, Tool for Measuring Well-Being,

Fig. 12 Correlation human and environmental well-being

a growing income would result in degradation of the environment. That may be what one expects but it is not a nice prospect, to say the least of it. It suggests that human well-being and environmental well-being are at collision course.

In Fig. 10 the scores for human well-being and environmental well-being are plotted for all 151 countries included in the SSI (Fig. 12).

In this figure a linear trend line has been inserted. This line shows a distinct downward

trend for EW with increasing HW. This lends credibility to the common opinion that HW and EW indeed are at collision course. However, many countries do not perform in accordance with the average trend. Moreover, this figure does not reveal the path along which countries are developing. So a detailed study would be required to reveal the role that various aspects play in the correlation between HW and EW. It should also answer the question whether a collision between HW and EW can be avoided and, if so, how this can be achieved.

National, Regional, and Local Level

The SSI offers the results for 151 countries, now already in four editions since 2006. The next update will be published in 2014. That provides valuable information of the development over time at the national level. Besides the national level, the SSI can also be applied at regional level, for the regions or provinces of a country. The first study in this respect has been done for Romania: for each of the eight regions of Romania, the indicators have been calculated and presented in a report in 2009 (Popovici, 2009). The first update is expected in 2013.

For the regional level in Romania, additional indicators have been assessed. The core set of the indicators for each region can be compared with any other result of the SSI. The additional indicators are tailor made and thus only offer the possibility of specific comparisons among the regions themselves. This comparison is most valuable and offers many suggestions for further policy measures.

Currently, a new index at city level is being developed. The concept of this index will be based on the SSI: comprising all three well-being dimensions. The goal is to define an easy and transparent index, which is useful for raising awareness among the public at large as well as for politicians and policymakers. The new index will be presented summer 2013.

Cross-References

- ▶ Sustainable Development

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Sustainable Transport

- ▶ Sustainable Transportation and Well-Being

Sustainable Transportation and Well-Being

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Synonyms

Green transportation; Sustainable mobility; Sustainable transport

Definition

Sustainable transportation refers to any travel mode that has a low impact on the environment by minimizing use of fossil fuels and harmful emissions. Examples include collective passenger transport (e.g., public transit, trains, and carpooling), use of public shared vehicles, as well as active transport (e.g., walking, cycling, in-line skating, skateboarding, cross-country skiing, and canoeing). Sustainable transportation is linked with health and well-being through its relationships with people-friendly land-use planning, economic sustainability, potential for interaction with nature, and physical and psychosocial health benefits.

Description

Sustainable transportation has received increased attention over the last decade, with the advent of youth- and adult-friendly (i.e., age-friendly) and sustainable city planning, and because of increased awareness about the negative impact of vehicle emissions on the environment and human health. This transportation perspective is consistent with the goals of ► [sustainable development](#). The purpose of sustainable transportation is to provide individuals and businesses with

equitable access to transportation for locations of necessity and leisure (e.g., work, school, community centers, recreation areas, retail areas, services) in ways that minimize adverse impacts on other people, the environment, and future generations. Collective passenger transportation, public sharing of bicycles and vehicles, and active transport are three key examples of sustainable transportation.

Collective passenger transport, like public transit, trains, and carpooling, may strengthen well-being in a variety of ways. For instance, if these collective passenger modes are perceived as convenient and safe ways to move around, this can result in fewer motorized vehicles on the road, fewer vehicle crashes, less traffic congestion, reduced greenhouse gas emissions and traffic noise, and improved air quality (Ewing, Meakins, Bjarnson, & Hilton, 2011). In places where transit systems are extensive, transit provides key sources of income and employment, as well as convenient access to those areas where people live, work, and play. Together, these contribute to the economic sustainability of communities. When transit is heavily used, the cost of travel is minimized, in turn, strengthening the user base, and personal and environmental well-being benefits. Furthermore, individual savings in transportation-related costs (e.g., money freed from car ownership, maintenance, and use, as well as parking fees) may be put toward other necessities, potentially alleviating life stresses. Travel times may even decrease, especially if dedicated carpool lanes, bus lanes, trams, and trains are viable options. Research shows that commuters perceive reduced travel times as less stressful and more conducive to work-life balance (Turcotte, 2011).

Public share bicycles (e.g., Bixi in Canada and Velib in France; DeMaio, 2009) and public share vehicles (e.g., Zip car in Canada and the United States and GoGet in Australia; Millard-Ball, Murray, ter Schure, Fox, & Burkhardt, 2005) are increasingly popular modes of sustainable transportation. Bicycles and vehicles are available for pickup and drop-off from self-serve locations, and may be used for short periods of time (e.g., typically an hour or less). These programs

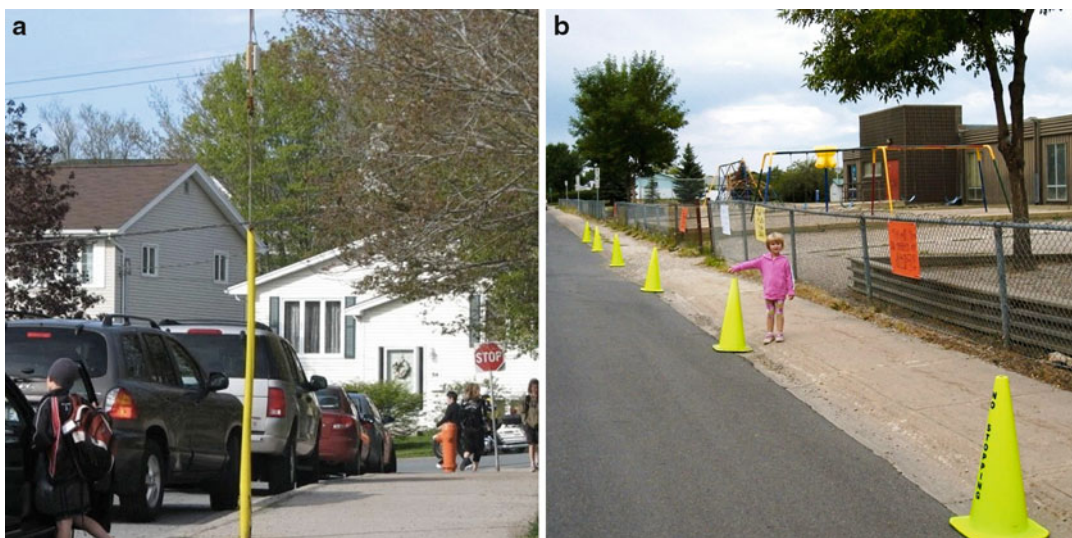
Sustainable Transportation and Well-Being, Fig. 1 A bike share stand in Brussels, Belgium is located along a commercial corridor, making it convenient to cycle and shop (Photo by S. Ramanathan)



are forms of collaborative consumption (Botsman & Rogers, 2010), as members may access bicycles or vehicles whenever needed, and individual ownership becomes unnecessary. Sustainability, community, and well-being are inherent and inseparable consequences of collaborative consumption. Fewer bicycles and vehicles need to be manufactured, the costs of car and bicycle use and maintenance are shared, and more equitable options become available for members within a community. Emerging evidence also suggests that switching from car ownership to car sharing can decrease transportation costs and increase use of walking, cycling, and public transit for transportation (Botsman & Rogers, 2010). When sustainable options are available, decisions about transportation mode are made more consciously, and cars are used less often. Similar to the benefits associated with public transit, if bicycle and vehicle share programs are popular, they can reduce traffic congestion and harmful emissions and limit the

need for land in public areas to be used as parking lots (DeMaio, 2009; Millard-Ball et al., 2005). Studies also indicate that communities that foster **social interaction** and a sense of belonging to the community are important factors that contribute to happiness and life satisfaction (Helliwell, 2011). Future research may indicate that bicycle sharing and vehicle sharing build this kind of social capital (Fig. 1).

Active forms of transport like walking and cycling are historically some of the oldest and most widely used forms of sustainable transportation around the world. As a source of **physical activity**, active transportation contributes to health and well-being, which includes physical, mental, and social dimensions. Some views also include spiritual well-being as a benefit of active transportation. High levels of well-being are associated with positive health, resilience, and an elevated capacity for enjoying life (Biddle & Mutrie, 2008). Walking or cycling to school or work has also been linked with cardiovascular



Sustainable Transportation and Well-Being, Fig. 2 (a) Cars line the street as children leave for the school day, creating a potentially dangerous situation for walkers (Photo by Canadian Active and Safe Routes to

School). (b) Pedestrians are prioritized with a no parking zone in front of a school (Photo by Canadian Active and Safe Routes to School)

fitness (Davison, Werder, & Lawson, 2008; Larouche, 2012), mood enhancements when the journey offers exposure to nature (Barton & Pretty, 2010), and opportunities for independent mobility among children (Freeman & Tranter, 2011). In addition, commuters who walk or cycle to work are more likely to report that they enjoy their commute when compared to drivers (Turcotte, 2006). These positive emotions reflect sustainable happiness – happiness that contributes to individual, community, and global well-being, without exploiting other people, the environment, or future generations (O'Brien, 2008). Moreover, when physical activity is integrated into daily activities as a means of transportation to work or school, individuals are much more likely to be physically active on a regular basis, and glean the range of benefits associated with a fit body and mind (Barton, 2009; Biddle & Mutrie, 2008). For example, evidence shows that children who walk to school are more likely to meet international recommendations for 60 min of physical activity per day (Stratton, Fairclough, & Ridgers, 2008). Recognizing these health and well-being benefits, walk to work programs and “car-free” initiatives that

promote combinations of active transport and public transit have been established in developed countries around the world, with the intent to increase population-wide physical activity participation (Biddle & Mutrie, 2008). Similarly, Safe Routes to School programs that focus on active transportation for the school journey have emerged in several countries (Committee on Environmental Health, 2009), including Canada, the United States, the United Kingdom, Australia, and New Zealand. In Canada, the introduction of child- and youth-friendly planning guidelines has outlined recommendations for meeting the needs and aspirations of youth for active travel (O'Brien & Gilbert, 2010). These guidelines have been endorsed by the Ontario Professional Planners institute in Canada and focus on the ways that transportation planning and land use may support active forms of transport for young people and, by extension, populations of all ages (Fig. 2).

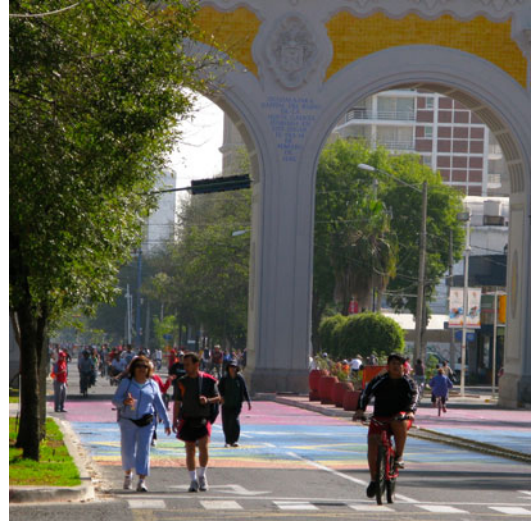
Relationships between mental health and built environments have also been identified. Environments that are rich in vegetation and green space are associated with lower levels of stress, increased sense of well-being, and healthy



Sustainable Transportation and Well-Being, Fig. 3 In Orangeville, Canada, nature is beautifully integrated into the median of their main street (Photo by M. Johnson)

emotional and cognitive development in children (Sullivan & Chang, 2011). If these natural environments are situated in areas that are also conducive to sustainable transportation, the salutary effects on mental health and well-being are likely compounded (Fig. 3).

Conversely, when travel by vehicle is the norm, and sustainable transportation options are not available, negative impacts to health and well-being are seen. For example, higher levels of traffic noise and lack of exposure to nature are associated with higher levels of stress and higher levels of aggression and violence, respectively (Sullivan & Chang, 2011). Furthermore, when few transit options are available, more people travel by personal vehicles, increasing traffic congestion, travel times, and forms of aggression termed “road rage” (Sullivan & Chang, 2011). Car-centric places are usually perceived to be unsafe and also tend to discourage active transportation and leisure time physical activities outdoors. In this way, the built environments of communities may create barriers that inhibit connectedness and the well-being of its members (Jackson & Sinclair, 2012). At the same time, even car-oriented cities can be transformed through events that close streets to motorized



Sustainable Transportation and Well-Being, Fig. 4 In Guadalajara, Mexico, a major street is closed off from vehicle traffic once a week so that citizens of all ages and incomes may walk, cycle, skateboard, in-line skate, dance, run, or wheel in the “paved park.” This event is known as *Via Reactiva* (Photo by C. O’Brien)

vehicles and open them to people. Worldwide, these have come to be known as a *Ciclovía*, after the Spanish word for bike path (Fig. 4).

Communities with sustainable transportation options are shown to have thriving public spaces with easily accessible parks, libraries, schools, and public services, all of which can enhance personal well-being. These approaches to transportation and land use have been termed smart growth, transit-oriented development, New Urbanism, green development, and active design (Ewing et al., 2011). When cities are built for people rather than vehicles, features like sidewalks, crosswalks, bicycle paths, and racks are prioritized, rather than parking spaces, high speed roads, and multilane streets (Jackson & Sinclair, 2012). In essence, people-oriented places are built with sustainable transportation infrastructure, with a high capacity, situated near high-density development areas. Neighborhoods with high street connectivity and where walking is a key form of transport are associated with higher social trust and cohesion among community members (Helliwell, 2011). Moreover, communities with central open spaces (i.e., squares or



Sustainable Transportation and Well-Being, Fig. 5 Park Güell in Barcelona is a municipal garden that can be accessed by public buses and underground trains and is a lively public space all year round (Photo by S. Ramanathan)

parks) and a mix of residential and commercial buildings encourage informal interactions between neighbors and usually have destinations of interest that people may walk or cycle to (Jackson & Sinclair, 2012). This also helps to create safer, liveable communities in which social capital and healthy choices (e.g., daily physical activities) are fostered (Sullivan & Chang, 2011). Overall, sustainable transportation is a critical component of communities that contribute to human and environmental health and well-being (Fig. 5).

Cross-References

- ▶ Built Environment
- ▶ Green Exercise
- ▶ Nature and Well-Being
- ▶ Physical Activity
- ▶ Physical Well-Being
- ▶ Social Well-Being
- ▶ Sustainable Communities Movement
- ▶ Sustainable Development
- ▶ Sustainable Urban Design

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within human communities since it influences the attractiveness, convenience, functionality, sociability, and vitality of the physical spaces within which we live.

Sustainable urban design can be seen as the imaginative creation of built landscapes and places so as to enhance long-term human and ecological welfare. As is described elsewhere in this encyclopedia, sustainable development (often simply referred to as “sustainability”) is a concept that arose in the 1970s out of concerns about global environmental, population, and resource trends that received institutional legitimacy in the 1980s and 1990s through forums such as the Brundtland Commission and the Rio Earth Summit and that has only grown in importance in the twenty-first century as threats such as climate change have become more real. Sustainability efforts emphasize the simultaneous achievement of multiple long-term goals such as the “Three Es” of environment, economy, and equity. Sustainability implies a long-term approach, a holistic outlook (e.g., crossing disciplinary boundaries and geographic scales), and an active, problem-solving approach. Urban design plays an important role in meeting many sustainability challenges as well as generally influencing quality of life, and so good urban design is crucial to sustainable development.

Writers on sustainable urban design fall into a number of camps, including theorists, visionaries, and the more professionally and pragmatically inclined. Theorists often focus on “design” in the broadest sense, meaning the form and nature of any human process. Such authors include Sim Van der Ryn and Cowan (1996), whose book *Ecological Design* emphasizes principles such as “solutions grow from place,” “make nature visible,” and “form follows flow.” In *Cradle to Cradle: Remaking the Way We Make Things* (2002), William McDonough and Michael Braungart explore challenges of closed-loop resource flows and “eco-effectiveness” within industrial processes as well as architecture. In their 1991 book *Green Architecture* as well as other works, architects Brenda and Robert Vale have also developed sustainable design

Sustainable Urban Design

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Definition

Sustainable urban design is the imaginative creation of built landscapes and places so as to enhance long-term human and ecological welfare.

Description

According to noted theorist Kevin Lynch (1974), urban design is “the imaginative creation of possible form” with regard to urban environments. Urban design usually refers to the arrangement of physical form and landscapes at scales larger than the individual building, which is the province of architecture. In practice, urban design often overlaps with landscape architecture, urban planning, and even architecture (particularly in regard to the exteriors of buildings). Professionals in all three of these disciplines frequently engage in what is increasingly known as urban design. Good urban design is essential to quality of life

principles such as “respect for users,” “respect for site,” and “holism,” as well as many more specific architectural and urban design strategies. Other theorists include Robert Thayer (2003), who takes a bioregional perspective on place design, and John Tillman Lyle (1994), who emphasizes “regenerative” design strategies working with systems of energy, water, waste, and habitat. In a more humanistic vein, Randolph T. Hester’s *Design for Ecological Democracy* (2006) proposes that communities be organized from the grass roots up around principles such as “centeredness,” “connectedness,” “fairness,” “sacredness,” “naturalness,” and “adaptability.”

Going back farther into the past, the subject of urban design has attracted a long history of visionary thinkers whose work can be seen as laying the groundwork for sustainability although many wrote well before the term was in use. Ebenezer Howard’s, 1898 concept of the “garden city,” for example, wove social, economic, and environmental concepts together on both municipal and regional scales and was enormously influential in twentieth-century Britain and to a lesser extent North America. The “ecological regionalism” of Lewis Mumford and others in early and mid-twentieth-century United States (e.g., Luccarelli, 1995; Mumford, 1961) can also be seen as advocating what we might now call sustainable urban design, in that it aimed for nurturing, human-scaled communities that balanced city and country and avoided excesses of industrial and corporate power. Ian McHarg’s *Design with Nature* (1969) combined a passionate plea to preserve natural environments and countrysides with a proposal to use overlay analysis of environmental factors as a way to organize urban development at large scales. *A Pattern Language* (1977), developed by Christopher Alexander and others, sought to identify time-tested principles of humanistic urban design from across the world’s cultures. Many of these principles, such as “green fingers” or parkland through urban areas and “sidewalk cafes” to promote sociability, are very much in harmony with those of today’s green designers. More recently, Bay Area visionary Richard

Register (2002) and Australian architect Paul Downton (2009) have put forth proposals for radical greening of existing cities, for example, by transferring development from inappropriate to more appropriate places and by designing intensely interconnected “urban ecology” or “ecopolis” projects within city centers.

Landscape architects and environmentally minded urban planners have put forth a variety of proposals for rethinking the relationship between “nature” and the city. Among the first of these were Anne Spirn (1984), whose book *The Granite Garden* emphasizes the constant give and take between natural and human-made elements within cities, and Michael Hough (1984), whose *City Form and Natural Process* advocated urban ecology as a basis for design. More recently, Timothy Beatley in *Biophilic Cities* (2011) chronicles cutting-edge efforts to bring nature back into cities through green roofs, green walls, urban agriculture, recreated habitat, and other means. Such strategies to green cities, especially to shade buildings, streets, and public spaces from the sun’s heat, are likely to become increasingly important as the Earth’s climate warms.

The movements known as the New Urbanism and Smart Growth, both of which gathered steam in the 1990s, have strong urban design components. Although not specifically listing sustainability as their goal, they move in that direction by emphasizing design features that can create walkable, transit-oriented, human-centered communities. Peter Calthorpe (1993), for example, lays out a typology of pedestrian- and transit-oriented urban design strategies in his book *The Next American Metropolis*. These principles were closely echoed in the official *Charter of the New Urbanism* (CNU, 1996). These movements emphasize actions that cross different scales of urban design, from the site and neighborhood to the district, city, and region. They also stress strategies that promote quality of life as well as sustainability: the clustering of development around town and neighborhood centers; the creation of pedestrian-oriented streets and public spaces; the integration of neighborhoods, cities,

and urban regions; and the design of interconnected park and greenway systems throughout urban areas.

Other professional planners and urban designers have made similar proposals for sustainable urban design. For example, Condon (2010) argues that sustainable neighborhood-scale urban form will be compact, connected, transit-oriented, green, and based around “lighter, greener, cheaper, smarter” infrastructure. The United States Green Building Council’s LEED-ND (Leadership in Energy and Environmental Design – Neighborhood Development) rating system provides a detailed yardstick for such neighborhood-scale design, emphasizing the location of development, connection to the surrounding context, pedestrian friendliness, and energy efficiency.

Certain questions remain unsettled in terms of sustainable urban design. For example, while compact urban form is generally seen as desirable, a series of books edited by Mike Jencks and others (e.g., Jenks, Burton, & Williams, 1996) points out that the relationship between density and sustainability is not simple or straightforward. Romantic visions of European city centers dating from the Middle Ages are not necessarily useful when it comes to planning the even denser megacities of the developing world. Many place- and culture-specific considerations of human welfare, employment, energy, sanitation, environmental protection, and circulation must be brought into play.

There is also the question of how to balance the contributions of different urban design elements to sustainability. Are some components of sustainable urban design, for example, those that reduce greenhouse gas emissions, more important than others? Systems such as LEED-ND do in fact give different weightings to different variables and require some as prerequisites for certification. This practice seems to indicate that establishing sustainable urban design priorities is both necessary and important.

Sustainable urban design strategies are still not commonplace within the juggernaut of urban and suburban construction. Most

development follows relatively conventional forms or at best includes a few green features such as more extensive street landscaping or a café or two masquerading as a neighborhood center. A more proactive public sector regulatory framework for development may be necessary to ensure that today’s fragmented suburban landscape becomes a more coherent and balanced whole in which environmental impact is drastically reduced and human welfare and quality of life are promoted. But there is hope: even the mainstream urban design practice is heading in directions that are more humanistic and ecologically oriented than a decade or two ago. As sustainability crises grow during the twenty-first century, this trend will almost certainly continue.

Cross-References

- ▶ [Sustainability](#)
- ▶ [Sustainable Development](#)
- ▶ [Urban Planning](#)

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Swamp

- ▶ [Wetland\(s\)](#)

Swedish Level-of-Living Surveys

- ▶ [Living Conditions, Swedish Surveys](#)

Swedish Surveys of Living Conditions

- ▶ [Living Conditions, Swedish Surveys](#)

Swiss Confederation

- ▶ [Switzerland, Quality of Life](#)

Switzerland, Quality of Life

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Synonyms

[Swiss confederation](#)

Definition

Switzerland is a small country located in the heart of Western ▶ [Europe](#), yet it does not belong to the European Union. The 7.8 million people (2009) mainly reside in urban regions. The country has four official languages: German, French, Italian, and Romansh. Switzerland stands out by its long tradition of direct ▶ [democracy](#) (since 1848), neutrality, and humanitarian commitment. Women's suffrage was introduced in 1971.

Switzerland's history of consensual politics, the development of the liberal state into a state with a large social expenditure, its principle of subsidiarity, the structure of the labor market as well as the quality of the working conditions, the organization of interest groups, the environmental situation, and the social stability have provided the country with a high level of ▶ [quality of life \(QOL\)](#). The high educational level, living standard, household income, and good ▶ [health](#) are reflected in one of the highest values of individual satisfaction in Europe. Nonetheless, the country is characterized by multiple ▶ [social inequalities](#), including a slight increase of its ▶ [poverty](#) rate during the last 20 years; relative ▶ [deprivation](#) lowers individual ▶ [well-being](#) in Switzerland.

Description

When compared internationally, Switzerland has generally been successful with its politics in

terms of stability, economic productivity, living standards, ► [education](#), ► [health](#), and ► [poverty reduction](#) and ranks high in overall ► [life satisfaction](#). Individual well-being surmounts societal ► [well-being](#) and depends on relative ► [deprivation](#) (Suter & Iglesias, 2005).

Swiss History: Switzerland as a “confederation” was created as an alliance among the sovereign valley communities of the central Alps. This notion of confederate sovereigns remained relevant even after the constitution of the Swiss state in 1848 in the principle of subsidiarity. Only a few tasks (defense, foreign affairs, and the common currency) were allocated to the power of the Swiss government, and direct ► [democracy](#) on the levels of the communities and cantons remained. The “small state” government entrusts many tasks and public services to lower levels of administration (cantons or municipalities) and/or to private social actors. Professional federations, for example, play an important role in vocational training, and public relief organizations deal with social problems.

The Swiss state has balanced the varied interests between cantons, rural–urban, rich and poor regions, language and religious groups, minorities and majorities, professional and other actors, migrants, and nationals to maintain stability and peace over time. This has been done politically, economically, and socially.

Politically, Switzerland has two chambers (according to population but also the cantons) involved in the decision-making process. It disposes of political instruments such as the referendum, the initiative, as well as the consultation process (Linder, 1999) to ensure minorities and interest groups the opportunity to be politically heard and directly influence or initiate changes. Switzerland also balances regional income differences by péréquation, that is, reallocating federal tax between cantons according to criteria of disadvantages. Women represent between 15 % and 20 % of the national parliament members. “Good governance” and the ability to directly influence politics and implement federal decisions according to the situation on lower administrative levels foster ► [satisfaction](#) and ► [quality of life](#) (Frey & Stutzer, 2002). Certain

cleavages – between the European Union and the Swiss state, the (Muslim) foreigners and Swiss nationals, and the political left and right – have recently become stronger and might threaten societal well-being in future.

Economically, due to lack of raw materials, wealth is generated by manpower and cooperation. The country stands out with a very low level of conflict among the workforce that can be traced back to the so-called peace agreement (1937) in the Swiss metalwork and machine industry, which developed into a model of a social partnership, in which trade unions and employers negotiate a sector-by-sector agreement regarding pay and working conditions, and became codified in the 1974 collective labor agreement (Armingeon & Geissbühler, 2000). Following the economic crisis in the early 1990s, the market was restructured leading Switzerland to become one of the economically most productive countries worldwide; thereby, the demand for high-skilled people grew and that of low-skilled people dropped (Sacchi, Salvisberg, & Buchmann, 2005). Furthermore, Swiss labor politics have been directed bottom-up. When considering benefits, the policies strictly distinguish between redistribution and insurance.

Socially, Switzerland has developed and expanded a welfare system since the Second World War. It provides a kind of socially acceptable minimum living standard: means-tested ► [social welfare](#), a basic first pillar (redistributive pay-as-you-go) pension system complemented by various other financial supports upon application; subventions for accommodation or extraordinary expenses; and means-tested subventions for health insurance. In addition to this type of social instruments, Switzerland has other contributive social schemes, where the aim is to sustain the socioeconomic position, for example, the second pillar for old-age insurance.

Demography: As other countries, Switzerland’s population is aging with the largest cohort born between 1959 and 1971, entailing challenges to the sustainability of the old-age pension system (Bonoli, 2000). Switzerland has one of the highest percentages of foreigners in Europe (22 % in 2009), and the foreign

population is young in comparison to the Swiss (Bundesamt für Statistik [BFS], 2011). Although household types have diversified, they remain strongly embedded in social structures (Widmer, Kellerhals, & Levy, 2005): about 37 % of private households in 2009 consist of one person and 33 % of two and 30 % of three and more. Lone-parent and patchwork families have become more frequent while the number of households with children is steadily declining (BFS, 2011:45).

Education: Switzerland has a universal public school system with a dual ► [education](#) – vocational education – at the secondary level. This particularity has led to a strong segmentation of the labor market. The secondary level is considered necessary for work insertion; about 85–90 % of the pupils achieve this level (13.1 % mandatory school, 51.7 % secondary level, and 35.2 % tertiary level, BFS, 2011:28). Educational mobility of children from educationally disadvantaged social origin or with a migration background is greater than that of Swiss nationals but does not translate into income mobility (Riphahn & Bauer, 2007).

Labor Market: The Swiss labor market has become largely globalized even though the small and medium-size companies account for more than 90 % of all companies. It has fewer (legal) constraints than its neighboring countries' labor markets. The 3rd sector has expanded; in 2009, about 75 % of the working population was employed in it (BFS, 2011:17). Switzerland has the highest employment rate of all OECD countries, the second highest part-time rate, the lowest unemployment rate, a strong increase in women's labor market participation, and one of the longest working times in Western ► [Europe](#) (40–44 h). Gender inequalities exist regarding the position in the labor market, the wage gap (Strub & Stocker, 2010), and the work-care balance (BFS, 2008).

Wealth and Income: Since the turn of the twentieth century, Switzerland developed from a poor to one of the world's ten currently wealthiest countries according to GDP measures (33,900 purchasing power standard Federal Statistical Office [FSO], 2011:26). It is one of the most unequal countries in the OECD in terms of wealth distribution, yet not of ► [income distribution](#) (Gini

coefficients for the year 2003: wealth: .832; income: .398, Jeitziner & Peters, 2007:17).

The *health system* is mandatory, encompassing and expensive and based on the insurance principle. Switzerland has very good health indicators: for example, life expectancy increased since the last century, and a large majority of people (88 % of men and 85 % of women) described their health as good or very good. Nonetheless, large inequalities remain; income inequalities and deprivations impact more strongly on ► [health](#) than other inequalities (Budowski & Scherpenzeel, 2005).

Organizations and Associations: According to different surveys, approximately one quarter of Switzerland's inhabitants voluntarily participate in nonprofit organizations (Nollert & Budowski, 2009).

Environment: According to Suter et al. (2009), Switzerland overuses its environment. Compared to other countries, though, Switzerland is more favorably placed regarding its ► [ecological footprint](#). Ecological awareness is high, in particular the necessity for restricting living standards and embracing the idea of possible ecological catastrophes. Moreover, Switzerland tends to show the highest level of ecologist commitment in international comparison.

Quality of Life: Switzerland has a comparatively well-functioning state, economy, and social environment enabling a high living standard and a good population health. Despite persisting inequalities, the population in Switzerland reveals a high overall life satisfaction: it holds the first position among 67 countries in the indicator "happy life years" (Veenhoven, 2005, see also Ott, 2011).

Cross-References

- [Democracy](#)
- [Ecological Footprint](#)
- [Education](#)
- [Europe, Quality of Life](#)
- [Health](#)
- [Poverty](#)
- [Quality of Life \(QOL\)](#)

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SWLS

- ▶ [Brazil, Satisfaction with Life Scale Survey Results](#)
- ▶ [Dimensionality and Measurement Invariance of Satisfaction with Life Scale](#)
- ▶ [Satisfaction with Life Scale \(SWLS\), an Overview](#)

SWLS-C

- ▶ [Satisfaction with Life Scale Adapted for Children](#)

SWs

- ▶ [Sex Workers](#)

Symbolic Capital

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Definition

The concept of “symbolic capital” is the fourth general type (“specie”) of capital dealt with by

Pierre Bourdieu's sociological theory, together with cultural, economic, and social capital.

Though, symbolic capital is not situated on the same plane as the other species, since it puts the stress on the "symbolic" dimensions of social life, which creates an asymmetric role. Bourdieu even discusses its existence as a genuine sort of capital and seems to hesitate between the use of this concept and more indirect formulations (like "the symbolic effects of (all sorts of) capital": Bourdieu, 1997).

In one of the definitions proposed by Bourdieu during the 1980s (Bourdieu, 1987), symbolic capital is, precisely, defined by any other sort of capital when it comes to its "recognition" or its "perception" according to particular "schemes." As Bourdieu puts it: « *symbolic capital is nothing but economic or cultural capital as soon as they are known and recognized, when they are known according to the perception categories they impose, the symbolic strength relations tend to reproduce and reinforce the strength relations which constitute the structure of the social space* » (Bourdieu, 1987). This definition based the concept of "categories of perception" is the most classical (Champagne & Christin, 2004).

This definition is supported by a more general conception of symbolic structures ("subjective" vs. "objective," "discursive" vs. "material," etc.) which are characterized, since the 1960s–1970s (Pinto, 1998), by their "relative autonomy": these structures are related to the distribution of economic, cultural, and social resources and to the distributions of specific assets in various fields. But, as they are internalized by the agents, they *distort* the perception of these resources or, more precisely, they fundamentally participate to construct and define the "exchange rates" between other types of capital (this corresponds to the more comprehensive conception, which is finally retained after some hesitation; see Champagne & Christin, 2004). Therefore, the notion of symbolic capital can neither be analyzed as an autonomous reality (which could be simply accumulated, transferred, etc.) nor as a secondary asset, which would be completely and

mechanically determined by the other species. Its status remains therefore difficult to assess without examining its general theoretical implication.

Description

Genealogy of Symbolic Capital

In Bourdieu's work, the notion of symbolic capital "arrives" a bit later than those of economic and cultural capital (but at the same time as "social capital"), during a period marked by an attempt of theoretical generalization which begins to take place explicitly in the second half of the 1960s. This attempt, which is related to the analysis of class differentiations, domination, and reproduction, will in particular lead to the major theoretical texts of 1972 (*Esquisse d'une théorie de la pratique* and "Les stratégies matrimoniales dans le système des stratégies de reproduction," in the historical journal *Annales*), in which symbolic capital is first mentioned as such.

Symbolic boundaries and distinctions, but also power and violence, are then seen as major aspects of social classes, and the notion of symbolic capital will help Bourdieu to describe these processes in a general framework, what he will call a "general theory of the economy of practices" at the end of *Esquisse (Outline)*.

The economic "analogy," which is used by Bourdieu to understand educational inequalities in terms of "cultural capital" in an attempt to construct a more general theory both inspired by and critical of economics (Lebaron, 2003), is already present in very early texts. It is even *first* mobilized in order to analyze objectively symbolic processes, without losing their specific symbolic dimension (see Bourdieu, 1994, for a later discussion of the economic dimensions of symbolic processes and the symbolic background of economic realities).

In his first book *Sociologie de l'Algérie*, published in 1958, Pierre Bourdieu develops an analysis of the differences of prestige between different Arab-speaking tribes. He describes the

reinforcement of groups as the product of a particular sort of accumulation of capital (“a cumulative effect analogous to the one which gets capital to attract capital in another context (. . .). This initial capital is apparently nothing but the name and the domination it confers to the group” (Bourdieu, 1958, p. 85)). This sort of capital, related to prestige and power, is reproduced through the uses of genealogy, which can be seen as a story of feats, attempting to maintain the memory of the origins of the group and create symbolic value(s) on this base. “The name in itself constitutes a power (. . .). The names conserved by tradition are those of victorious fractions or the main families to whom diverse groups will ask for protection” (Bourdieu, 1958, p. 86). In this original text, what will later be called “symbolic capital” is implicitly related to names of families and associated to the particular authority of families and tribes. It is close to the idea of “power,” when it is understood in terms of prestige, “honor,” and “moral authority” and not of direct material or physical constraints. It is a variant of magic: “a magical link unites the name and named object; to borrow the name is to participate to the virtues of his owner and in particular, to the “Baraka”, vital force, mysterious and well-being power which favors elite men” (Bourdieu, 1958, p. 87). This magical aspect of symbolic capital will remain present until the last theoretical texts about symbolic capital (Bourdieu 1994, 1997).

A few years later, in a study of the social reproduction of peasants in Bearn (Bourdieu, 1962), Bourdieu will continue to analyze family names (and even names of “houses”: “maisons”) as the expressions of the symbolic patrimony which families have to perpetuate, especially during the stake created by the necessity of alliances through marriage. In his very well-known early text about “celibacy and peasant condition,” published in 1962, the position of families is not only analyzed in economic terms but also through the “name and renown” (“nom et renom”) of the “house” (“maison”) conserved by the “house chief” (“chef de maison”), which is at stake in the reproduction process.

Toward a General Theory of the Economy of Practices

In another text written in 1960 about “the sense of honor” among Kabyle peasants, Bourdieu uses the notion of “symbolic profit” to analyze the “embeddedness” (and the “dissimulation”) of economic logics into considerations of prestige and honor (Bourdieu, 1972a, pp. 29–60). The conceptual mix between symbolic processes and economic concepts is then made intellectually possible, if not yet completely explicit, and it will remain a central feature of Bourdieu’s sociological theory: economics and symbolic structures are thought “together.” An intermediary stage is certainly the generalization of the notion of “capital” in the study of educational inequalities, which takes place in the second half of the 1960s (e.g., in the collective book by Darras, *Le partage des bénéfiques* in 1966: Darras, 1966).

It is no surprise if the notion of symbolic capital itself (defined as “prestige, honor, in brief *hurma*” in 1972) really emerges as such in anthropological texts about Algeria, and especially Kabylie: in *Esquisse d’une théorie de la pratique* (translated into English as *Outline of a theory practice*), published in French in 1972, one finds one of the first occurrences of the well-known representation of social resources based on four species of capital, with an asymmetric role given to symbolic capital, which provides their values to the others, but also dissimulates the origin of this value (which creates a logical circle). “The symbolic capital (. . .) has a particular effect provided and only provided it dissimulates the fact that “material” species of capital are at its origin, and, finally, at the origin of its effects” (Bourdieu, 1972a, p. 376).

Reproduction and Accumulation Strategies

In Bourdieu’s early text on family and kinship, included in the same book, a more systematic analysis is developed on the basis of empirical surveys realized between 1960 and 1970. Symbolic capital is defined as a capital of “honorability,” which is maintained through specific behaviors (“honor behaviors”), where one can see

a particular sort of individual and collective strategy, which is not completely made conscious. It is particularly developed in a society where economic accumulation remains limited: in that traditional society, the peasants adopt these strategies, conscious or not, in order to maintain and accumulate symbolic capital, that is, to defend (and promote) their familial and personal “honor” in relation to each other. Among the most interesting empirical analyses in this early anthropological text, one studies, for example, the stake of first names given to children inside families, a way to reproduce the group. A child is given the name of his (or her) grandfather (or mother) or any other particular member of the family, doted of a specific reputation. The practice of genealogies, again, reveals stakes around the transmission of *magical* characteristics related to first names.

At the same period, Bourdieu’s analysis of marriages in a Bearn small area during the turn of the 1960s (the survey is realized in 1959–1960) is centered on the reproduction of economic and symbolic capital among peasant families (Bourdieu, 1962). The analysis goes on during the 1960s and the formula “maximization of economic and symbolic capital” is used in the second article based on this fieldwork, the famous article of 1972 (“Les stratégies matrimoniales dans le système des stratégies de reproduction”, Bourdieu, 1972b), in order to describe strategies aiming at maintaining both the level of patrimony and some more “perceptual” and even “undefined,” “fuzzy” though highly relevant aspects of their social identity, like the “honor” surrounding the name of the family, which objectifies its relative position in the social structure of the peasant world.

What is striking here is the link between the notion of “symbolic capital” and the systematic introduction of *strategies* in Bourdieu’s analysis. Strategies are not purely economic, but they are also largely symbolic, in the sense that their aim is maintaining a certain “reputation” and “honorability,” and not only to increase wealth or material profits, even if this second dimension is always present to some extent. Among the bywords then

used by Bourdieu to define symbolic capital is the notion of “collectively recognized credit” (Bourdieu, 1972a, p. 121), which is first the expression of the “importance” attributed to a person by symbolic construction processes, but which also shows the way Bourdieu tries to think the symbolic “embeddedness” of economic notions, and to connect them to more fundamental mechanisms.

Much later, in his theoretical masterpiece *Méditations pascaliennes*, Bourdieu generalizes the notion of “symbolic capital” to an “existential” theory inspired by Pascal: being *important* for others, then for oneself, is related to the fact of “being occupied, projected towards aims,” etc. Symbolic capital, defined as “recognition” and “consideration,” appears as the basis of social existence, as an existence “for the others.” “*Of the distributions, one of the most unequal, and the most cruel, is the distribution of symbolic capital, that is social importance, and reasons to exist*” (Bourdieu, 1997, p. 284). Institution rituals, inside the family and more generally (nomination, ordination, etc.), are interpreted as ways to organize socially this distribution and reproduce and transfer symbolic capital.

Empirical Analyses of Symbolic Capital Mechanisms

Empirical analyses of the particular function of symbolic capital are, after the main example of familial strategies, very present in the study of elite groups, and of particular fields, which are developed after the beginning of the 1970s (for a synthesis, Bourdieu, 1989).

Writers in the literary field (Sapiro, 1999, Poliak, 2006), intellectuals (Charle, 1990), philosophers (Pinto, 1986), academics (Bourdieu, 1984), company leaders (Bourdieu & Saint-Martin de, 1978), but also institutions like elite schools (“grandes écoles,” Bourdieu, 1989) or companies (Bourdieu, 1999) concentrate various forms of specific “reputation” and are structured around symbolic stakes. These forms of “reputation” define sorts of symbolic capital, reproduced through particular strategies inside the fields.

The notion of field, which appears in 1966 but is formalized in 1971, gives a large extension to

the concept of capital and in particular to symbolic capital. Each field is even *defined* by a particular sort of capital at stake: literary, scientific, political, etc. This necessarily implies a specific type of symbolic capital, which is the “perceived” manifestation of the specific assets prevailing in the field, and the way they are socially “valued.” For example, in fields of “cultural production” (like the literary, artistic, or scientific fields), symbolic goods are at stake and the accumulation of symbolic capital by agents of the field is related to the production of these goods (“work,” “scientific articles,” or “results”) and to the complex way their “quality” is assessed. To accumulate specific symbolic capital in these fields means nothing but acting in conformity with the rules of the field, in order to conquer specific recognition.

In the scientific field (Bourdieu, 1975), the reputation (i.e., the specific sort of symbolic capital) which prevails is based on the accumulation of a particular type of “credit,” closely related to the perception of the “validity” and the “importance” of “discoveries,” “theories,” “results,” etc. An expression of this phenomenon is the gift by the “scientific community” of a personal name to a particular scientific “effect” or “object,” like the “Fermat theorem.” Each field is the place of particular capital accumulation and, consecutively, of complex symbolic capital construction processes.

One of the most well-known direct applications of the notion concerns the political field (Bourdieu, 1982): it is, for example, the interpretation of the existence of “spokesmen” in the political practice and of the mechanisms of political power. Politics is centered on discourse and legitimacy and then on symbolic capital (and social capital). The accumulation of symbolic capital is intrinsically related to the concentration of power: the king, for example, has conquered the “scepter,” which allows him speaking for the entire group and producing legitimate discourses (Bourdieu, 1982). This analysis is developed and systematized when Bourdieu analyzes the historical process of state formation as the product of a “concentration of symbolic capital” (Bourdieu, 1994).

It is logical that the notion of symbolic capital is extensively used by Monique de Saint-Martin, a close collaborator of Bourdieu during the period 1960–1980, when she studies the reproduction and changes of a particular social group: aristocracy (de Saint-Martin, 1992). Names are, historically, a central stake in the French nobility, as they express the symbolic capital of a long-lasting, deeply rooted, and closed social group: the oldest a family, the highest its collective symbolic capital. The “particle” (in French “de”) in itself expresses an aristocratic origin and relates symbolic capital to names in a very concrete manner. First names also concentrate some symbolic capital, in the sense that they also rely to the history of the family and its particularly well-known members. Such types of analysis can easily be extended to the “grande bourgeoisie” (Pinçon & Pinçon-Charlot, 2000).

The study of intellectuals also reveals the importance of symbolic capital accumulation in a more political (or “external” to the field) sense: to have become “a name” (in French “s’être fait un nom”) is the precondition for acting with moral or political authority as an “intellectual” (see Charle, 1990). Analyses of the magical authority of “economics Nobel laureates” also relate it to the accumulation of a very particular sort of symbolic capital, based on the combination of science and economic expertise. This sort of symbolic capital has overcome the domination of religious legitimacy, another traditional major source of symbolic capital, in modern societies. Economists are the owners of high levels of symbolic capital, which make them central in public policies and public debates and decisions (Lebaron, 2006).

“Negative” Symbolic Capital

Processes of “discrimination” and “stigmatization” well documented in the literature of the social sciences especially after Goffman (1963) can be reinterpreted in terms of symbolic capital: any particular physical or “symbolic” property (physical aspect, skin color, linguistic practice, religious habits, etc.) can be negatively valued in certain societies or groups. This shows the fact

that symbolic capital can be either positive (and result in a kind of “attraction,” concretely defined as “recognition,” “care,” “love,” etc.) or negative (a “repulsion,” perceived as various forms of “racism,” “rejection,” “hostility,” “discrimination,” etc.). As nobody is entirely and uniformly characterized by a positive or a negative symbolic capital, the amount of symbolic capital of an individual or a group can be described as a social combination of attractive and repulsive dimensions of this individual, group, etc.

In the Indian society (and the Hindu religion), the division into casts (“system of casts”) recalls the existence of very subtle and complex stratifications of symbolic capital based on a religious conception of purity. At the lower level, the “Dalits” are defined by their exclusion from the rest of the society, “repulsive” for the other casts (for a recent illustration of this negative symbolic capital in Tamil Nadu: See Mahalingam, 2004). Inside a relegated group, some mechanisms provide a specific symbolic capital, which allows it to resist at least partially against the “external” repulsive forces.

One can add that a high level of symbolic does not necessarily protect from pathologies related to symbolic capital: recognition being always “relative,” a “lack of recognition” can be felt important even in middle or top positions (“misery of position,” Bourdieu and others, 1993, see also Poliak, 2006) and may also generate suffering.

How to Measure Symbolic Capital?

In various texts, Bourdieu and his collaborators propose diverse empirical measures of symbolic capital by the construction of relevant indicators for data analysis (for an in-depth synthesis of Bourdieu’s various specific contributions: Mauger, 2005).

It is first (and most easily) the case in power elite and field studies. Studying various elite groups, like company leaders, writers, or academics, it is relatively “natural” to find specific indicators of “notoriety,” like the presence in journalistic rankings (e.g., the “businessman of the year”) and in prize lists (the “prix

Goncourt” or the “Nobel prize”). Being referenced in a “meritocratic” directory like the *Who’s Who* or in a more socially distinctive one like the *Bottin mondain* is of course an indicator in itself. Recognition relates here again to *family names* and *first names*, their recognition, visibility, etc.

In the academic field, prizes and scientific distinctions are good proxies for measuring the amount of symbolic capital which an individual, a laboratory, and a university concentrates. Citation studies (“H index”, “G-Index, impact factor” etc.) help to measure more in-depth the amount of symbolic capital held by an individual, an institution, etc., through his/her production.

Toward a Generalized Multilevel Conception of Symbolic Capital

A generalized and multilevel conception of symbolic capital implies not to restrict it to individuals in specific fields or social groups but to enlarge it to the global social space as Bourdieu firmly suggests in *Méditations pascaliennes* (Bourdieu, 1997) and also to a large set of places and institutions at various levels, as can be inferred from *La misère du monde* (see the chapter “Effets de lieu,” Bourdieu and others, 1993).

Places concentrate symbolic capital, that is, a certain level of “reputation” or “notoriety”: a town, a region, and a country are not only geographical (physical) locations, composed of a set of individuals or particular institutions (companies, administrations, monuments, schools, etc.), but they can also be seen as being perceived, stigmatized, or, on the contrary, overvalued (in the cases of strong symbolic domination). *Geographical* characteristics of the individuals (place of birth of the individual, of his/her parents, etc., residence location, etc.), as well as some of their educational titles, may therefore help approximate empirically their level of symbolic capital. Objective measures of the concrete diffusion (“renown”) of “names” can also be used, through studies of the press, of Internet, etc., helping to understand the way people are “cited” and become more or less “visible” in social life.

Specific surveys are nevertheless necessary to grasp the mechanisms by which symbolic capital is concretely accumulated in its various, changing, and contextual forms: subjective feelings of “recognition” by various individuals and institutions, experienced practices of stigmatization, and at the opposite of “gratification,” all these interconnected psychosocial processes which define the “economy of symbolic goods” need to be better described, and measured, especially to participate to the study of the quality of life.

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Symbolic Theory of Crime and Crime Control

- ▶ [Crime Control in China, Satisfaction with](#)

Sympathy

- ▶ [Compassion, Happiness, and Self-Esteem](#)

Symptom Level

- ▶ [Duke Severity of Illness Checklist](#)

Symptomatic Gallstone Disease

- ▶ [Symptomatic Gallstone Disease and Quality of Life in Taiwan](#)

Symptomatic Gallstone Disease and Quality of Life in Taiwan

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Synonyms

CGIQLI; Laparoscopic Cholecystectomy; SF-36; Symptomatic gallstone disease; Taiwan

Definition

The Gastrointestinal Quality of Life Index (GIQLI) was developed by Eypasch et al. which is a 36-item survey that evaluates the physical and mental problems associated with chronic gastrointestinal disease on a Likert scale; each survey question has five response options (0–4, worst to best condition). The GIQLI generates a total score and four subscale scores (physical well-being 0–40, mental well-being 0–20, gastrointestinal digestion 0–40, and gastrointestinal defecation 0–24). The physical well-being subscale reflects the limitations in physical or social activities directly related to chronic gastrointestinal conditions. The three remaining subscales are reflective of a patient's mental, digestive, and defecation problems. Survey total and subscale scores are normalized on a 0 (worst) to 144 (best) scale based on published algorithms. While treatment effectiveness in chronic gastrointestinal conditions have not been established through this kind of quality measurement tool, the patient-based GIQLI enables physicians to understand the effects of gastrointestinal diseases and its intervention on the functioning and well-being of patients from their point of view.

Because different cultures adopt different values and norms, a linguistic-translated

instrument must also be appropriately adapted and evaluated in culture. There is currently no validated Chinese-language quality of life instrument to evaluate patients with chronic gastrointestinal disease. Rather than design a new instrument, it is believed that having a common tool available in both English and Chinese will make it possible to combine data from various centers worldwide for analysis. A uniform gastrointestinal outcomes measure will provide cross-cultural quality of life information and provide a way to compare treatment effectiveness under different health-care systems. We translate and validate a Chinese (Taiwan) version of the GQLI (CGIQLI), and compare the performance characteristics between the CGIQLI and the original GIQLI. The performance characteristics of a quality of life measure include its validity, reliability, and responsiveness to clinical change. The performance of the CGIQLI was shown to be equivalent to the English version, the GIQLI, and the CGIQLI is a valid tool to evaluate adults with chronic gastrointestinal problems among the Chinese-speaking population.

Description

Introduction

Gallstone disease is prevalent among the general population (Halldestam, Kullman, & Borch, 2009), with a yearly incidence ranging from 1 case per 1,000 young men to 19 cases per 1,000 older women (Lowenfels & Velema, 1992). Changes in dietary habits, with increased consumption of calories and cholesterol, have led to an escalation of gallbladder disease in many countries (Rahman, 2005). Gallstone disease has major effects on patient well-being (Lien et al., 2010; Sandblom et al., 2009). To date, the influence of this disorder on quality of life has not been studied among Asian populations. The development of laparoscopic cholecystectomy (LC) in the last two decades has partly led to the increase of cholecystectomy, contributing to the improvement of nutritional status and living standards in Taiwan. Since the 1990s, several articles

have been published regarding the severity of symptoms, nature of gallstones, benefits, and risk of LC, based on the information obtained from some 8,000 LC surgeries performed in the Cathay General Hospital (Taipei, Taiwan). It is obvious that LC indeed benefits patients, especially for those with severe symptoms. However, limited studies have focused on the quality of life among patients with gallstone, and the health-related quality of life status following LC among the Chinese-speaking population; there is also limited research in the literature that has reported LC quality of life outcomes. The quality of life impacts of LC and the predictors of patients' subjective outcomes remained undetermined. We used the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36) and Gastrointestinal Quality of Life Index (GIQLI) surveys to report subjective quality of life following LC and to investigate the factors that may predict LC quality of life outcomes in adults with cholelithiasis. Frequently serum biochemistry studies are routinely performed before surgical treatment of gallstone disease, but associations of laboratory results with preoperative quality of life have not been thoroughly investigated. Unexplored is the correlation of quality of life with liver enzyme measures, including serum levels of alkaline phosphatase, direct and total bilirubin, alanine aminotransferase (ALT), and aspartate aminotransferase (AST). Using general health status and gastrointestinal health-specific measuring instruments (Johansson, Thune, Blomqvist, Nelvin, & Lundell, 2004; Planells, Bueno, Sanahuja, & Garcia, 2004; Vetrhus, Soreide, Eide, Nesvik, & Sondena, 2005), the association of quality of life status with baseline laboratory findings were investigated, and the quality of life predictors among Taiwanese adults undergoing surgery for symptomatic gallstone disease were revealed.

Methods

Study Population

Before surgical intervention for symptomatic gallstone disease, 102 consecutive adults (>18 years)

at a tertiary referral medical center were prospectively enrolled in the study within 1-year period (July 2004 to June 2005). The patients were administered the International Quality of Life Assessment Project's Taiwan version 1.0 of the 36-Item Short-Form Health Survey (SF-36; Lu, Tseng, & Tsai, 2003; New England Medical Center Hospital, 1996) and the Taiwan Chinese version of the Gastrointestinal Quality of Life Index (GIQLI; Eypasch et al., 1995; Lien et al., 2007). All measuring instruments were validated and were considered to be of equivalent clinical reliability and validity relative to the original English-language versions (Lien et al., 2007; Lu et al.). The SF-36 data from study patients were compared with norms of the general Taiwanese population matched on age and sex (Tseng, Lu, & Tsai, 2003). The SF-36 and GIQLI data from study patients were compared between subgroups with low versus high serum alkaline phosphatase levels and leukocyte counts using 150 U/L and 10,000/IL as the cutoffs. Elevated alkaline phosphatase level and leukocyte count are usual signs of liver or gallbladder inflammation, indicating disease progression. The cutoff thresholds are used to categorize patients with quiescent versus acute diseases for health status comparisons.

Measuring Instruments and Statistical Analysis

The SF-36 is a widely used general-purpose health-related quality of life measure with eight subscale domains, including the following: physical functioning, role functioning-physical problems (RP), bodily pain (BP), general health, vitality, social functioning, role functioning-emotional problems, and mental health. Scores are on a scale from 0 (worst) to 100 (best) (New England Medical Center Hospital, 1996). Based on a Likert-type scale, the GIQLI contains 36 items that evaluate the severity, frequency, and consequences of problems associated with gastrointestinal diseases, with each item having five possible responses ranging from 0 (worst) to 4 (best) (Lien et al., 2007). The GIQLI generates a total score ranging from 0 (worst) to 144 (best). The GIQLI items can be grouped into the following four domains: physical well-being

(range, 0–40), mental well-being (range, 0–20), gastrointestinal digestion (range, 0–40), and gastrointestinal defecation (range, 0–24). Quality of life subscale results are expressed as the mean \pm SD. Two-tailed *t*-test was used to compare SF-36 scores of study patients versus age- and sex-matched general Taiwanese population norms (Tseng et al., 2003). Mann–Whitney test was used to compare SF-36 and GIQLI results between subgroups of study patients with low versus high serum alkaline phosphatase levels and leukocyte counts. Pearson product moment correlation coefficient was used to investigate associations of GIQLI results with corresponding SF-36 subscale scores. Multivariate regression models were applied to investigate the correlations of SF-36 and GIQLI results with the following: patient demographics (sex and age), serum biochemistry markers (leukocyte count and alkaline phosphatase, AST, and ALT levels), and comorbidities.

Results

A total of 102 patients (32 male and 70 female) were enrolled in the study. The mean age was 49.7. Thirty-nine percent of patients had comorbidities, including hypertension, heart disease, diabetes mellitus, reflux disorder, and others. In subgroup analysis, 14 patients had elevated leukocyte count ($[10,000/\text{IL}]$), and 13 patients had high serum alkaline phosphatase level ($[150 \text{ U/L}]$).

SF-36 and GIQLI

Compared with the general Taiwanese adult population, study patients had significantly poorer performance on all eight SF-36 subscales ($P < 0.001$). In subgroup analysis, patients having high serum alkaline phosphatase level had significantly lower scores on physical functioning (63.1 ± 27.3 vs. 83.3 ± 19.3 , $P = 0.001$) and role functioning-emotional problems (43.6 ± 41.7 vs. 70.4 ± 37.8 , $P = 0.020$) compared with patients having low serum alkaline phosphatase level (Table 1). Patients with leukocytosis (high leukocyte count) had significantly lower scores on physical functioning (68.2 ± 28.5 vs. 82.0 ± 20.2 , $P = 0.05$) and general health (43.9 ± 17.4

vs. 57.3 ± 17.7 , $P = 0.027$). The mean total GIQLI among the entire study cohort was 95.0 ± 20.5 . Patients with high serum alkaline phosphatase level had significantly worse total GIQLI (83.0 ± 19.4 vs. 96.8 ± 20.1 , $P = 0.023$), mental well-being (10.4 ± 3.7 vs. 13.1 ± 4.2 , $P = 0.031$), and gastrointestinal defecation (16.3 ± 4.3 vs. 19.5 ± 3.2 , $P = 0.001$). Patients with leukocytosis had significantly worse physical well-being (19.8 ± 8.2 vs. 24.5 ± 6.5 , $P = 0.032$) and gastrointestinal defecation (17.0 ± 4.4 vs. 19.4 ± 3.3 , $P = 0.034$).

Correlation of General Health Status with Gastrointestinal-Specific Quality of Life

Total GIQLI showed moderate to strong correlation with all eight SF-36 subscale scores ($P < 0.05$). These correlations were especially strong for bodily pain ($c = 0.62$), vitality ($c = 0.52$), and general health ($c = 0.53$) ($P < 0.001$ for all) (Table 2). Most of the remaining SF-36 subscale scores correlated moderately with GIQLI results, except for poor correlation of SF-36 mental health with GIQLI gastrointestinal defecation ($c = 0.14$, $P = 0.149$).

Multivariate Analysis

Few biochemistry markers were predictive of SF-36 subscale scores in multivariate regression models that considered sex, age, comorbidities, leukocyte count, and alkaline phosphatase, total bilirubin, direct bilirubin, AST, and ALT levels. Direct bilirubin ($b = -32.6$, $P = 0.001$), AST ($b = 0.13$, $P = 0.049$), and alkaline phosphatase ($b = -13.6$, $P = 0.032$) levels were predictive of worse total GIQLI (adjusted $R^2 = 0.183$). Other significant predictors are summarized in Table 3.

Discussion

Gallbladder disease has escalated in many countries because of increased dietary consumption of calories and cholesterol (Rahman, 2005). Despite improved nutritional status and living standards in Taiwan, Ho, Lin, Yu, Chen and Wu (1995) reported a steady increase in surgical treatment of gallstone disease during the past four decades.

Symptomatic Gallstone Disease and Quality of Life in Taiwan, Table 1 Subgroup analysis of 36-Item Short-Form Health Survey (SF-36) and Gastrointestinal Quality of Life Index (GIQLI) results by high versus low alkaline phosphatase level and leukocyte count

Variable	Mean \pm SD			
	Alkaline phosphatase level		Leukocyte count	
	<150 U/L	\geq 150 U/L	<10,000/ μ L	\geq 10,000/ μ L
SF-36				
PF	83.3 \pm 19.3	63.1 \pm 27.3*	82.0 \pm 20.2	68.2 \pm 28.5**
RP	64.3 \pm 41.4	48.1 \pm 50.5	61.9 \pm 43.1	64.6 \pm 41.9
BP	58.5 \pm 20.7	48.6 \pm 17.2	58.4 \pm 20.2	49.1 \pm 21.6
GH	56.2 \pm 18.0	52.4 \pm 19.4	57.3 \pm 17.7	43.9 \pm 17.4**
SF	71.8 \pm 17.7	61.5 \pm 24.2	70.6 \pm 18.4	69.8 \pm 22.9
VT	56.2 \pm 16.8	55.4 \pm 14.9	55.9 \pm 17.1	57.9 \pm 12.1
RE	70.4 \pm 37.8	43.6 \pm 41.7*	67.4 \pm 38.7	63.9 \pm 43.7
MH	61.9 \pm 16.0	54.8 \pm 20.4	61.4 \pm 17.1	58.0 \pm 13.3
GIQLI				
Total	96.8 \pm 20.1	83.0 \pm 19.4*	96.4 \pm 20.1	84.4 \pm 20.8
PW	23.6 \pm 6.8	26.8 \pm 6.8	24.5 \pm 6.5	19.8 \pm 8.2**
MW	13.1 \pm 4.2	10.4 \pm 3.7*	12.8 \pm 4.3	11.6 \pm 3.4
GDI	26.0 \pm 7.4	29.3 \pm 6.2	26.8 \pm 7.2	23.2 \pm 7.9
GDE	19.5 \pm 3.2	16.3 \pm 4.3*	19.4 \pm 3.3	17.0 \pm 4.4**

SF-36 PF physical functioning, RP role functioning-physical problems, BP bodily pain; GH general health, SF social functioning, VT vitality, RE role functioning-emotional problems, MH mental health, GIQLI PW physical well-being, MW mental well-being, GDI gastrointestinal digestion, GDE gastrointestinal defecation

*P < 0.05 (Mann-Whitney test)

**P < 0.05 (Mann-Whitney test)

Symptomatic Gallstone Disease and Quality of Life in Taiwan, Table 2 Correlation of Gastrointestinal Quality of Life Index (GIQLI) results with 36-Item Short-Form Health Survey (SF-36) subscale scores

GIQLI	SF-36							
	PF	RP	BP	GH	SF	VT	RE	MH
Total	.29	.30	.62	.53	.48	.52	.39	.39
PW	.28	.31	.60	.57	.51	.52	.39	.34
MW	.22	.22	.44	.54	.47	.56	.34	.56
GDI	.20	.19*	.54	.35	.28	.36	.24	.22
GDE	.25	.26	.46	.28	.33	.25	.32	.14*

SF-36 PF physical functioning, RP role functioning-physical problems, BP bodily pain, GH general health, SF social functioning, VT vitality, RE role functioning-emotional problems, MH mental health, GIQLI PW physical well-being, MW mental well-being, GDI gastrointestinal digestion, GDE gastrointestinal defecation

*Not significant. All other correlation coefficients are significant at the .05 level (Pearson product moment correlation)

Few studies (Johansson et al., 2004; Mentis et al., 2001; Planells et al., 2004; Quintana, Arostegui, Cabriada, Lopez de Tejada, & Perdigo, 2003; Vetrhus et al., 2005) have evaluated quality of life outcomes among patients with gallstone disease. The effects of this disorder and predictors relative to quality of life are unknown, especially in the Asian-Pacific area. In this study, we used validated SF-36 and GIQLI questionnaires to explore the quality of life and its potential confounders among Taiwanese adult patients with symptomatic gallstone disease.

Our survey revealed that the study patients demonstrated considerable decrements (compared with general Taiwanese population norms) on all eight SF-36 subscales. Especially notable were the effects of symptomatic gallstone disease on RP and BP. Overall, significant correlation of SF-36

Symptomatic Gallstone Disease and Quality of Life in Taiwan, Table 3 Multivariate analysis of quality of life predictors

Variable (adjusted R^2)	Independent variable β						
	Sex	Age	WBC	ALT	AST	Alk-p	Direct bilirubin
SF-36							
PF -0.292		-.45**		.35**		-13.8*	-42.2**
BP -0.099							-27.1**
VT -0.1379							-23.0**
RE -0.1207				.39**		-43.0**	
SF -0.1373		.3*		.15*		-20**	
GH -0.1319	10**		-11.8*				
MH -0.1007		.25*				-12.3*	
RP -0.0425							
GIQLI							
Total -0.17					.13*	-13.6*	-32.6**
PW -0.14							-6.7**
MW -0.08							-3.8*
GDI -0.22	3.3*	.1*		.04*			-11.9**
GDE -0.18					.03*	-4.1**	-4.4**

SF-36 PF physical functioning, RP role functioning-physical problems, BP bodily pain, GH general health, SF social functioning, VT vitality, RE role functioning-emotional problems, MH mental health, GIQLI PW physical well-being, MW mental well-being, GDI gastrointestinal digestion, GDE gastrointestinal defecation, WBC white blood cell count, ALT alanine aminotransferase, AST aspartate aminotransferase, Alk-p alkaline phosphatase

* $P < .05$

** $P < .01$

scores with GIQLI results attested that gastrointestinal symptoms were major contributors to compromised quality of life outcomes in terms of general health status and gastrointestinal-specific measures. Patient characteristics and laboratory test results showed varied association with quality of life findings in this study (Table 3). High serum alkaline phosphatase level and leukocytosis compromise gastrointestinal quality of life to some extent. After multivariate adjustment, preoperative alkaline phosphatase and direct bilirubin levels remained significant predictors of general health and gastrointestinal-specific quality of life. Alkaline phosphatase level reflects lipid metabolism and can indicate liver or gallbladder dysfunction (Choi & Paim, 2000). According to Huang, Lein, Tai and Wu (2003), alkaline phosphatase level exceeding 400 IU is a poor prognostic factor for biliary reconstructive surgery. Multivariate analysis in the present study demonstrated that poor gallbladder function, represented by elevated preoperative alkaline phosphatase level, was a strong and significant predictor of poor quality of life. Mild to moderate

hyperbilirubinemia (elevated serum level of total or direct bilirubin) is frequently seen in patients with acute cholecystitis; approximately one-third of these patients may have elevated serum bilirubin levels at the time of admission (Dumont, 1976; Edlund, Kempf, & van der Linden, 1983). Hyperbilirubinemia in acute cholecystitis is due to reduced bile excretion caused by pressure on ducts from the distended gallbladder (Edlund et al.).

Multivariate analysis herein also demonstrated effects of elevated direct bilirubin level on general health and gastrointestinal-specific quality of life, especially the latter (Table 3). Serum levels of alkaline phosphatase and direct bilirubin may provide useful preoperative information for surgeons relative to predicted quality of life among patients.

In conclusion, symptomatic gallstone disease considerably affects patient quality of life in terms of general health status and gastrointestinal-specific measures. Serum levels of direct bilirubin and alkaline phosphatase significantly predict quality of life and can be used to evaluate patient well-being at admission.

Cross-References

- ▶ [Aged](#)
- ▶ [Quality of Life](#)
- ▶ [Taiwan](#)

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Synthesis of Quality of Life Models

- ▶ [Top-Down QOL Models](#)

Synthetic Indicators of the Quality of Life in Europe

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Synonyms

European synthetic welfare indicator; Index of well-being in Europe; Measurement of the quality of life in Europe

Definition

A synthetic indicator refers to a numerical measure reflecting the situation of an objective state of affairs made up by many components meant to be integrated into a single comprehensive value.

Description

The evaluation of the quality of life involves evaluating multiple aspects of society and implies the simultaneous use of many social indicators. In this multidimensional evaluation, the indicators' weighted sum is generally used as an integrated measure for the purpose of offering a global synthesis of welfare. In this respect, synthetic indicator-construction methods are particularly interesting in this field of research, especially within the European union context.

In this essay, the following definition of quality of life is adopted: "Quality of Life is the result of complex interactions between a set of objective and subjective factors: The first refers to external conditions of an economic, socio-political, environmental and cultural nature, whilst the subjective factors refer to the individual's perception of this life and

satisfaction research in the diverse dimension of life" [Somarriba (2008), Somarriba and Pena (2009a)].

Starting from this definition, the application of the synthetic indicators methodology is sought to disclose the situation of the European countries in this field.

For the application of the methodology, several problems arise which may be summarized as follows:

- (a) The selection of the areas or domains constituting the concept
- (b) The selection of indicators for each area
- (c) The aggregation of the selected indicators to obtain the synthetic measure

As to the problems inherent in aggregation, there are:

- (a) The heterogeneity of the measurement units used for the partial indicators
- (b) The interdependence among them
- (c) The weighting for each single indicator within a given area and for each area in the total

Below we will review three different aggregation methods that have been used for obtaining of alternative weighted systems (Somarriba and Pena (2009a)): the analysis of principal components, the measurement of P_2 distance, and the data envelopment analysis (DEA). We will analyze the advantages and disadvantages of these three methods.

Principal Components Analysis (PCA)

The method of principal components has been used by a range of authors as a tool for the construction of synthetic indicators of quality of life [Ram (1982a), Slottje, Scully, Hirschberg, and Hayes (1991), among others].

This method consists of transforming a set of original variables into another denominated set of principal components that are characterized as uncorrelated to each other. As measurement, the amount of information incorporated in a component is used its variance. In the synthetic indicator by principal components, the weights of the variables are the factorial loads in the first principal component, which we can consider equal to welfare.

This method presents as principal advantages compared with other statistical alternatives that it is computationally easier, has excellent *mathematical properties*, and avoids the *duplication of information*. In addition, it can be used for *comparison* across countries or settings, or over time, provided the separate indices are calculated with the same variables.

The principal criticisms to this methodology as an instrument in the construction of synthetic indicators are the following:

The synthetic indicator derived from this procedure is exclusively an ordinal type of indicator, and the weights of partial indicators do not have a clear socioeconomic interpretation.

Additionally, this procedure does not take into account *all nonredundant information*, since it only includes the variance of the first component and it may remove useful information from the synthetic indicator. It also presents some *difficulties* if one desires to construct a single index of the *variables that are not very highly correlated* among themselves. The method has a tendency to pick up the subset of highly correlated variables that make up the first component and assign marginal weights to relatively poorly correlated subsets of variables.

Data Envelopment Analysis

The methodology of data envelopment analysis (DEA) has been used traditionally for the estimation of the relative efficiency of a set of productive units, Decision Making Units (DMU). However, DEA has been used as a possible tool for obtaining synthetic indicators.

Data envelopment analysis is a nonparametric technical procedure that uses a technique of linear programming and that evaluates the relative efficiency of a set of homogenous productive units. To do so, it makes use of the amounts of inputs and outputs consumed and produced by each unit, respectively, and uses techniques of linear programming. DEA is constructed from the best observed practice, that is to say, the efficient frontier of production of each unit.

Some research has been published in which this method was used for the derivation of synthetic indicators of well-being and quality of life,

for example, Hashimoto and Kodama (1997), Despotis (2005a, b), Mahlberg and Obersteiner (2001), Hashimoto and Ishikawa (1993), and González, Cárcaba, Ventura, and García (2011).

This model is characterized by constant returns on scale in which m inputs are used in the production of s outputs and for which there are n observations corresponding to n productive units (DMU). The technical efficiency of a certain unit 0 can be estimated through the following linear program [Farrell (1957), Murias, Martínez, and De Miguel (2006)]:

$$\text{Max } h_0 = \frac{\sum_{r=1}^s u_r y_{rj_0}}{\sum_{i=1}^m v_i x_{ij_0}}$$

s. t. :

$$\frac{\sum_{r=1}^s u_r y_{rj}}{\sum_{i=1}^m v_i x_{ij}} \leq 1 \quad j = 1, \dots, n$$

$$u_r, v_i \geq 0 \quad r = 1, \dots, s; i = 1, \dots, m$$

where h_0 is the objective function, u_r is the weight of the output r , v_i is the weight of the input i , y_{rj} is the amount of the output r of the unit j , and x_{ij} is the amount of the input i of the unit j .

Two of the main *advantages* are its technical emphasis and *flexibility*, given that it is not necessary for all the units to assign the same importance to the same partial indicator. Also, this flexibility can be adjusted with the introduction of additional restrictions that allow the incorporation of additional information into the model.

In addition, the program itself determines the weights, which implies an *absence of value judgments* on the part of the investigator in relation to the relative importance of each variable for determining the efficiency of a unit (DMU).

One of the *disadvantages* of this procedure is that the program can assign a zero or very low weight to a specific factor which, from a theoretical point of view, is very important.

Furthermore, this method does not define in a sufficiently precise manner which data are

outputs and which are inputs within the context of measurement of the quality of life. Therefore, when the variables are defined by the investigator as inputs or outputs, some arbitrariness may be introduced into the model.

The P_2 Distance Method

The P_2 distance, defined by Professor Pena (1977), is a synthetic indicator that adds the information contained in a set of social indicators, and it is designed to make *inter-spatial and inter-temporal comparisons*.

A theoretical country that has the worst variable values of the object of study is taken as a reference. The DP_2 indicator calculates the distances of each country with respect to that theoretical country of reference.

The P_2 distance is defined as:

$$DP_{2j} = \sum_i \left\{ \left(\frac{d_i}{\sigma_i} \right) (1 - R_{i,i-1,\dots,1}^2) \right\}$$

with $R_i^2 = 0$, where $d_i = d_i(r^*) = |x_{ri} - x_{*i}|$ and the reference base is $X_* = (x_{*1}, x_{*2}, \dots, x_{*n})$

where m is the number of countries, n is the number of variables, x_{ij} is the value of the variable i in the country j , σ_i is the standard deviation of the variable i , and $R_{i,i-1,\dots,1}^2$ is the coefficient of determination in the regression of X_i over $X_{i-1}, X_{i-2}, \dots, X_1$.

Examples of works which apply this method to creating indicators in the area of welfare include Rodriguez (2010); Cuenca, Rodríguez, and Navarro (2010); Somarriba and Pena (2009b); Somarriba (2008, 2010); Zarzosa and Somarriba (2013); and Montero, Chasco, and Larráz (2010).

The indicator solves a large number of problems such as the *aggregation of variables expressed in different measures, arbitrary weights, and duplication of information*.

The order of entrance of the partial indicators and the determination of the weights of each variable is determined through an iterative algorithm that reaches convergence when the indicator fulfills a set of desirable properties. The order of entrance of the partial indicators is obtained in

accordance with the absolute values of the coefficients of linear correlation between the values of the indicators and the synthetic indicators.

In addition, by means of correction factors, new information is obtained by incorporating the new information and avoiding duplications. These factors are the weights of the partial indicators.

As in the case of data envelopment analysis, the requirement of this method of classifying the indicators as inputs or outputs could introduce some subjectivism into the procedure.

Comparison of Results

We selected an initial set of objective and subjective indicators (Somarriba and Pena (2009a)), for the European Union which were unambiguously interpreted as “good” or “bad” for social welfare. These indicators reflect aspects, like work, accommodation, education, leisure time, income and health, social and family life, and individuals’ self-assessment of their lives (general satisfaction and happiness).

Table 1 shows the classification of the different countries in relation to the results obtained with the three synthetic indicators [PCA, DP_2 , DEA/AR]. The countries were classified on the basis of their quality of life levels (1 = high, 2 = high–medium, 3 = low–medium, and 4 = low).

The classifications according to the PCA and the DP_2 indicators coincide in a percentage of 71. In the case of the DEA indicator, the results are contradictory: on three occasions, its classifications do not agree with any of the other two indicators; on one occasion, it agrees with indicator PCA, on one occasion with DP_2 , and on two occasions with both simultaneously. This result, together with the low discriminatory power of this indicator (DEA), raises doubts about its quality.

The method of *principal components*, which is considered representative of the family of factorial analysis methods, raises a number of problems as a method for building composite synthetic indicators of quality of life:

- The first of the components explains only 56 % of the total variance, omitting 44 % of all nonredundant information.

Synthetic Indicators of the Quality of Life in Europe, Table 1 Comparison of the synthetic indicators APC, DP₂, DEA/AR

Country	PCA	DP ₂	DEA/AR
Austria	2	1	
Belgium	1	2	
Bulgaria	4	4	4
Cyprus	2	2	
Czech Republic	3	3	
Denmark	1	1	
Estonia	4	3	4
Finland	1	1	
France	2	2	4
Germany	2	2	
Greece	3	3	
Hungary	3	3	
Ireland	2	1	
Italy	2	3	4
Latvia	4	4	
Lithuania	4	4	
Luxembourg	1	1	
Malta	2	2	
Netherlands	1	1	
Poland	3	4	4
Portugal	3	3	4
Romania	4	4	4
Slovakia	4	4	
Slovenia	3	3	
Spain	3	2	
Sweden	1	1	
Turkey	4	4	
United Kingdom	1	2	

- Its application only allows the ordering cases; it is an ordinal measure, whereas the measurement of welfare requires cardinal type measures.
- The weights of the variables are the respective factorial loads in the first component. From a mathematical point of view, the meaning of these weights is clear, but it makes little sense in relation to the objective of measuring well-being.
- This method solves the problem of correlations, but the resulting synthetic indicator does not include all the nonredundant information of the variables.
- The analysis of principal components does not allow making inter-spatial and inter-temporal

comparisons, only ordinal comparisons, as opposed to the DEA and DP₂ methods.

Data envelopment analysis is useful for constructing synthetic indicators, and it facilitates spatial and temporal comparisons.

Only seven out of twenty-eight countries are judged DEA inefficient. The number of countries with unitary indicators is so high that it leads us to believe that the indicator overvalues the quality of life, offering little information to our analysis.

This method can guarantee impartiality in the weights and allows the introduction of expert opinions and individuals' perceptions of their welfare. Each analysis of country or unit can determine its weight in an objective manner, and this freedom can be controlled with the introduction of additional restrictions.

Unfortunately, this method presents disadvantages, since it can show multiple virtual solutions [virtual inputs and outputs] and the existence of restrictions can cause problems of non-feasibility. Furthermore, this method fails to define in a sufficiently precise manner which data are outputs and which are inputs within the context of measurement of quality of life. As a result, when the investigator defines the variables as inputs or outputs, some arbitrariness is introduced into the model. Additionally, in this study, this method overvalues the level of quality of life and lacks discriminatory power to classify the countries.

One of the disadvantages of the method of DEA for composite synthetic indicators is that the program can assign a zero or very low weighting to factors which, from a theoretical point of view, are very important. Indicators like "leisure time," "satisfaction with education," "school life expectancy," "satisfaction with one's family," and "satisfaction with one's social life" are not used in the construction of DEA indicators in our example.

In our opinion, of the three methods analyzed, the synthetic indicator of the *P₂ distance* [Pena (1977)] appears to be the optimal method of obtaining synthetic indicators of well-being:

- This measurement guarantees that the weight of the partial indicators is determined in a nonarbitrary manner.

- The obtained weights have an economic interpretation, while the weights derived from the analysis of principal components did not.
- In addition, as a cardinal measurement, it is a distance measurement, which allows us to make comparisons in time and space.

The only disadvantage of this method is that it introduces some subjectivism into the procedure when classifying the indicator as positive or negative, since an increase in the value of any variable might mean an improvement of the quality of life.

Based on this indicator, Europe displays a strong polarization between, on the one hand, Nordic countries and Austria, and, on the other hand, Eastern European and the new accession countries. The distance between the averages of both groups is 9.71 units in relation to the reference base. The rest of the countries are between those extremes.

Cross-References

- ▶ [European Quality of Life Survey \(EQLS\)](#)
- ▶ [European System of Social Indicators](#)
- ▶ [Objective Index of Quality of Life Developed for the Municipalities of the Barcelona Province](#)
- ▶ [Objective Index of Quality of Life in Spain](#)
- ▶ [Quality of Life Index](#)
- ▶ [Subjective Indicators](#)

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Synthetic Research

► [Meta-Data-Analysis](#)

System Dynamics Modeling

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Synonyms

[State space modeling](#)

Definition

Feedback mechanisms or reciprocal causal effects and stability are core issues in system dynamics modeling. The famous Dutch inventor Cornelis Drebbel (1572–1633) was the first to study and knowingly apply feedback mechanism to keep the temperature of an oven at a constant level. The presence and nature of feedback mechanisms typically determine whether the system shows a stable development. Modern systems and control theory distinguishes itself from the classical theory by the state space approach (Caines, 1988; Kalman, 1960; Zadeh & Desoer, 1963). The state space model covers an extremely general class of dynamic models. In fact, all nonanticipative models (models with no causal arrows heading backward in time) can be represented in state space form. The state space model, for example, covers longitudinal latent factor and path analysis models and allows optimal estimation of the latent states or factor scores by means of the Kalman filter or smoother (Oud, Jansen, van Leeuwe, Aarnoutse, & Voeten, 1999; Oud, van den Bercken, & Essers, 1990). Oud (2004) showed also how autoregressive and moving average parameters (ARMA), nonstationarity (in the means as well as in the covariance

structure), and trait variables (random subject effects) become part of the state space model and how missing data handling takes place in its estimation.

The distinguishing feature of a state space model was formulated by Kalman (1960, p. 39) in his famous paper about what became later known as the Kalman filter. The state space model specifies one or more latent variables, called state variables, that contain all “one has to know about the past behavior of the system in order to predict its future behavior.” If one wants to predict or control the future of a system, knowledge of the current state of the system (e.g., obtained by means of the Kalman filter) and its future input should be sufficient. If the state does not contain enough information to do this, then the number of latent state variables has to be extended until it does. This is analogous to cross-sectional factor analysis, where enough factors have to be specified to account for the common variance in the observed variables. In the above sense, the state in the state space model gives a complete latent description of the system at any point in time (Polderman & Willems, 1998, p. 144). This explains the popularity of the state space model and its usefulness in prediction and control problems.

Description

While the purpose of latent state estimation by means of the Kalman filter and the Kalman smoother is optimal control or just knowledge of the latent inside of the system, from the late 1960s onwards, these devices were additionally used to estimate the parameters of the state space model in the single time series ($N = 1$) case. The procedure involves iterative reestimation of the unknown latent states, considered as missing data, in conjunction with stepwise improvement of parameter estimates. For the large N (panel data) case, Oud (1978) put the state space model in the form of a structural equation model (SEM) and estimated its parameters by the first published version of the SEM program LISREL (Jöreskog & Sörbom, 1976). In addition to being

appropriate for large N , the SEM formulation allows more complicated error structures than are possible in the classic $N = 1$ approach. Recently Voelkle, Oud, von Oertzen, and Lindenberg (2012) explained how SEM can also be applied in the $N = 1$ case, making SEM state space modeling suitable for arbitrary N . In addition to discrete time modeling, state space theory offers continuous time modeling by differential equations for oscillating as well as nonoscillating processes. Continuous time state space modeling by SEM in behavioral science has been discussed by Oud and Jansen (2000) and more recently by Voelkle, Oud, Davidov, and Schmidt (2012). A nice feature of continuous time modeling is that the procedure becomes applicable for individually varying observation intervals (Voelkle & Oud, 2013). The combination of arbitrary N with the fact that the N subjects may all have different observation time points and different intervals between observation time points makes SEM state space modeling an extremely flexible analysis tool. Recent features are conveniently implemented by the nonlinear SEM package OpenMx and continuous time modeling is done by the OpenMx program CT-SEM (Voelkle & Oud, 2011).

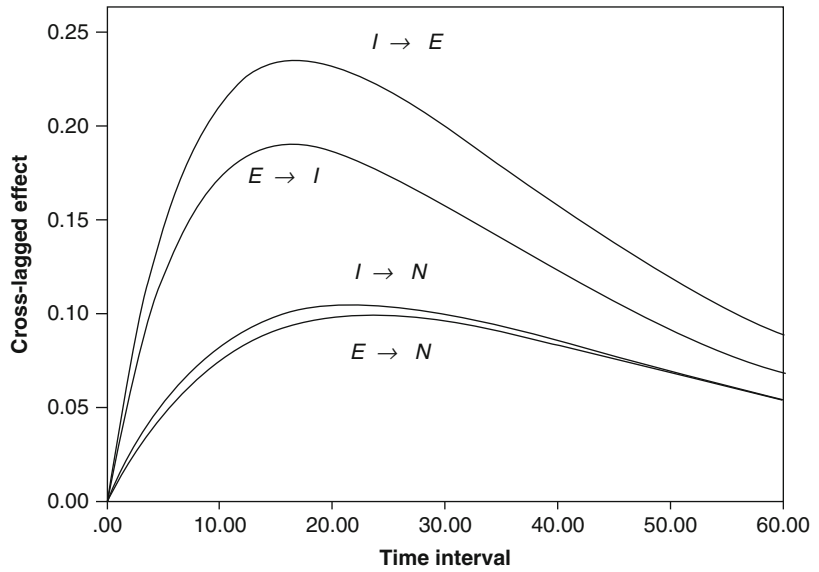
Continuous time state space modeling will be illustrated by two examples. The first example is taken from Toharudin, Oud, and Billiet (2008), who analyze the relationships between three latent state variables (Individualism I , Nationalism N , and Ethnocentrism E) in a panel of $N = 1,274$ Flemish respondents. Measured in 3 consecutive election years (1991, 1995, and 1999) by five, four, and eight items, respectively, the latent variables I , N , and E are part of an elaborate measurement model and the model as a whole has 51 observed variables. From the six continuous time cross-effects between the latent variables four are significant. There is a clear feedback relation between Individualism and Ethnocentrism: $I \rightarrow E$ and $E \rightarrow I$, but only relatively small unidirectional effects from both I and E on N : $I \rightarrow N$ and $E \rightarrow N$. The role of Flemish nationalism turns out to be much less influential than often assumed.

For the significant cross-effects, Fig. 1 displays the cross-lagged effect functions. A cross-lagged effect function describes the consequences of a cross-effect over increasing intervals over time. Starting from zero over an interval of zero, the cross-lagged effect builds up until a maximum is reached somewhere and then, in a stable model, tapers off to zero again. Figure 1 shows that the maximum of $I \rightarrow E$ (0.235) is reached somewhat later, at an interval of 17.0 years, than the lower maximum of $E \rightarrow I$ (0.190), reached at interval 16.4. The maxima of $I \rightarrow N$ and $E \rightarrow N$ are both much lower (0.105 and 0.099) and reached at later intervals (22 and 23.2 years). Figure 2 shows that the mean values of Individualism and Ethnocentrism hardly changed in the data collection period 1991–1999 and are hardly expected to change in the prediction period, whereas the mean of Nationalism increased in the data collection period from 4.23 to 4.55 and is expected to show a further slight increase in the prediction period. Because of the stability of the model, all means converge to a stable equilibrium position.

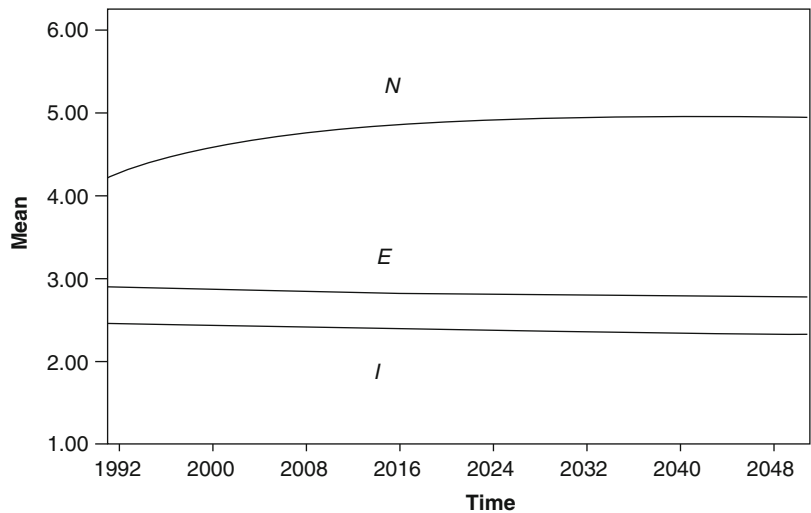
In the second example, taken from Oud (2010), a state space model couples subsystems husband and wife by letting marital satisfaction of one influencing marital satisfaction of the other. The data came from 235 Dutch couples, who filled out a questionnaire in 4 consecutive years (2002, 2003, 2004, 2005). Again the question is whether there is a unidirectional influence (from husband to wife or from wife to husband) or a feedback relationship between the subsystems and how this determines the development of marital satisfaction in both. This example in addition illustrates that one state variable per subsystem and two for the system as a whole (marital satisfaction in husband and marital satisfaction in wife) was not enough to represent the required information in the system. In a continuous time model, a higher dimensionality of the state expresses itself in a higher order of the differential equation model. The second-order model gave a significant fit improvement in comparison to the first-order model. So, husband and wife had to be characterized by two

System Dynamics Modeling,

Fig. 1 Standardized cross-lagged effect functions



System Dynamics Modeling, Fig. 2 Latent mean trajectories



state variables at each point in time: marital satisfaction itself and the first-order derivative of marital satisfaction (the change in marital satisfaction). It turned out that the effect of wife on husband was significant but no significant effect in the opposite direction was found. Although marital satisfaction in both husband and wife eventually converged to an equilibrium position, for both husband and wife a decline in mean marital satisfaction was found in the data collection period as well as over a large part of

the prediction period. The decline was much more pronounced in husbands, however, than in wives.

Cross-References

- ▶ [Ethnocentrism](#)
- ▶ [Latent Variables](#)
- ▶ [Longitudinal Data Analysis](#)
- ▶ [Marital Satisfaction](#)

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System Justification Theory

► Coping with an Unjust World

System Justification Theory (SJT)

► System-Justifying Ideologies

System Maintenance

► Democracy and Bureaucracy

Systematic Reviews of Measurement Properties

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Definition

Systematic reviews of measurement properties are reviews that integrate the evidence found in the literature about the quality of the measurement properties, such as validity and ► **reliability**, of one or more measurement instruments to assess a specific construct. In this entry,

we focus on measurement instruments to assess the construct health-related quality of life (HRQL). Such a review consists of several steps. After formulating the aim and the corresponding research question of the review, all relevant studies that evaluate any measurement property of an HRQL instrument are identified by a systematic search of the literature, and selected using clear inclusion and exclusion criteria. Then the methodological quality of the included studies is systematically assessed, and the results of the measurement properties and other relevant information are extracted from each study. Thereafter, the results are synthesized over the studies, and finally, a conclusion is drawn about the best instrument to measure, for example, HRQL, or about the adequacy of one specific HRQL measurement instrument.

Description

Aim

There are different types of systematic reviews, which have in common that they all evaluate the evidence of one or more measurement properties. Some reviews focus on only one measurement instrument; others include commonly used measurement instruments, but the most useful ones include all measurement properties of all available instruments to measure HRQL. The conclusion of these latter reviews forms the basis to make a well-informed choice about the best measurement instrument in a specific situation. These reviews also reveal which HRQL instruments look most promising and which measurement properties should be examined further.

A literature search cannot be started without a well-formulated research question. This research question should contain (1) a specification about HRQL, that is, disease-specific, health-related or general HRQL; (2) the target population of interest, that is, focused on a specific age category or patients with a specific disease; and (3) the measurement properties of interest. The review may be focused,

for example, on content validity or responsiveness only or on all measurement properties. Sometimes, the research question also includes the type of measurement instrument, but in the case of HRQL, this is not necessary as it is usually a questionnaire.

Identification and Selection of All Relevant Articles in the Literature

A sound literature search is challenging, because studies on measurement properties are not easy to find. This is due to a large variation in terminology used for measurement properties, poorly written abstracts by the authors, or by poorly indexing of the articles by both the authors (keywords) and the professionals working for the databases.

With regard to relevant databases, Medline and Embase will contain most articles about HRQL instruments, although PsycINFO and CINAHL may additionally yield relevant studies. For each of these databases, a comprehensive search strategy has to be formulated. This search strategy should contain search terms, that is, all possible synonyms, for three key elements: ► [quality of life](#) (see the entry “► [Quality of Life](#)” for all possible synonyms), the target population, and terms for the measurement properties. Search terms for measurement properties have been defined in a PubMed search filter (Terwee, Jansma, Riphagen, & De Vet, 2009), which contains a combination of all synonyms for reliability, validity, and so on. Besides electronic databases, reference lists of relevant articles should be checked. In a later phase of the search process, when the names of relevant measurement instruments are known, these names can be used as search terms to find additional studies on its measurement properties.

After potential relevant references have been identified, more strict inclusion and exclusion criteria are applied to select articles to be included in the review. At this stage, one can select the articles which focus on special aspects of HRQL of interest, for example, disease-related or only the mental component, or which focus on exactly the age category or patient population of interest, for example, young diabetics with

depression. Also restriction to, for example, short instruments or original versions of the measurement instruments can be defined at this stage. Identification and selection of the relevant articles should preferably be done by two researchers, who reach consensus afterwards, to avoid that relevant papers are missed. Drawing a flow chart to document the search and selection process is highly recommended.

Assessing the Methodological Quality of the Articles

The strength of the evidence on the quality of the measurement properties depends on the methodological quality of the studies in which these properties are assessed. The COSMIN checklist (► [CONsensus-based Standards for the Selection of health Measurement INSTRUMENTS](#)) is developed for this purpose by consensus of international experts. The COSMIN checklist contains items to assess the quality of the design and analysis of studies evaluating the following measurement properties: internal consistency, reliability, measurement error, content validity, construct validity (i.e., structural validity, hypotheses testing, and cross-cultural validity), criterion validity, and responsiveness. When the items of the COSMIN checklist are satisfied for a specific measurement property, the results found for the quality of the measurement instruments in the studies can be trusted, that is, they are probably not biased.

For example, the COSMIN checklist for the measurement property reliability includes items to assess the design of the study, such as “Was the time interval stated?” and “Were patients stable in the interim period on the construct to be measured?” To assess the statistical methods for reliability, items such as “Was an intraclass correlation coefficient (ICC) calculated?” (for continuous scales) and “Was kappa calculated?” (for dichotomous items) are included.

A scoring system to obtain a total score (excellent, good, fair, poor) for the methodological quality of a study for each measurement property has been proposed (Terwee et al., 2012). Up-to-date information regarding the COSMIN scoring system can be found on www.cosmin.nl.

Extracting Relevant Data from the Studies

There are three types of data to be extracted from the articles: characteristics of the measurement instrument (e.g., number and types of domains and number of items), characteristics of the study sample (e.g., age, gender, disease characteristics, setting), and last but not least, the results of the measurement properties. To avoid reading and interpretation errors, also the data extraction should preferably be done by two researchers independently, who reach consensus afterwards.

Information on the measurement properties that should be extracted concerns, for example, the values of Cronbach’s alpha, kappa values, limits of agreement, correlations between (change) scores, or the results of factor analysis. The accompanying confidence intervals and the sample size used in each analysis are also relevant to be extracted. In this phase of the systematic review, it is important to extract the exact results (raw data) as reported in the articles, and not classify it as satisfactory or not satisfactory yet. The judgment of adequacy takes place in a later phase.

Characteristics of the study sample are important to judge the generalizability of the results of the measurement properties. The COSMIN checklist (Mokkink et al., 2010) contains items that can be used for this purpose. These generalizability items include, among other things, items to describe the type of population included (e.g., gender, age, and disease characteristics), the setting and how the study sample was selected (e.g., convenience sample, consecutive patients, or a random sample), and the language version of the HRQL instrument. The generalizability items should be completed for each measurement property separately because some properties may be assessed in subsamples or totally different study samples. These generalizability items are important to assess the (dis)similarities of the samples used in different studies in the phase of data synthesis.

Data Synthesis

When a measurement property has been evaluated in different studies, the results of various

studies should be combined. This should be done for each measurement property separately. Results can be combined if three requirements are met: the characteristics of the studies are sufficiently similar with regard to study population, setting, and the (language) version of the instrument used (i.e., the generalizability items); the results on the measurement properties in the studies do not show too different or conflicting results; and the studies that evaluate the measurement properties are of sufficiently methodological quality, implying that the results can be trusted.

There are two options for data synthesis: a quantitative analysis or a qualitative analysis. For some measurement properties, quantitative analysis is not an option because there are no quantitative data available, for example, in case of content validity. A quantitative synthesis of the results is labeled as statistical pooling. In that case, a systematic review is often called meta-analysis. Statistical methods for pooling exist for the following statistical parameters: Cronbach's alphas, correlation coefficients (intraclass, Spearman, Pearson), standard errors of measurement (SEMs), and minimal important change (MIC) values. For the pooled result, it should then be assessed whether the value for the measurement property is adequate.

Sometimes, evidence from different types of studies should be combined. An example of this is the assessment of internal consistency. In order to be able to assess the internal consistency of a measurement instrument adequately, it is necessary to have information about the unidimensionality of the scales (i.e., from factor analysis) and about the Cronbach's alpha. This information may come from different studies. To obtain a rating of "strong evidence for good internal consistency," three requirements should be met: (1) the subscales should be shown to be unidimensional, (2) high Cronbach's alphas should be found in a number of studies of good methodological quality, and (3) the results should be consistent over studies.

Statistical pooling is not an option when quantitative data is not available for a measurement property, when studies are very dissimilar

or when the studies are of low methodological quality. However, we still have to come to a conclusion about the measurement property. In that case, a best evidence synthesis can be performed. This is a qualitative analysis in which the following characteristics are taken into consideration: the similarity of the studies, the consistency of the results, and the methodological quality of the studies. Based on these characteristics, the strength of the evidence can be determined. Studies of poor methodological quality can provide only weak evidence. For example, when a high internal consistency is found in a number of studies that are of fair quality, there is only moderate evidence of high internal consistency, but when a low score for a reliability parameter (e.g., $ICC < 0.4$) is found in a number of studies that are of good methodological quality, then there is strong evidence that the measurement instrument has low reliability. To be most informative, details about how the methodological quality is classified, how the consistency of the results is assessed, and how the (dis)similarity of the studies is determined should be presented.

Adequacy of the Results on the Measurement Properties

Criteria of adequacy should be applied to the combined results of the measurement properties. There are no consensus-based criteria available yet for the adequacy of a measurement property. Suggestions for such criteria can be found in textbooks (De Vet, Terwee, Mokkink, & Knol, 2011; Nunnally & Bernstein, 1994) and in this encyclopedia in the sections of the respective measurement properties. For example, Cronbach's alpha between 0.70 and 0.90 or up to 0.95 has been mentioned as good internal consistency. For reliability, an ICC value of 0.70 is considered to be acceptable, but values greater than 0.80 or even greater than 0.90 are, of course, much better. For construct validity, based on hypotheses testing, for example, more than 75 % of the hypotheses should be confirmed.

All these criteria are arbitrary, and researchers may have good reasons to differ from these suggestions, but the reasons for

applying stricter or more lenient criteria should be explained in the review. Quality criteria for measurement properties were suggested by Terwee et al. (2007). These criteria combine standards for the methodological quality of studies with criteria for the adequacy of the results of those studies. Preferably, the assessment of the methodological quality of studies and the adequacy criteria for good measurement properties should be applied separately.

Drawing Conclusions in a Systematic Review

To draw an overall conclusion on the quality of a specific measurement instrument to assess HRQL or to select the *best* HRQL measurement instrument for a particular situation, the evidence on all measurement property should be combined. When insufficient data is available to draw conclusions about the measurement instruments, the review often provides guidance for further research, especially with regard to which measurement properties require further and better examination.

Reporting the Results of a Systematic Review

The publication of a systematic review of measurement properties can become a quite extensive report. In fact, the evaluation of each measurement property can be considered a separate systematic review on itself because for each measurement property, different studies might provide data, the methodological quality of the studies and generalizability of the results should be considered separately per measurement property, and the data synthesis and judgment of adequacy of the result should be considered per measurement property. The article about the review should at least contain (1) the results of the literature search and selection of the studies; (2) the methodological quality of the included studies; (3) the characteristics of the included measurement instruments; (4) the characteristics of the included study populations; (5) the raw data on the measurement properties; (6) the results of the data synthesis, either as a quantitative or a qualitative analysis; (7) the judgment of adequacy of the results for

each measurement property; and finally, (8) the conclusion about the best measurement instrument. Extensive tables can be placed in appendices or on a website.

Conclusion

The number of systematic reviews of measurement properties is increasing. Only sound systematic reviews provide useful data to form the basis for the choice of the best instrument for a specific construct in a specific situation. Evidence about the best instruments is important because the quality of scientific research on HRQL highly depends on the quality of the measurement instruments. Moreover, acceptance of only one or a few high-quality measurement instruments to assess quality of life in general and for specific diseases would facilitate comparability of the results of future studies.

Cross-References

- ▶ [Internal Consistency](#)
- ▶ [Reliability](#)

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Systemic Approach to Quality of Life

► Systemic Quality of Life Model (SQOL)

Systemic Design

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Synonyms

[Systems thinking](#)

Definition

Systemic design is a design-based approach that outlines and plans the flow of matter running from one system to the others, pursuing a metabolization processes which should reduce the ecological footprint and generate profitable economic flows. The project plans and optimizes all the actors and parts of an ecosystem allowing for their coherent and mutual evolution. A systemic designer manages and encourages reciprocity in dialogue among the several players throughout the development of the project, in a new cultural sector.

It grows out an autopoietic system, open to the context, in which the whole is greater than the sum of its parts and the goals of balance and evolution are valid for every parts; they are interdependent, strategic, and necessary in the

direction of substance and energy flows and in the endogenous processes of generation and transformation into the system (see [Fig. 1](#)).

Description

From Systems Theory to Systemic Design

Systemic thinking has its theoretical basis in disciplines, as cybernetics and sociology, which during the twentieth century have begun to consider natural and human processes as a network of incoming (input) and outgoing relationships and, doing so, have been able to regulate themselves with feedback actions, as stated in the “general systems theory” by Ludwig von Bertalanffy (1968).

Systemic thinking began to be defined in particular in biology, physics, psychology, and ecology, and in the 1950s of the twentieth century, it started to influence engineering and economics. It has grown inspired by works on self-organization by Ilya Prigogine and Nicolis (1977), by the concept of autopoiesis by Humberto Maturana and Francisco J. Varela (1992), and by Fritjof Capra’s living systems theory (1996, 2002).

In 1998 systemic thinking found its actual theorization and project leanings as systemic design within the researches on Ecodesign at Politecnico di Torino, Italy (Lanzavecchia, 2012). There, in the late 1990s, it started a cooperation with Gunter Pauli’s ZERI Foundation (Zero Emissions Research and Initiatives) based in Switzerland (Pauli, 2010), to merge the economical and technological knowledge with the design and environmental one. The results were a strong method with clear and defined principles that can be applied in pragmatic fields, from agro-industry to events management and from metallurgy to educational systems.

Crisis of Producing Processes

In the beginning of this millennium, humanity is living a moment of economic, social, cultural, and politic crisis: above all a value crisis. That is because the consumerist system has been created by a linear way of thinking, typical of the

SYSTEMIC DESIGN Guidelines

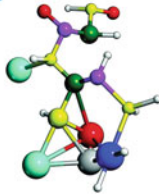
OUTPUT INPUT



The output (waste) of a system becomes the input (resource) for another one, creating:

- an increase in cash flow;
- new job opportunities.

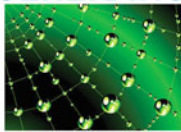
RELATIONSHIPS



The relationships generate the system:

- each one contributes to the system;
- the relationships can be within the system or outside of it.

AUTO-GENERATION



Self-producing systems sustain themselves by reproducing automatically, thus allowing them to define their own paths of action and jointly coevolve.

ACT LOCALLY



The local context is fundamental because

- **it values local resources:** humans, culture and materials;
- **it helps resolve local problems** by creating new opportunities.

MAN AT THE CENTRE
OF THE PROJECT



Man connected to own environmental, social, cultural and ethic context.

Systemic Design, Fig. 1 Charts of systemic design, showing the complex relationships occurring between production and territory. By keeping an open cultural and scientific mind on the different disciplines, the outputs become pivotal to the creation of a new production process aiming at zero emissions. Product or service design,

when compliant with the output/input principles, becomes itself one of the main actors of the production system, interweaving its own specific competences with the open multidisciplinary vision. Territorial design can take from systemic approach objective elements of development and connotation of the environment where it performs

industrial production which has influenced the whole modern time.

But today this way of thinking is not appropriate to the challenges and problems that arise with vehemence, both from an ecological and a financial-economical point of view. Even culture and society are deeply in crisis: all the choices made every day are inevitably influenced, spontaneously and subtly, by the consumerist habitus, so much so that we do not even realize we have become victimized.

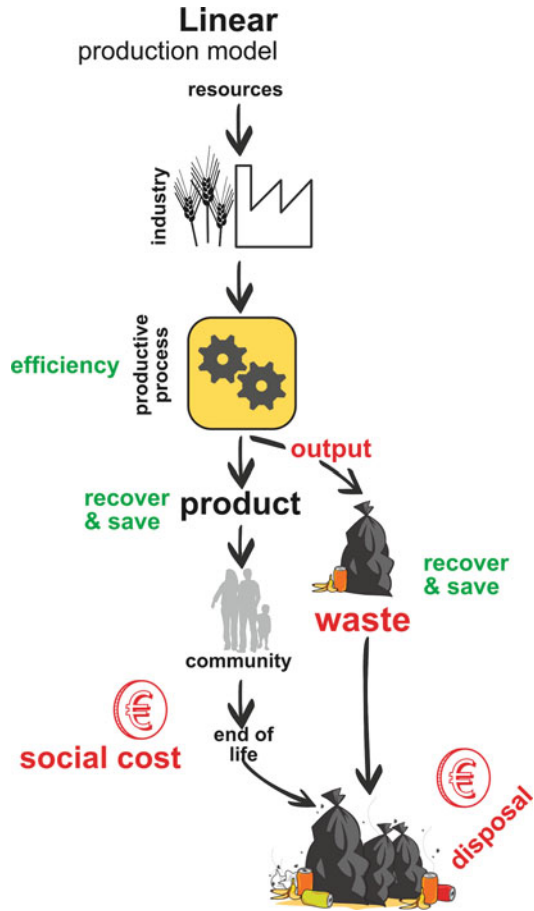
Environmental awareness, despite being widespread, proves to be useless when facing attitudes that have now become deep-rooted in our daily life and that end up denying this feeling of environmental friendliness.

As a consequence it becomes difficult to assess the outcomes generated by this behavior, in that shared culture is not conducive to a habitual consideration of daily choices generating flows of matter and energy and involving the other components of our social and economic system.

Also on a planning level, we show a lack of consciousness and awareness and our work is not carried out with the intention to pursue this dangerous goal, often blaming other people’s weak environmental education and bad behavior for the occurrence of the current ecological problems (see Fig. 2).

The Role of Design

Over the years design has been able to identify the outcropping needs of the society and to go along with the transformations, even anticipating new developmental fields. It has extended its boundaries getting more and more in touch with other sectors, offering more open viewpoints on problems, and most of all making different types of know-how, meeting, and interacting aiming to discover new investigation contexts. It has become an accredited point of reference for innovation. All this success geared at extending testing fields has generated new products; however, it has relegated to a technical and technological area all the problems related to the use of raw materials, energy, and production waste.



Systemic Design, Fig. 2 The linear approach. Although the current linear production model proves to be “efficiency orientated” throughout its production, recycle, and economy processes, both as far as product and scrap are concerned, it generates waste that inevitably resn considerable end-of-process social costs

On the other hand, there is a widespread belief that the role of design nowadays should consist in trying to rebalance the relation between production, environment, and society and in making an effort to start some interventions which maintain the balance of this mutual bond, making it better through a constant multi- and transdisciplinary dialogue.

Such a context calls for a deep change within industrial design practice. Designers will be required to face the responsibilities they have toward those who ask for the solutions of real problems, as well as the realization of wishes

that have not yet been fulfilled and the qualitative improvement of their lives, aware that ► **sustainability** is not an individual property but a shared value involving the whole community.

Design must shift the attention to a “human” dimension that builds in a sensible and responsible way a system of places, communities, practices, and processes. This is possible by intervening in the processes with a view toward sustainability from a supplementary relationship between community and territory, between natural and artificial, and between man and ecosystem.

In the broadest sense, the whole range of actors of this economic process (politicians, economists, manufacturers, costumers, etc.) can jointly affect the new directions of the goal: to modify the consumer’s habitus and create a new ecology. The methodology used to achieve this goal consists in a new design of production processes referred not to a classic constant schedule, which has always been focused on a feverish repetition of unit, but to a systemic production model which prefers close resources rather than distant ones, which pays attention to the flow of matter and energy which passes through it and turns to better account the environment and its community.

Moreover, humanity needs a different model of economy, which puts in action a network of relations in order to turn the outputs of a production system into resources (inputs) for another one, in a local context: a virtuous cooperation among production processes (agricultural and industrial) and the system of natural kingdoms, the territorial background, and the community.

The systemic design moves its design process by considering all the variables produced by the flows, the relations, and mutual connections and by each aspect that substantiates around the production process and use of a product or service (see Fig. 3).

Feasible Way of Analysis and Planning Philosophy of Systemic Design

The starting point of this change is the systemic design: planning open systems where

there is no waste of production. The final point is a benefit for the whole community: total reduction of the production output, creation of new job placements, increasing gains for companies and individuals, new virtuous cooperation among different people and better environmental quality, but, above all, the possibility for humankind to have a future. The so-called holistic survey is the first step of this operating system.

Holistic Survey

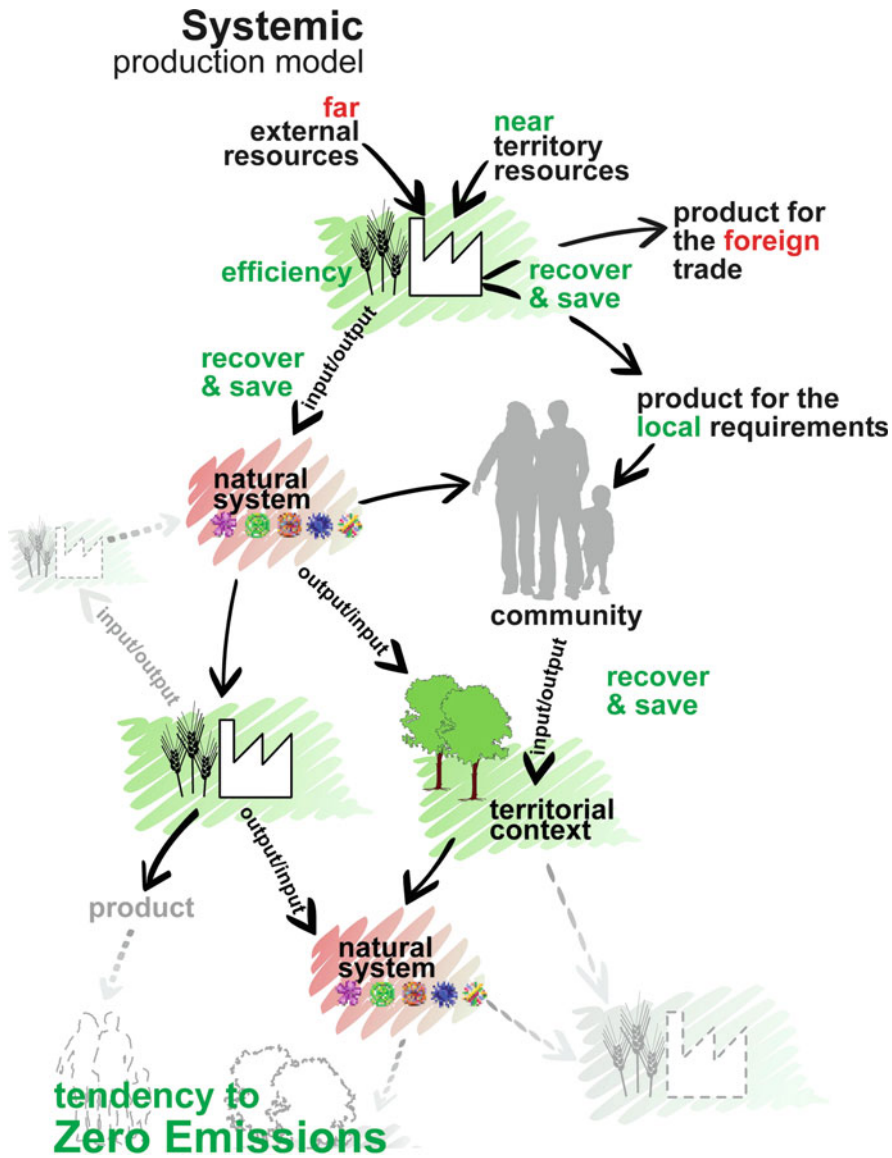
This survey on the state of art provides an indication of the quantity and quality of what each process involves; it considers all aspects of the investigation scope and reports all the connections that are created both in the system existing between the individual parts constituting it and the context in which it is located. The social, economic, and productive structures that mark out the industrialized society are based on two main points: the flows of matter and energy required for the production (agricultural and industrial) and consumption processes and the relations that get going among these flows and processes. The flows of various kinds of connections that are created on the territory among the different actors are subject or object of the actions.

The item **“flows of matter and energy”** deals with anything that physically allows production, exchange, and consumerism of goods and services:

- The resources (input)
- The waste (output) and surplus
- The realized products and the provided services
- The logistics of goods and people

The item **“active relationships”** deals with all the relations that processes can generate directly or indirectly:

- The territory is the key area to consider as it provides a physical, social, cultural, and virtual space of exchanges that the process creates.
- The network of primary services.
- The regulatory and legislative apparatus that limits and defines a process.



Systemic Design, Fig. 3 The systemic approach. A systemic production model exploits the resources in the proximity, rather than the ones that are distant, and promotes, through the output of a system that becomes the input of another one, a more effective relationship among

farming and industrial production processes, the system of the natural kingdom, the territory, and the communities. This is conducive to the creation of an open relational network that revitalizes and defines the territory with its peculiar features

- The private institutions that provide services to support the production process.
- The producers of goods, services, components, and semifinished products used and consumed by a process.
- The users, producers, and maintenance technicians.

Criticality Statements

On the basis of the results coming from the holistic survey, the designer must investigate the qualitative and quantitative criticalities of the analyzed system. They will deal with social, cultural, environmental, and economic spheres of the analyzed system.

Particularly, it will be investigated the cause and effect relationships that concern:

- The quality of available resources (output) and the used ones (input)
- Excessive use of matter and energy during the process
- Emissions of CO₂, polluting substances, wastes, and soil exploitation
- Disproportion and/or surplus of production, managerial, logistic, and disposal costs
- Overproduction of goods in relation to the demand
- Disconnection between the product system and the local territory system, that means dependences on extraterritorial capitals, matters, energies, and cultures
- Unemployment and underestimation of the abilities and local manpower

Design Guidelines

These guidelines represent the methodological basis to set up the project and also the essential tool to understand and evaluate the system as a whole; furthermore, they can define new possible relationships useful to the system.

They are based on the key consideration that the center of a systemic project is the humanity with the totality of his relations in the environmental, social, cultural, and ethical issues of which he is part. The humanity is part of the complex natural system to which he must communicate and interact harmoniously.

Nature, the most efficient system, defines the lines of a model that is in favor of a critical reading of the processes and the redefinition of the latter as open systems. In nature there is no waste and every excess is metabolized by the system itself as a dynamic flow through the five kingdoms (vegetables, animals, fungi, algae, and bacteria); all that is waste or toxic for a kingdom may be considered as a source of food and raw materials for another; diversified and highly localized systems are durable and efficient; the interaction between species within a self-generating system permits to create and separate the material at room and pressure temperature and stabilize toxic and potentially harmful elements.

In this way it is possible to realize an integration between manufacturing culture and design research that brings out connections and coherences between human processes and nature toward efficient and sustainable scenarios.

The principles that are applicable to the anthropic systems are:

- **The outputs (wastes) became inputs (resources) to another one.** This innovative relationship, which sees as resources the quality and quantity of the waste products, is the basic new economic model: it uses the continuous flow of matter and energy and generates new products, new jobs, and new economy. Contrary to the linear view in which the waste is a problem, in the systemic approach it is an opportunity, a raw material for other processes.
- **Relations generate the system itself.** As well as in a net, the different knots are connected to each other and give strength to the whole complex, so that the relations between the various parts constitute the system itself, and allow its identification. Each element or knot is strategic only if it is related to another one, which may be internal or external to the system, creating new relationships and new dynamics of development.
- **Self-generating (autopoietic) systems sustain and reproduce themselves.** Biological systems are characterized by the principles of mutual learning, self-regulation, and dynamic ability to change in relation to the results obtained by coevolving the entire system as a whole: they are able to sustain and reproduce themselves; they also know exactly what they need and in what amounts, in order to maintain the internal balances and the external relations. Our manufacturing facilities should be guided by these operations, try to regulate each other, and coevolve together.
- **Act locally in the context in which it operates.** This guideline points out the need to exploit local, social, cultural, and material resources. By using wisely the resources of the territory, you feed the local development, you effectively fight the delocalization of production and the contribution of external resources,

and you promote the preservation in situ of the heritage of material culture.

The design of products, services, or processes has to cover several applicable scopes and establish relationships with those that allow an integrated and systemic development, not only of the processes but also of the society, the culture, and the territory. It comes with a more developed project, interesting and complex, embracing the whole production chain, including all the problems regarding the production waste which are placed on the same level of supply and use of raw materials. This design will require multicultural and design approaches, inclusive of a complex system of active skills or to activate on the territory.

The identified design solutions, products, services, and processes will have two temporal scales of application: the first one is short term and consists in punctual interventions starting with perceivable results in the immediate future (transition level). The second one is long term, and it enables the final dynamic activation and realization of the open system (systemic level).

Cross-References

- ▶ [Design, an Overview](#)
- ▶ [Ecological Literacy](#)
- ▶ [Innovation Design](#)
- ▶ [Interdependence](#)
- ▶ [Social Sustainability](#)

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Systemic Functioning

- ▶ [Faceted Action System Theory \(FAST\)](#)

Systemic Paradigm

- ▶ [Faceted Action System Theory \(FAST\)](#)

Systemic Quality of Life Model (SQOL)

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Synonyms

[Applications of SQOL](#); [Comparative evaluation of QOL models](#); [Conceptual Framework for Quality of Life](#); [Cultural well-being](#); [Faceted Quality of Life Theory](#); [Functioning of the individual](#); [Human existence and quality of life](#); [Mental well-being](#); [Physical well-being](#);

Objective conditions, subjective assessments of; QOL measurement, QOL definition; Scientific theory, quality of life; Semantic continuity of QOL; Social well-being; SQOL; Structure of Quality of Life; Systemic approach to quality of life; Systemic quality of life theory; Systems of indicators; Variable selection for QoL; Work life, quality of

Definition

The Systemic Quality of Life Model (Shye, 1989) is a general theory for defining, conceptualizing, and measuring human quality of life in its wide sense, encompassing cultural, social, physical, as well as mental well-being. Based on the ► [Faceted Action System Theory](#), SQOL conceives of the human existence as an action system that functions in four *systemic-functioning modes*: the *conservative*, the *integrative*, the *adaptive*, and the *expressive*. These modes of human existence define for the human individual four life domains, or *subsystems*: the *cultural*, the *social*, the *physical*, and the *personality* subsystems, respectively. Further, in each subsystem the human individual functions in each of the four systemic-functioning modes. SQOL provides a rational procedure for generating QOL variables – and sets of variables – that evenly cover the concept of human life quality. *Measurement* of human life quality by SQOL relies on evaluating people's *functioning effectiveness* in the observed functioning modes and then compounding the evaluations using a suitable statistical procedure (e.g., means, summation, ► [multiple scaling](#).)

Description

The Conception of SQOL

SQOL is a top-down QOL model that starts with the abstract notion of *human existence* and ends up with a set of concrete, observable QOL variables. SQOL starts with a conception of human existence as an action system, identifies its functioning components, and rationalizes these

components to constitute (sub-) systems in their own right. Then it identifies components of these subsystems and so on. At every successive level of this analysis, SQOL components define increasingly more specific modes of human functioning, for each of which concrete variables, observable with respect to individual persons, may be selected or constructed. Thus, a balanced sample of QOL variables can be systematically created, much in analogy with the method of stratified sampling of respondents.

The challenge of the SQOL is the interpretation of the formally defined functioning modes as human conditions recognizable reality. Thus, for example, the ► [Faceted Action Systemic Theory](#) suggests that *functioning in the expressive mode of the personality subsystem* may be interpreted as “fulfilling one’s personal aspirations.” [Table 1](#) presents a summary interpretation for each of the $4 \times 4 = 16$ modes at the second resolution level, in terms identifiable in the reality of individual human existence. In general, at the i^{th} resolution level, 4^i modes would be formulated. So far empirical investigations have been attempted up to the third level ($4^3 = 64$ modes).

SQOL is conceived as an attribute of the human *individual*, and it is to be empirically observed as such. The individual, however, functions not just as an isolated entity but as a part of a social group which also shares some cultural values. This is manifested in the functioning assessments of the social and the cultural subsystems. Furthermore, SQOL is essentially *culture independent* in that its basic conceptual constructs apply to all human beings, even though different people may attain their functioning levels by different ways and means. In specific applications the formulation of variables and the language used may vary to suit the investigated population and the purpose of the investigation.

Subjective or Objective?

SQOL variables, or questionnaire items, are neither objective nor subjective in the senses commonly used in QOL research. Rather, they may be considered subjective assessments of objective conditions, namely, of the functioning

Systemic Quality of Life Model (SQOL), Table 1 The systemic quality of life model. 4X4 table of human functioning modes and their interpretations (Adapted from Shye, 1976, 1985a, 1989)

Subsystem Mode	Personality	Physical	Social	Cultural
<i>Expressive</i>	Self-actualization, fulfilling personal aspirations, creativity	Self-chosen physical activity and mastery of environment	Social status, social and interpersonal influence	Expression of beliefs, self-chosen cultural and educational activity
<i>Adaptive</i>	Recreation: resources affording relaxation	Suitable physical conditions: air, food, shelter, temperature	Suitable relations with social institutions and office holders	Cultural and educational resources, cultural agreement with environment
<i>Integrative</i>	Peace of mind, feeling good mentally	Physical health, feeling good physically	Intimate friendships	Integrity: agreement among values and between values and behavior
<i>Conservative</i>	Self-confidence, a sense of personal identity	Physical security: freedom from threats of injuries and chronic illness	Social trust, sense of belonging to society	Cultural identity, confidence in values held

effectiveness of an individual in the various modes. Often the assessor is indeed the individual whose life quality is assessed, but this need not be the case and there are quite a few studies where, for example, children's QOL is assessed by their parents or by social workers, or where experts are called upon to assess (actual or hypothetical) changes in the ► [quality of life](#) of a population resulting from an environmental project (existing or planned, resp).

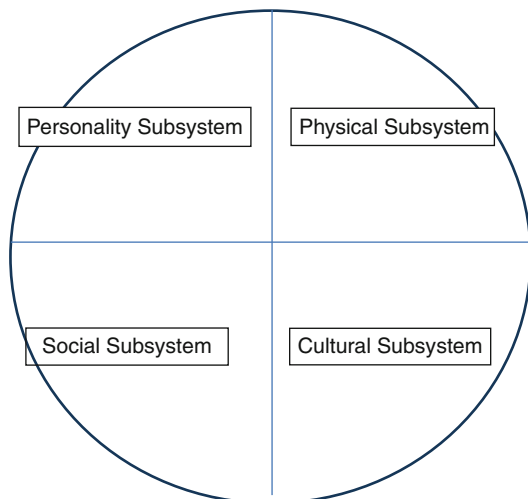
SQOL as Scientific Theory

SQOL is a *theory* in the sense used in the empirical sciences: It hypothesizes a specific structural pattern in observed data, a pattern discoverable through an appropriate data analysis, namely, ► [Faceted SSA](#) (see Borg & Shye, 1995; Shye, 1998, 1999; Shye & Elizur, 1994). ► [Faceted SSA](#) (FSSA) is a content-oriented variant of Guttman's (1968) Smallest Space Analysis (SSA). In this respect, as well as in other important respects, SQOL diverges from Parsons' (e.g., 1951) approach to action systems. See ► [Faceted Action System Theory \(FAST\)](#).

A central aspect of SQOL theory concerns its scientific imagery. Like all faceted models for behavioral systems, the content universe of SQOL is pictured as a topological manifold in a geometric space. The Continuity Principle (Borg & Shye, 1995; Shye, 1971, 1998, 1999;

Shye & Elizur, 1994), proposed within the facet approach to behavioral research, implies that not only every observed variable is mapped as a point into a geometric space (as in MDS, SSA and their variants) but that, moreover, every point in the appropriate geometric manifold represents a variable (observable-in-principle) of the investigated behavioral system. Applied to quality of life research, the Continuity Principle implies that human life quality is a multivariate content universe, containing in fact infinitely many variables that form a semantic continuum. The finite set of *actually* observed QOL variables in a particular study is regarded as but a *sample* drawn from the entire SQOL content universe. Structural data analysis afforded by ► [Faceted SSA](#) provides a procedure for making inferences from the sample of observed variables to the entire SQOL content universe. Determining the structure of the concept space is also relevant for deriving theory-based measurement scales for quality of life by ► [Multiple Scaling](#) (Shye, 1985b).

The spatial representation of SQOL content universe suggests that SQOL *components* be represented by *regions* of the representation manifold. A hypothesis of a particular pattern of partitioning SQOL space into regions, each containing variables of prespecified contents, is called a *regional hypothesis* and is, in fact, a theory concerning the structure of SQOL,



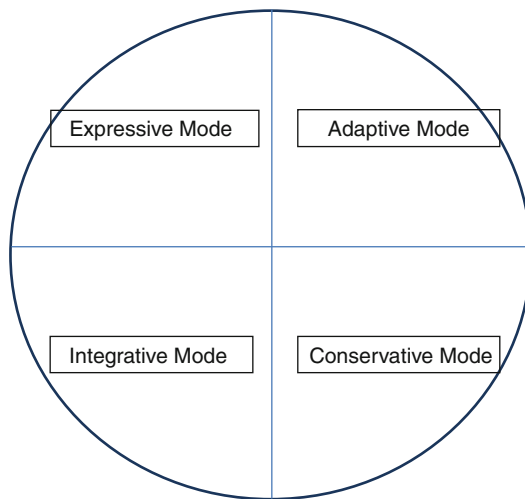
Systemic Quality of Life Model (SQOL), Fig. 1 Hypothesized partitioning of SQOL representation space into subsystemic regions as predicted by faceted action system theory and confirmed in empirical studies using FSSA

testable by ► **Faceted SSA** (FSSA). Such a theory validates SQOL components and specifies their interrelationships in geometric terms. As a special case of the more general ► **Faceted Action System Theory**, SQOL theory presents a clear set of regional hypotheses that have been largely confirmed. Thus, for example, the theory predicts that a 2-dimensional ► **Faceted SSA** performed on *any* sample of observed SQOL variables, covering the four functioning subsystems, would reveal that (a) the variables of each of the four subsystem occupy a distinct connected region; (b) these four regions are in the form of circularly ordered sectors; (c) in that circular order, the personality sector is opposite the cultural, and the physical sector is opposite the social.

The hypothesized partition is shown in Fig. 1.

This subsystem regional hypothesis has been confirmed in a large number of studies and replications. See ► **Applications of SQOL** section below. Moreover, it seems that more advantaged populations reveal this structure more clearly (e.g., Benish-Weisman & Shye, 2011; Davidson-Arad, 2005. See ► **Faceted Action System Theory (FAST)**).

SQOL theory anticipates, moreover, that a separate analysis of each subsystem would



Systemic Quality of Life Model (SQOL), Fig. 2 Hypothesized partitioning of the representation space of a subsystem into its modal regions as predicted by faceted action system theory and confirmed in empirical studies using FSSA

reveal a partitioning into four sectors, each representing one of its four *functioning modes*. The sectors are circularly ordered as in Fig. 2, with the expressive region opposite the conservative and the adaptive region opposite the integrative. Figure 2 depicts the hypothesized partition that applies to each of the four subsystems – the cultural, the social, the physical, and the personality – separately considered and analyzed.

This modal regional hypothesis has been confirmed in a number of studies (see Shye, 1985a).

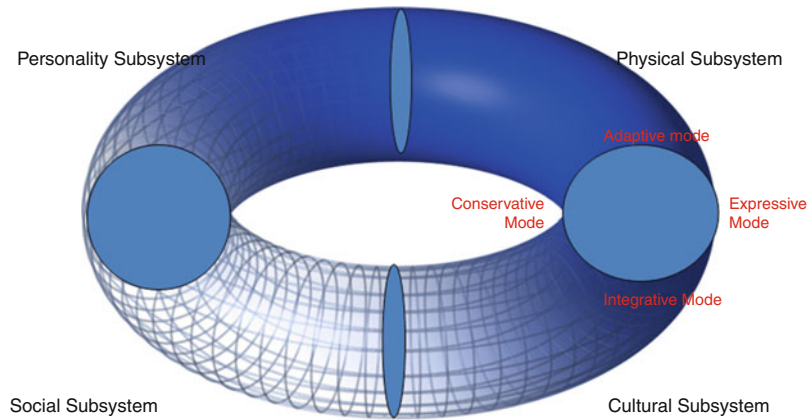
A hypothesis combining the 2-dimensional systemic structure (Fig. 1) and the 2-dimensional modal structures (Fig. 2, which represents the structure of four subsystems) into a complete SQOL theory would point to a structure that is at most $2 \times 2 = 4$ -dimensional (Shepard, 1978, pp. 64–65; Shye, 1978, p. 396). However, the dependence between the two levels (the systemic and the modal) suggests the 3-dimensional torus structure, as shown in Fig. 3. While piecemeal evidence has been accumulated for this theory, it has not yet been fully tested.

Applications of SQOL

The following illustrative applications of SQOL model rely on the model's claim to be exhaustive

Systemic Quality of Life Model (SQOL),

Fig. 3 The Torus theory of the systemic quality of life



(its components cover the entire QOL content universe, by the systemic conception), exclusive (its components do not overlap), and balanced (its components, at each level of analysis, are of equal level of generality/specificity).

Indicators. Quality of life indicators may serve to compare people's well-being over time and across locations. SQOL-based indicators were employed to record and compare the well-being of the general population at different time points and in different towns in a statistical yearbook (Choshen & Greenbaum, 1992). SQOL has been applied also to assess the life quality of special populations such as the sick (Cairns, 1990), the aged (Shye & Griffel, 2010), and new immigrants (Benish-Weisman & Shye, 2011).

► **Planning.** Social and environmental projects may be decided upon or shaped by their impact on the QOL of affected populations. In one study, a multidisciplinary panel of experts evaluated a proposed *nuclear power plant* by assessing its anticipated effects on the SQOL of populations to be affected (Shye, 1982). Other studies identified sources of *distress* (defined as acutely low SQOL in specific functioning modes) among residents of poor neighborhoods, supplying the factual basis for remedial planning measure to be taken within a wide scale urban renewal project (Joelson et al., 1982; Shye, 1989).

Intervention. Structured interventions in institutions for juvenile delinquents (designed to improve specific aspects of residents' QOL as well as aspects of the organizational quality of

those institutions) were evaluated using SQOL (Wolins, Wozner, & Shye, 1980). Another study (Davidson-Arad, 2005; Davidson-Arad & Wozner, 2001a, b) probed into the considerations of child protection officers in their decision of whether or not to remove children at risk from their homes by collecting officers' assessments of children's projected SQOL under the two alternative sets of conditions: (a) child remains at home versus (b) child is removed from home to institutional care. Assessments were then confronted with the actual decisions made. (This is in fact a form of policy capturing analysis).

► **Motivation.** It is often assumed that people who choose to act in a certain way expect to benefit in *some* way. This assumption is more valid the more comprehensive and complete is the set of benefits considered. For example, what motivates people to volunteer? This question was answered in terms of benefits (framed as improved SQOL functioning modes) gained by the volunteer (Shye, 2010). The theoretical question of ► **altruism** versus egoism was also addressed in this study. Another survey research, reported in the *Calcalist – Business and finance daily* (2011), identified the SQOL-formulated motivations of social activists for their participation in the unprecedented middle-class mass protests in Israel in summer 2011.

The Psychotherapeutic Relationship. The dynamics of therapist-patient partnership were investigated over time to reveal definite patterns of convergence and of "trailing displacement"

concerning the two partners' assessments of the patients' systemic life quality and concerning their expectations from the therapy in terms of improvements in patient's SQOL functioning modes (Ezrachi, 2008).

Quality of Work Life. Based on SQOL, Quality of Work Life was defined and evaluated as the impact of work on workers' SQOL. A structural parallelism between general QOL and Quality of Work Life was revealed (Elizur & Shye, 1990).

► *The Rights of the Child.* An SQOL-assisted content analysis of more than forty declarations and conventions on the ► [rights of the child](#) provides the basis for a systematic historical account of the evolution of image of childhood in the course of the twentieth century (Veerman, 1992). The documents were analyzed with respect to their reference to each of the 16 (2nd level) SQOL functioning modes.

Comparative Evaluation of SQOL

In their review of 68 QOL models that had been published in the period 1965–2001, Taillefer, Dupuis, Roberge, and Le May (2003) used the following criteria to evaluate and score these models: (a) the level of conceptualization of the model (does the model just specify QOL components or does it refer to relationships among them or, even better, does it include a theoretical explanation for such relationships); (b) definitional clarity (does the model specify a main construct for QOL such as well-being, satisfaction, functioning); (c) distinction between factors that may influence QOL and QOL per se; and (d) whether the instrument for measuring QOL is derived from the model. Based on these criteria, Shye's (1989) systemic life quality model was ranked first among the 68 reviewed models (Taillefer et al., 2003). The review found that SQOL is (a) a "theoretical framework" (the highest level of conceptualization indicated); (b) it has a clear defining construct (viz. functioning effectiveness); (c) the factors external to QOL but influencing it were well identified (and distinguished from QOL itself); and (d) the instrument used to measure QOL was derived from the model. Hence, the authors conclude about the Systemic Quality of Life Model (Shye, 1989):

"This model received the maximum global score... meeting all the requirements of this review" (p. 308). And further: "[Of] the three best models (Dupuis, Perreault, Lambany, Kennedy, & David, 1989; Shye, 1989; Sirgy, Rahtz, Cicic, & Underwood, 2000), only the one made by Shye received a perfect score by both judges" (p. 313).

Cross-References

- [Faceted Action System Theory \(FAST\)](#)
- [Faceted Smallest Space Analysis \(Faceted SSA; FSSA\)](#)
- [Systems of Indicators](#)

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Systemic Quality of Life Theory

- ▶ Systemic Quality of Life Model (SQOL)

System-Justifying Beliefs

- ▶ System-Justifying Ideologies

System-Justifying Ideologies

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Synonyms

Just-world theory; Social dominance theory; Social identity theory; System justification theory (SJT); System-justifying beliefs

Definition

System-justifying ideologies refer to a number of different belief systems which reflect an individual's desire to justify the existing social, economic, and political arrangements. According

to system justification theory (SJT), individuals who endorse strong system-justifying ideologies regard the current status quo as legitimate and fair. However, the impact of system-justifying ideologies may differ for members of advantaged and disadvantaged social groups, respectively.

Description

The term “system justification” was first introduced to the literature by Jost and Banaji (1994) in the context of research on intergroup relations, stereotypes, and out-group favoritism (see also Jost, 2001). System-justifying ideologies refer to the phenomenon that individuals have a general tendency to accept and to support the status quo of a society even at the expense of personal or group interests (Jost, Banaji, & Nosek, 2004). The existing social, economic, and political arrangements are perceived as legitimate, reasonable, and just even if an individual himself or herself is put at a disadvantage by these arrangements (Jost, 2001; Kay et al., 2009).

The assumption that even members of disadvantaged social groups endorse system-justifying ideologies contradicts fundamental assumptions of earlier theories. For example, rational choice theories (e.g., Neumann & Morgenstern, 1944) posit that an individual’s behavior is guided by self-interest and that individuals strive to maximize their own advantage. Accordingly, members of disadvantaged social groups are expected to disapprove the current status quo in society. Thus, rational choice theories imply that members of disadvantaged groups will support ► [social change](#) in order to improve their benefits. However, the likelihood of members of disadvantaged groups questioning the current status quo is lower than suggested (e.g., Jost & Burgess, 2000; Kay et al., 2009). Social identity theory (Tajfel & Turner, 1986; Turner, 1975) implies that people need to evaluate themselves in a favorable way. Since group membership is an important aspect of a person’s ► [self-concept](#), people also tend to

evaluate their in-group more positively compared to other groups.

According to social identity theory, these phenomena can be explained by the psychological need for positive distinctiveness. As Jost (2001) points out, “not much is known from social identity theory about the causes of perceived legitimacy or about why members of low status groups would ever find the system to be legitimate, when such a perception clearly conflicts with group-serving motivations” (p. 94).

Given the limitations of earlier theories described above, the authors developed system justification theory. According to Jost et al. (2004) as well as to Jost and Hunyadi (2005), the basic postulates of system justification theory are the following:

1. There is a general psychological motive to justify current social, economic, and political arrangements. The desire to view the status quo in a society as just and legitimate satisfies the need for personal control (Furnham, 2003): People wish to make sense of what happens to them as well as to other people. According to Lerner (1980), “people want to and have to live in a just world so that they can go about their daily lives with a sense of ► [trust](#), hope, and confidence in their future” (p. 14). Thus, system-justifying ideologies serve the purpose of coping with unpredictable and uncontrollable circumstances which would be psychologically threatening. Therefore, people adhere to the illusion that every person gets what he or she deserves (Lerner, 1980; Jost, 2001). As a consequence, system-justifying ideologies diminish emotional ► [distress](#) and foster psychological well-being. On the individual level, system-justifying ideologies have a palliative as well as an adaptive function: Being confronted with a system that is unjust and illegitimate may cause negative emotional arousal. By perceiving the status quo in society as orderly and meaningful, however, an individual must no longer be afraid of a world which is unpredictable and unfair (Jost et al., 2010).

2. The strength of system-justifying ideologies varies with respect to situational and dispositional factors. Several studies show that people defend and justify the status quo of a social system in response to threat: Jost et al. (2005) demonstrated that the manipulation of system threat leads to an increase of in-group favoritism among high-status group members in Israel. At the same time, the effect of the manipulation was different for low-status group members who showed an increase in out-group favoritism. In a study in the aftermath of several terrorist attacks, Ullrich and Cohrs (2007) found out that international terrorism as a specific threat increases system-justifying tendencies. Focusing on the September 11th terrorist attacks on the World Trade Center in New York City, Bonanno and Jost (2006) revealed that adherents of different political parties were more likely to shift toward conservatism. Besides these situational cues, there are also individual differences in the tendency to indulge in system-justifying ideologies. Studies show that individuals with a high need to manage uncertainty and threat are more likely to endorse system-justifying ideologies (e.g., social dominance orientation, right-wing authoritarianism, conservatism; Cohrs, Moschner, Maes, & Kielmann, 2005; Jost & Hunyadi, 2005; Matthews, Levin, & Sidanius, 2009).

According to Jost and Hunyadi (2005), several types of system-justifying ideologies have been identified in the literature. Among them are several well-established theoretical approaches in social psychology such as just-world theory (Lerner, 1980) and social dominance orientation (Sidanius & Pratto, 1999). Although the underlying motives may be theorized differently, the ideological function of these system-justifying ideologies is conceived similarly: All system-justifying ideologies serve to rationalize inequalities and to justify the status quo in society (Jost et al., 2010). In their overview, Jost and Hunyadi (2005, p. 261) list a number of system-justifying ideologies, among them economic

system justification, belief in a just world, social dominance orientation, right-wing authoritarianism, and protestant work ethic.

People's desire to justify existing social, political, and economic arrangements may have different consequences. Several studies have addressed the outcomes of system-justifying beliefs on the individual level and on the level of the society, respectively.

On the individual level, system-justifying ideologies have consistently been found to correlate with different indexes of ► [subjective well-being](#) (e.g., Dzuka & Dalbert, 2007; Lipkus, Dalbert & Siegler, 1996; Rankin, Jost, & Wakslak, 2009). In this regard, system-justifying ideologies serve as important coping mechanisms having adaptive effects on mental health. There is empirical evidence that the strength of system-justifying ideologies among members of advantaged groups reduces ► [negative affect](#) (e.g., guilt, shame, discomfort) and enhances ► [positive affect](#) (e.g., ► [happiness](#), ► [satisfaction with life](#), ► [self-esteem](#)). On the contrary, members of disadvantaged groups show stronger negative affects and lower positive affects when system-justifying ideologies increase. O'Brien and Major (2005) emphasize that the differential effect of system-justifying ideologies on well-being will depend on the extent of group identification: For example, the higher the identification of a member of a disadvantaged group with its in-group, the stronger the negative consequences on the individual's well-being. Rankin, Jost and Wakslak (2009) found beneficial effects of system-justifying ideologies on positive affect and life satisfaction also for members of a low-status group. Bonanno and Jost (2006) showed that the conservative shift among higher exposure survivors of the September 11th terrorist attacks was associated with adaptive as well as maladaptive functions. For example, the researchers noticed elevated levels of posttraumatic stress disorder and depression on the one hand and increased religiosity on the other.

On the level of the society, system-justifying ideologies may have a negative social and

political impact: Perceived legitimacy of a social, political, and economic system has been found to be one of the most important determinants of system stability (Gurr, 1970). Thus, system-justifying ideologies contribute to the stability of current arrangements in society. People who rationalize the status quo are less inclined to advocate for social change. Consequently, system-justifying ideologies may contribute to perpetuating social inequalities and to stabilizing a given system (Kay et al., 2009). These effects of system-justifying ideologies have equally been found for members of advantaged and disadvantaged groups (Jost & Hunyadi, 2005).

However, the detrimental social effects of system-justifying ideologies are not indispensable or inevitable. System-justifying ideologies such as the belief in the just world may also motivate efforts to (re)establish justice or compensate for injustice in a society (Montada, 1998). System-justifying ideologies are often derived from a need of control. When people feel dependent on the system and have the impression that little can be done, they will be more likely to indulge in system-justifying beliefs. In turn, a sense of efficacy may buffer the negative social effects of system-justifying ideologies (e.g., the justification of inequality or injustice). There is accumulated empirical evidence that corroborates this assumption. Using an experimental research design, Mohiyeddini and Montada (1998) showed that self-efficacy to promote justice moderates the relationship between just-world belief and ► [prosocial behavior](#). Mohiyeddini and Montada (1998, p. 52) concluded that “a strong belief in a just world will motivate blaming or derogating victims when a restoration of justice is (...) impossible or costly.” However, as expected by the authors, a person’s tendency to blame a victim decreases significantly when his or her ► [self-efficacy](#) expectation to promote ► [justice](#) increases. Beierlein, Werner, Preiser, and Wermuth (2011) showed that the negative impact of the belief in a just world on the justification of social inequalities may be attenuated if a person judges its reference group as politically efficacious to promote justice.

When collective political efficacy was high, justification of inequality did not inevitably increase with the belief in a just world. Collective political efficacy buffered the negative impact of belief in a just world on justification of inequality.

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Systems of Indicators

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Definition

Systems of social indicators are systematically and purposefully selected, well defined, and clearly structured sets of indicators. In a more ambitious notion, also interrelationships among individual indicators covered by the system are supposed to be known and specified.

Description

Issues of developing indicator systems have been addressed within the field of social indicators research since its beginnings. Some authors considered it even a constitutional characteristic of social indicators to “be part of a coherent system of socio-economic measurement” (Olson, 1969: 339) or to be “components in a social system model” (Land, 1971: 323). Social indicator systems are generally considered as systematically selected sets of indicators usually structured by life domains, such as health, education or public safety. Efforts to construct systems of social indicators are typically facing some basic problems and challenges. First of all, they need to provide an answer to the key question of what ought to be measured or how to choose a limited number of subjects and measurement dimensions from a principally unlimited universe. Depending on the response to this challenge, one may distinguish data-driven, policy-driven, and concept-driven approaches: Data-driven approaches of developing indicator systems typically select and limit subjects and dimensions of measurement due to the availability of data. Policy-driven approaches usually depart from policy goals and objectives to be operationalized by indicators,

aiming to monitor goal achievement. Concept-driven approaches are typically based on theoretical or conceptual frameworks allowing to guide and justify the selection of measurement dimensions and indicators to be covered. Constructing indicator systems also requires to determine structural elements and to define detailed procedures of measurement, which is the purpose of a “systems architecture”. And finally, indicator systems are also supposed to respect certain formal criteria like comprehensiveness, consistency, non-redundancy and parsimonious (Noll, 2002). Although social indicators are conceptualized primarily as output – or outcome – indicators, indicator systems may include different types of indicators, e.g., input and output indicators or descriptive and analytical indicators, and relate these indicators to each other.

Early examples of indicator systems include the “System of Social and Demographic Statistics”, the Organisation for Economic Cooperation and Development (OECD) “Program of Work on Social Indicators”, as well as the “German System of Social Indicators”.

The “System of Social and Demographic Statistics” (United Nations, 1975) was developed within a United Nations project led by the later Nobel laureate Richard Stone. This most ambitious “concept-driven” system aimed to integrate social and demographic statistics, using an input–output transition matrix representation of cohort flows through the life cycle. Related to a detailed and systematic list of social concerns, social indicators within this system were “designed to summarize the basic data of the system for purposes of easy monitoring and assessment of social concerns about the welfare of various groups of the population” (United Nations, 1974: 14). Although the blueprint of a System of Social and Demographic Statistics has strongly influenced the statistical systems in many countries, it has never been fully implemented yet.

The large-scale OECD project called “Program of Work on Social Indicators” was launched in 1970 and started from the premise that “growth is not an end in itself, but rather an instrument for creating better conditions of life”

(OECD, 1982: 7). The “OECD List of Social Indicators” as the major outcome of the project was intended to be both comprehensive and systematic. The suggested 37 social indicators “were designed to measure trends in individual well-being”, as reflected in 17 “social concerns common to most OECD countries” (OECD, 1982: 7; OECD, 1973). In order to qualify for selection, indicators were – among other criteria – supposed to be output oriented, be policy relevant, form part of a comprehensive grid and form an integrated framework of definitions, specifications, statistical guidelines and disaggregations. Unfortunately the OECD’s efforts to develop a system of social indicators were discontinued before the suggested indicators were implemented in OECD member countries.

The *German System of Social Indicators* is an indicator set, which has been developed with a view to monitor well-being and social change in Germany. This system of social indicators was first published in the mid-1970s and is thus among the oldest indicator systems which are still in use. Initially developed within the SPES-Project, the German System of Social Indicators has been continuously enhanced and updated by the Social Indicators Research Centre of GESIS since the late 1980s. The dimensional structure and systematic indicator selection resulted from theoretical reflections on individual well-being and quality of life and was initially also based on an empirical analysis of policy goals (Zapf, 1979). Covering 14 life domains, the system currently includes almost 400 indicators. Since most of the time series data – available through the web-based “Social Indicators Monitor” (www.gesis.org/SIMon) – are disaggregated according to various sociodemographic characteristics, the indicator system also offers information on the well-being of specific subgroups of the population as well as on the inequality of living conditions in general.

There are also a number of more recent social indicator systems worth mentioning, such as the Calvert-Henderson Quality of Life Indicators, the European System of Social Indicators and the selection of social indicators used by the OECD for their “Society at a Glance” publication.

The *Calvert-Henderson Quality of Life Indicators* were first published in 2000 (Henderson, Lickerman, & Flynn, 2000). Since then updates are available at a website. This set of indicators aims to present a “comprehensive picture of the overall well-being of the nation in a manner that is easy to understand and use, statistically verifiable, grounded in theoretical and empirical knowledge” (see website: <http://www.calvert-henderson.com/backgrnd-intro.htm>) using a systems approach. The indicators refer to 12 domains: education, employment, energy, environment, health, human rights, income, infrastructure, national security, public safety, recreation and shelter. The number of indicators is limited to only one or a few for each domain, thus providing a concise but overly simple map of American quality of life and its changes across time.

The *European System of Social Indicators* is another recent example of an indicator system, which has partly been developed within the EuReporting-Project, funded by the European Commission from 1998 to 2001. This system is considered to be an instrument to continuously monitor individual and societal well-being as well as social change across European societies (Noll, 2002). The European System of Social Indicators is based on an explicit conceptual framework allowing to determine the issues and measurement dimensions to be covered by the indicators system. For each of the projected 14 life domains, dimensions of measurement and indicators address different aspects of individual quality of life, as well as dimensions of social cohesion and sustainability as two major components of the “quality of society”. Moreover, also basic dimensions of the social structure as well as attitudes and value orientations are included. The indicator system covers not only all the member states of the European Union and some other European nations but also the USA and Japan as two important reference societies. Time series data are being provided through the web-based information system “Social Indicators Monitor” (www.gesis.org/SIMon).

The biannual OECD report “Society at a Glance” (OECD, 2011) – first published in 2001 – is based on a systematic set of social

indicators and provides data on demography and family characteristics, employment and wealth, mobility and housing, health status, social expenditure, subjective well-being, and social cohesion. This set of social indicators includes three different types of indicators: (1) context indicators illustrating national differences in social trends, (2) social status indicators reflecting social situations, which are the target of policy action and (3) *societal response indicators*, highlighting the way in which society is responding to such challenges. The systematic character of the OECD “Society at a Glance” indicator set is particularly due to the distinction and systematic application of these different indicator types, originally used in the field of environmental indicators.

Overall, the number of existing explicit systems of social indicators remains rather limited, although there is ample agreement that a conscious and systematic selection of indicators is of crucial importance (Berger-Schmitt, & Jankowitsch, 1999; Noll, 2004).

Cross-References

- ▶ [European System of Social Indicators](#)
- ▶ [German System of Social Indicators](#)
- ▶ [OECD List of Social Indicators](#)
- ▶ [Social Indicators](#)
- ▶ [Systemic Quality of Life Model \(SQOL\)](#)

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Systems of Social Indicators for Germany

- ▶ [German System of Social Indicators](#)

Systems Thinking

- ▶ [Ecological Literacy](#)
- ▶ [Systemic Design](#)