F

F Distribution

► F-Ratio

F Test

► F-Ratio

Face (Re)Cognition

► Face Perception

Face Perception

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Synonyms

Emotional expression recognition; Face processing; Face (re)cognition

Definition

Faces are highly important objects for humans and other primates because they convey information about the identity of others, their emotional state, gender, and age and support nonverbal and verbal communication. Accurate and fast face perception is therefore crucial for ► social interaction and socio-emotional well-being. Face perception starts in the visual system where the various types of facial information are processed and continues to higher-order systems allowing for the access to biographical ► knowledge, the seen person's name, ► attractiveness judgments, and multisensory integration.

Description

The elaborate human face perception system presumably evolved due to the highly social nature of our species, which requires fast and accurate identification of other individuals, their internal state (► mood, emotion) and intentions, and their suitability as social partners and potential mates. Clearly, life quality suffers if any of the face-related processes is compromised. Such problems may arise very early on in ► development or emerge from brain damage.

The structure of the face perception system is captured by cognitive (Bruce & Young, 2000) and neurocognitive models (Haxby, Hoffman, & Gobbini, 2000). These models usually postulate that several parallel processing streams branch

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off after the initial construction of a view-centered description of the perceived face, taking place in the inferior occipital gyri. The first stream serves the identification of individuals by constructing expression-independent descriptions and matching these structural codes with those of known faces (lateral fusiform gyrus). At further stages, person-specific biographical and name information is accessed, possibly in the anterior temporal lobe. A different branch, diverging to the superior temporal sulcus, is devoted to changeable aspects of faces, in particular, eye gaze, facial expression, and lip movements, each of which is analyzed in more specific regions, for example, the amygdala, the insula, and the limbic system. Specific questions about the details of these widely established models are subject of intense study.

Despite the overall similarity and overwhelming number of different faces stored in memory, they are often easily and quickly recognized. This is probably due to holistic or configural processing mechanisms that are especially – but not exclusively – employed for faces, as experimentally demonstrated in the *part-whole*, *face inversion*, and *composite face effects* (Farah, Wilson, Drain, & Tanaka, 1998). The specialness of face perception (▶ cognition) relative to general cognitive functioning and object cognition is also supported on the basis of individual differences by demonstrating factor analytically separable abilities for face perception and face memory (Hildebrandt, Wilhelm, Schmiedek, Herzmann, & Sommer, 2011; Wilhelm et al., 2010). Individual differences vary continuously from the pronounced inability to perceive and recognize faces (prosopagnosia) over normal face cognition to so-called super-recognizers (discussed in the book edited by Calder, Rhodes, Johnson, & Haxby, 2011), with women usually showing some superiority over men (Sommer, Hildebrandt, Kunina-Habenicht, Schacht, & Wilhelm, 2013). Prosopagnosia may be innate or acquired (by brain damage); in some cases, the recognition of non-face objects may be spared, which is further evidence for the specificity of face cognition.

Although the special status of face cognition is uncontested, its origin is controversially discussed. One view emphasizes the role of experience and proposes general principles and mechanisms for skilled object cognition – with faces being the object category, for which humans show the greatest expertise (Calder et al., 2011). The other view suggests a dedicated and innate neurocognitive system for face processing (Calder et al., 2011). Supporting the latter view, there seem to be separable genetic factors for individual differences in the processing of face identity residualized for general cognitive functioning (Wilmer et al., 2010; Zhu et al., 2010). Already newborn infants show a preference for looking at faces and very young infants seem to recognize the face of their caretaker (Calder et al., 2011; Schwarzer & Leder, 2003). The dedicated neurocognitive system for face cognition – in the so-called fusiform face area (FFA) (Kanwisher, McDermott, & Chun, 1997) – seems to be developed and specialized already by two months of age (Calder et al., 2011). The specificity of face cognition relative to other ▶ cognitive abilities is maintained also at the other extreme of the development, older age (Hildebrandt et al., 2011), where also face-specific FFA activation appears to be maintained (Park et al., 2004).

Crucial information for ▶ social interactions is provided by emotional facial expressions. Rapid and correct recognition of facial expressions entails an adaptive advantage; for example, the expression of anger in others does not only provide information about an emotional state but can also signal potential danger in the environment and thus elicit (appropriate) fear-related responses and the inhibition of inappropriate action (Ekman & Rosenberg, 1997). Facial expressions are not mere passive reflections of internal states but can be actively modulated in order to serve communication purposes and behavioral intentions of the individual (Ekman & Rosenberg, 1997). Basic emotion theories (contributions in Sander & Scherer, 2009) assume that facial expressions convey at least six basic emotions – anger, disgust, fear, happiness, sadness, and surprise – that are universally expressed and cross-culturally recognized (Ekman & Rosenberg, 1997; Katsikitis, 2002). However, facial expressions are also modified

by culture specificities, for example, rules about the appropriateness to display certain emotions in certain social contexts (Elfenbein & Ambady, 2002). Persons differ in their ability to recognize facial expressions of emotion: Normally, persons show high recognition accuracy, but deficits in the recognition of basic emotions were shown for several disorders (e.g., schizophrenia, autism spectrum disorders) and other disabilities (Calder et al., 2011). Beyond basic emotions, faces also reveal more complex emotions, such as pride or shame, and further affective states as, for instance, described by so-called circumplex theories of emotion (contributions in Sander & Scherer, 2009). These emotion expressions are however more difficult to be recognized: There are no ceiling effects in recognition accuracy for them as for basic emotions; however, as yet they are not very well described in terms of Facial Action Units (see contributions in Sander & Scherer, 2009). The recognition of weak but realistic facial expressions of emotion is facilitated by context information (Wallbott, 1988).

Although neurocognitive models (Bruce & Young, 2000; Haxby et al., 2000) suggest separate streams for the processing of face identity and facial expressions, these streams have recently been shown to be less independent and more interactive than previously assumed (Calder et al., 2011).

The information gleaned from faces is important also in other respects. Facial ▶ attractiveness is relevant for selecting social partners and mates. Surrounding facial ▶ attractiveness there is controversy whether beauty is defined merely by the similarity to a facial prototype consisting of the average of faces and whether it is a reproduction-related signal or an aesthetic judgment. In everyday life, inferences are frequently made from the appearance of a person's face to her or his personality. Recent research shows that these stereotypes may have some validity, for example, in the case of "trustworthiness" (Stirrat & Perrett, 2010). Finally, some variable aspects of the face, especially lip movements, support verbal communication. Thus, also in normally hearing listeners, seeing the lip movements strongly improves speech recognition. Conversely, incongruous lip movements interfere with auditory speech processing, as demonstrated by the famous McGurk effect (McGurk & MacDonald, 1976).

Cross-References

- ▶ Action Research
- ▶ Adaptation
- ▶ Aesthetic Value
- ▶ Aging Population
- ▶ Attractiveness
- ▶ Ceiling Effect
- ▶ Cognitive Abilities
- ▶ Cognitive Function
- ▶ Communication and Personal Well-Being
- ▶ Cross-Cultural Comparison
- ▶ Development
- ▶ Disability
- ▶ Emotional Well-being
- ▶ Environment and Health
- ▶ Factor Analysis
- ▶ Genetic Disposition of Quality of Life
- ▶ Knowledge
- ▶ Life Quality Index
- ▶ Mood
- ▶ Social Functioning
- ▶ Social Interaction
- ▶ Social Well-being

References

Bruce, V., & Young, A. (2000). *In the eye of the beholder: The science of face perception*. Oxford: Oxford University Press.

Calder, A., Rhodes, G., Johnson, M., & Haxby, J. (2011). *Oxford handbook of face perception*. Oxford: Oxford University Press.

Ekman, P., & Rosenberg, E. (1997). *What the face reveals*. New York: Oxford University Press.

Elfenbein, H. A., & Ambady, N. (2002). On the universality and cultural specificity of emotion recognition: A Meta-Analysis. *Psychological Bulletin, 128*, 203–235.

Farah, M. J., Wilson, K. D., Drain, M., & Tanaka, J. N. (1998). What is "special" about face perception? *Psychological Review, 105*, 482–498.

Haxby, J. V., Hoffman, E. A., & Gobbini, M. I. (2000). The distributed human neural system for face perception. *Trends in Cognitive Sciences, 4*, 223–233.

Hildebrandt, A., Wilhelm, O., Schmiedek, F., Herzmann, G., & Sommer, W. (2011). On the specificity of face cognition compared to general cognitive functioning across adult age. *Psychology and Aging, 26*, 701–715.
Kanwisher, N., McDermott, J., & Chun, M. M. (1997). The fusiform face area: A module in human extrastriate cortex specialized for face perception. *Journal of Neuroscience, 17*, 4302–4311.
Katsikitis, M. (2002). *The human face. Measurement and meaning*. Boston: Kluwer Academic Publishers.
McGurk, H., & MacDonald, J. (1976). Hearing lips and seeing voices. *Nature, 264*, 746–748.
Park, D. C., Polk, T. A., Park, R., Minear, M., Savage, A., & Smith, M. R. (2004). Aging reduces neural specialization in ventral visual cortex. *Proceedings of the National Academy of Science, 101*, 13091–13095.
Sander, D., & Scherer, K. (Eds.). (2009). *The Oxford companion to emotion and the affective sciences*. Oxford: Oxford University Press.
Schwarzer, G., & Leder, H. (2003). *The development of face processing*. Göttingen: Hogrefe & Huber.
Sommer, W., Hildebrandt, A., Kunina-Habenicht, O., Schacht, A., & Wilhelm, O. (2013). Sex differences in face cognition. *Acta Psychologica, 142*, 62–73.
Stirrat, M., & Perrett, D. I. (2010). Valid facial cues to cooperation and trust: Male facial width and trustworthiness. *Psychological Science, 21*, 349–354.
Wallbott, H. G. (1988). In and out of context: Influences of facial expression and context information on emotion attributions. *British Journal of Social Psychology, 27*, 357–369.
Wilhelm, O., Herzmann, G., Kunina, O., Danthiir, V., Schacht, A., & Sommer, W. (2010). Individual differences in face cognition. *Journal of Personality and Social Psychology, 99*, 530–548.
Wilmer, J. B., Germine, L., Chabris, C. F., Chatterjee, G., Williams, M., Loken, E., et al. (2010). Human face recognition ability is specific and highly heritable. *Proceedings of the National Academy of Sciences of the United States of America, 107*, 5238–5241.
Zhu, Q., Song, Y. Y., Hu, S. Y., Li, X. B., Tian, M. Q., Zhen, Z. L., et al. (2010). Heritability of the specific cognitive ability of face perception. *Current Biology, 20*, 137–142.

Face Processing

► Face Perception

Facet Analysis

► Faceted Action System Theory (FAST)

Facet Theory

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Definition

Facet theory, formulated by Louis Guttman, is a systematic approach to coordinating theory and research. It integrates the constituents of scientific endeavor: the formal definition of the research problem in the form of facets (a facet is a set for classifying research issues), and the construction of hypotheses which link the definitional framework with aspects of the structure of the empirical observations defined by the facets. Thus, facet theory allows for promotion of the systematic development of scientific generalizations in cumulative fashion for the study of well-being and related disciplines in the social sciences.

Description

In order to develop scientific theories, some formalization must take place. Formalization is the ultimate lawfulness which has assumed a form to be passed on, such as structural formations (patterns). The formalization is an outcome of a never ending interactive process between the informal and the formal. Hence, the essence of any scientific progress is the relationship between the informal and the formal.

Formal definitions are required to establish successful theories leading to scientific generalizations, i.e., scientific lawfulness. Guttman's mapping sentence idea is intended to meet this requirement.

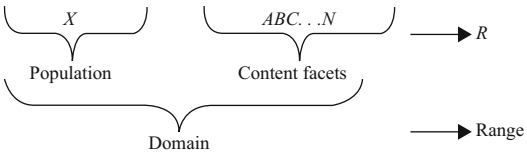
The Mapping Sentence

The Concept of a Mapping Sentence. The mapping sentence is a definitional framework for the universe of content of a given issue,

that provides a basis for stating and testing hypotheses, thus facilitating systematic theory construction (Borg & Shye, 1995; Guttman, 1959, 1982, 1991; Levy, 1976, 1985, 2005) The mapping sentence generalizes R.A. Fisher's (1935) design of experiments to the design of any observations. It incorporates formal facets with informal verbal connectives. A *facet*, which is the basic concept of facet theory, is one way of classifying variables according to some rule, and the elements of the facet conform to that rule. For example the facet "behavior modality" classifies human behavior into three modalities: "cognitive" (head), "affective" (heart), and "instrumental" ("hands" – action or "doing" of any kind). Since any research content is usually classified in more than one way, the mapping sentence includes at the same time several content facets, thus partitioning the content of the issue at hand into multifaceted types. A properly defined set of *m* facets, namely, the mapping sentence, "provides an *m*-way simultaneous classification of variables" (Guttman, in Levy, 1994, Chap. 11).

A mapping sentence includes three varieties of facets. The first – usually symbolized by X – designates the *population* of respondents being researched. The second variety of facets classifies the *content of the variables* (example above). These two varieties together define the *domain* of the mapping sentence. The third kind of facet is the *range*, namely, the set of response categories specified for the universe of items under study.

The mapping can be expressed abstractly in the following nonverbal form (Levy, 1985, p. 73):

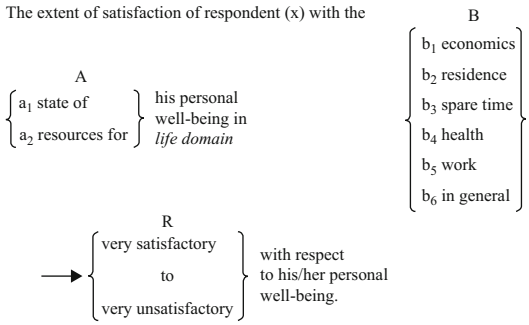


The left member, or *domain* of the mapping, is the Cartesian set *XABC. . .N*, giving all possible combinations of the form *xab. . .n*, that is, of each member of the *population x* with each of the *content facets of the Cartesian set ABC. . . N*. The arrow indicates the mapping of the *domain* into the set *R* of possible responses; that is, the range facet (*R*) is the image of the domain. An actual observation is made by choosing one and only one response from the *range* facet for each sentence generated by the *domain* facets (Guttman, 1991). Hence, each respondent (*x*) has one and only one response in *the range* (*R*) for each question (or test, or any other stimulus) classified by the elements of the *content* facets *ABC. . .N*. This classification of elements is known as *structuple* (or profile).

The Structioned Mapping Sentence: A Definitional Framework for Constructing Variables

In order to give an abstract mapping substantive meaning, verbal connectives are added to the facets to make the mapping sentence readable in ordinary language like the one presented below for defining the universe of content for the observations of personal well-being. The sentence is clear with respect to the rule of each facet, with the elements of each facet being mutually exclusive. Each facet appears in the mapping sentence as a set of elements listed in bracketed columnar form. The name (rule) of the facet may appear (in *italics* face) right before or after its list of elements, depending on the verbal structure of the sentence. The common range for the well-being items is expressed in the mapping sentence, by level of *satisfaction* (Facet *R*) after the arrow (Levy & Guttman, 1975; see also the entry "▶ Definitional Framework for the Concept of Well-Being" in this encyclopedia). Note that the meaning of the range is also indicated in the domain – the left member of the mapping. (The content facets are detailed and discussed below, in the context of regional hypotheses.) Such a mapping sentence is termed a *structioned mapping sentence* (Guttman, 1991). A structioned mapping sentence should make sense in ordinary speech, regardless of the number of the facets involved. Otherwise there may be conceptual flaws in the proposed facets. ("Making sense" is no guarantee of theoretical or practical *fruitfulness*: It is a necessary condition but not sufficient.)

Mapping Sentence for Observations on Personal Well-Being



Sampling of items. The number of ordinary sentences (structuples) derivable from the above mapping sentence is 12 ($2 \times 6 = 12$). These serve as guides for actual *item construction*, specifying both the similarities and differences among the designed items. Each item is defined by the mapping sentence in a manner independent of its specific formulation. Consider, for example, the faceted definition a_1b_6: extent of satisfaction with the *state* (a_1) of one's situation *in general* (b_6). A possible item constructed according to this structuple (profile) can be "to what extent are you satisfied with your personal situation?" Or for the faceted definition a_2b1: extent of satisfaction with *resources* (a_2) in the *economic domain* (b_1), a possible item can read as follows: "to what extent are you satisfied with your income?". Many other items can be constructed for each of these two structuples. The same holds for all the structuples derivable from the mapping definition. Though striving for formality, with its formal facets, the structioned mapping sentence is at the same time a flexible device. It enables fruitful strategies for systematic theory development, since it lends itself easily to correction, deletion, intension (adding content facets), and extension (adding elements to a facet). For example, more life domains, such as family, education, etc., can be added to the *life domain* facet (Facet B) of the above mapping sentence (Elaboration of Levy, 1976).

The number of derivable sentences from a structioned mapping may be very large, depending on the number of facets and the number of elements within each facet. Though it may be impossible in practice to carry out such a total design, in each case, a small sample of items that will nevertheless suffice to yield the essential information about the facets can be *systematically* constructed. Actual item construction has to conform with the research topic, which may result in placing different emphasis on certain facets, and within facets on certain elements (Levy & Guttman, 1989).

Apart from guiding item *construction*, the structioned mapping sentence may serve as a *culling rule* for a universe of content that already exists, guiding one as to how to *choose* items from among those existing.

Roles of Facets in Establishing Structural Theory

The general hypothesis of facet theory is that specifying formal *roles* to the facets of a mapping sentence provides a rationale for constructing hypotheses concerning the correspondence between the definitional framework (the mapping sentence) and an aspect of the empirical data. The empirical aspect of theory dealt with here is the interrelations among variables, the emphasis being on structural lawfulness, based on the relative sizes of the correlations. Indeed, the regional lawfulness to which the Similarity Structure Analysis (SSA) is a partner supports this general hypothesis. SSA, which is an intrinsic ▶ data analysis technique, formulated by Guttman for viewing proximity coefficients (such as coefficient correlation matrices), looks at content regions in the space of variables rather than at coordinate systems (Borg & Lingoes, 1987; Guttman, 1968; Lingoes, 1968, and in this Encyclopedia). Namely, it is hypothesized that each content facet will be reflected in the data by corresponding regions for each of its elements. The hypothesized dimensionality of the SSA space is not necessarily connected to the number of content facets in the structioned mapping sentence. In general, the dimensionality of SSA can be equal to, greater than, or less than the number of content facets.

The Concept of Regionality

A scientific law states conditions under which a certain phenomenon is expected to occur,

and it is tested by examining what actually happens under specified conditions. The specified conditions are stated in the framework of the mapping sentence with its variety of facets. Regional hypotheses relate to the roles that the content facets of the mapping sentence play in partitioning the SSA space. Rationale for various partitioning correspondences derives from (a) considerations of *order* among elements in the facets and (b) from the *roles* that the content facets play within the mapping sentence.

(a) Three major roles come from considerations of *order* among elements in the facets: "*Polar Role*: Unordered facet (or alternatively, a facet whose elements have a circular order). Each element of the facet corresponds to a different direction in the SSA space, emanating from a common origin. *Modular Role*: Simply (or partly) ordered facet, with an 'absolute' origin, this origin being common to that of a polar facet. *Axial Role*: Simply ordered facet, where the notion of order is *unrelated* to that of other facets." (Guttman, 1977, in Levy 1994, Chap. 10).

(b) Partitionings relating to *roles* that the content facets play within the framework of the mapping sentence. Differentiation is made between two varieties of content facets: *stem* and *modifying*. A stem facet directly modifies the name of the range but does not modify the other facets According to Guttman, "stem facets should partition the space orthogonally to each other. A modifying facet sub-partitions into stem facets" (personal communication). Guttman's hypothesis was confirmed for the area of well-being (Levy, 1990). Furthermore, since a stem facet modifies only the range of the mapping sentence, it is by definition an "ordered" facet, because the range (or ranges) of a structioned mapping is ordered (according to a common meaning) and hence may play an axial or modular role in partitioning the space.

Each content facet corresponds to a certain partitioning of the SSA space into as many regions as there are elements to the facet. Having several content facets, each with its own role, leads to intersecting partitions that generate various geometrical structures such as radex, cylindrex, etc. 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. Regional hypotheses are for a space that in principle has points everywhere. 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. Such variables are substantively *dissimilar*, yet statistically *closer* to each other than to similar variables (from the same region). This is a relatively new principle initiated by facet theory, and enables detection of lawfulness in data that has hitherto been unobserved or misinterpreted. Attaining more and more refined regions leads to more and more refined restrictions on sizes of correlations.

Regional Lawfulness in Practice: The Radex Structure of Personal Well-Being

The example presented here to illustrate the use of facet theory for the study of personal well-being includes only ten items which relate to less structuples than the 12 possible from the content facets AB of the above mapping sentence. Yet these allow for structural lawfulness, because each element of each facet is represented in at least one of the items, as presented in Table 1. The mapping sentence includes two distinct content facets. Facet A distinguishes between (a_1) the self's *state* of well-being (e.g., satisfaction with self's situation) and (a_2) the self's well-being regarding the possession of *resources* (such as Income, Residence, Health etc.). Facet B is the *life domains* facet of the self's well-being. It suggests that objective conditions are perceived and evaluated to determine satisfaction with regard to different life domains (Andrews & Withey, 1976; Campbell, Converse, & Rodgers, 1976; Levy & Guttman, 1975; Veenhoven, 2000). Six life domains relating to the self's social environment such as work, income, leisure etc. are

Facet Theory, Table 1 Interrelationships (weak monotonicity coefficients[a]) among ten personal well-being items, together with content structuples

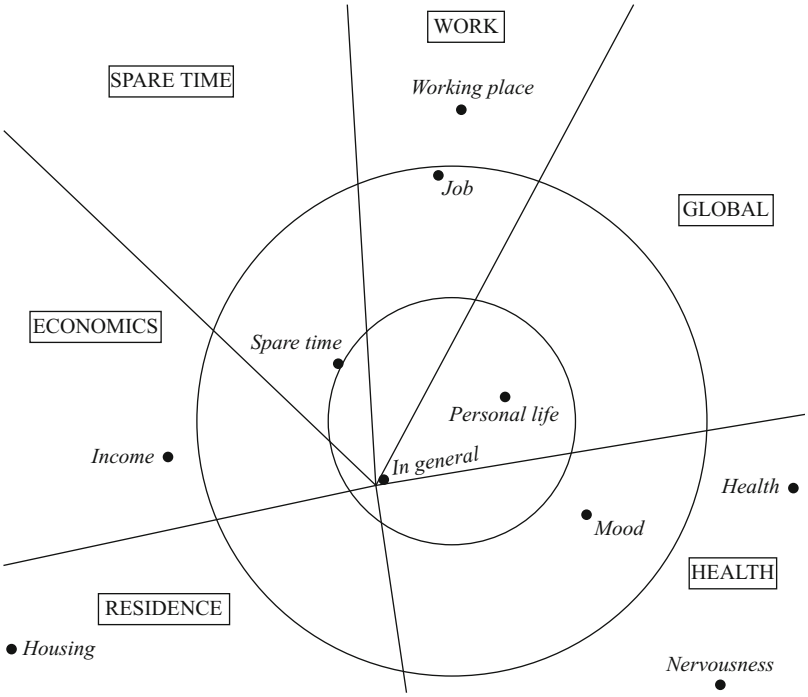
	1	2	3	4	5	6	7	8	9	10	Structuple
Income 1	–	50	17	17	35	65	38	38	49	42	a_2b_1
Housing 2	50	–	08	11	21	37	14	10	29	31	a_2b_2
Health 3	17	08	–	49	57	39	27	26	58	26	a_2b_4
Nervousness 4	17	11	49	–	57	35	20	29	31	33	a_2b_4
Mood 5	35	21	57	57	–	55	35	34	57	51	a_1b_4
In general 6	65	37	39	35	55	–	47	42	66	49	a_1b_6
Job 7	38	14	27	20	35	47	–	83	49	42	a_1b_5
Working place 8	38	10	26	29	34	42	83	–	48	42	a_2b_5
Personal life 9	49	29	58	31	57	66	49	48	–	51	a_1b_6
Spare time 10	42	31	26	33	51	49	42	42	51	–	a_1b_3

[a]Decimal point omitted

specified in facet B. Inspection of the mapping sentence suggests that facet A is a *stem* facet. The range of the mapping sentence refers back directly to facet A since what is being assessed from "satisfactory" to "unsatisfactory" is the "state" of the self's well-being and the possession of "resources" allowing for the promotion of well-being. Facet B of *life domains* has the rationale for a *polarizing* facet because it is an unordered facet, namely, a facet whose elements have a circular order. The data come from the Continuing Survey for April 1971 of the Israel Institute of Applied Social Research, on a sample of 1,620 Jewish urban adults. The interrelations among the ten personal well-being items are presented together with their content structuples (profiles) in Table 1. (An earlier version of this analysis appeared in Levy, 1976.)

There is a systematic correspondence between the two content facets and the empirical structure of the correlations, as manifested by viewing Table 1 through SSA (Fig. 1). This lawfulness linking the content of observations with their empirical structure is a theoretical leap.

In Fig. 1 each item appears as a point and two points tend to be closer together as the correlation between the two items involved increases. For example, the coefficient between item 7 (job) and item 8 (working place) is 0.83 and they are close together in the space. Whereas items 2 (housing) and 4 (nervousness) have a correlation of 0.11 and they are far apart. The space used is of the smallest dimensionality (two in this example) which allows such an inverse relationship between all the pairs of observed correlations and the geometric distances. In this technique, as well as in the other techniques developed by Guttman, the data are treated intrinsically in terms of inequalities, needing no explicit prespecified model. Reference axes are *not* in the general definition of SSA. Only *relative sizes* of coefficients and *relative distances* are of concern. The spread of points in the space shows that facet A serves as a *modulating* facet, corresponding to the notion of order resulting from being a stem facet, and from substantive considerations, such as sharing a common origin with the polarizing facet (life domains). The elements of facet A correspond to distance from an origin in the SSA space. The items closest to the origin within the inner circle assess satisfaction with the *state* of well-being, the global well-being at the origin, constituting the innermost circle. The items that assess satisfaction with possession of *resources* for well-being are located in the outer band toward the periphery. A similar modular partition, the resources occupying the outer band, can be found in Elizur (1984). As hypothesized, the unordered *life domain* facet (B) plays a *polarizing* role in partitioning the space into wedge-like regions, one for each life domain, emanating from the origin common to



Facet Theory, Fig. 1 The Radex structure of the interrelationships (SSA) among ten items of satisfaction with life domains (the inner bands relate to "state" of well-being and the "resources" for well-being are located in the outer band)

both facets. This partition was obtained in numerous studies on the structure of well-being in different countries (inter alia Bilsky, 2003; Canter, 1984; Cohen, 2000; Levy, 1976, 1990; Levy & Guttman, 1975, 1989; Levy & Sabbagh, 2008). Hence the modifying facet, *life domains*, sub-partitions into the stem facet, though the partitions are not orthogonal to each other. It seems that this kind of partition of the stem facet is possible only when a single stem facet is involved. Having two facets correspond to modulating and polarizing partitions of an SSA space is a form of circular lawfulness called a *radex* (Guttman, 1954). In later research, this radex theory was expanded by elaborating the life domain facet to include domains of the self's *personality* (Musek, 2007), in addition to the self's *social environment* domains such as income, education, leisure, residence, family, etc. studied hitherto. This resulted in a radex theory which was more generalized and robust for personal well-being (Levy & Sabbagh, 2008). However, even the extended radex theory for personal well-being is only one aspect of the multivariate structure of the entirety of the well-being concept. Hence, to put it in a more general way, even the facets of a given design are usually but a sample from a much larger set of possible facets and, "developing a fruitful facet design for content is an evolutionary process—in a sense never-ending as is all science" (Guttman, in Levy, 1994, Chap. 11, p. 127).

The Road to Cumulative Social Science

The above example demonstrates the efficacy of the mapping sentence in establishing scientific lawfulness, by assigning formal roles to the content facets which correspond to the partitioning of the empirical space of the observations. Furthermore, it enables cross-cultural comparisons of the interrelations of observations and helps ensure continuities in research: "through knowing what facets are common to different studies, one can begin to learn about lawfulness in several studies" (Guttman, in Gratch, 1973, p. 36). When a few facets are used, they generally partition the space into relatively large regions. The finer the partition into

regions, the sharper the delimitation of sizes of correlation. The road to finer partition is through increasing the number of content facets (intension of the mapping sentence). Most research until now has been limited to relatively few facets, but these have sufficed to establish basic lawfulness.

Since the differential roles of the facets in a mapping sentence have implications for the structure of the interrelations of the variables defined by them, it is important to construct complete mapping sentences including all kinds of facets – population, content and range clearly indicating their rules, and also their roles within the mapping. Every replication not only sheds light on the internal consistency of the topic under study, but may contribute to the systematic development of scientific generalizations that are empirically established and hence, in the long run, may be called "laws." The effectiveness of the facet approach in establishing structural lawfulness in the social sciences in fields, such as attitudes, social indicators, well-being, values, ethnic identities, involvement, intelligence, multitrait-multimethod matrices, etc., is documented by a collection of cross-cultural and long-term replications in Levy (1985, 1990). These continue to be replicated and extended (inter alia Borg & Shye, 1995; Canter, 1985; Rebhun & Levy, 2006; Sagie, Elizur, & Yamauchi, 1996). When discussing the complex problem of defining domain boundaries in the social sciences, Clyde Coombs states that he believes that Guttman's facet theory is "the only substantial attempt to provide a general theory characterizing domains; in this sense it is a metatheory. As behavioral science advances, so will the need for such theory" (Coombs, 1982).

The facet approach is also successfully applied in other scientific disciplines such as engineering (Waks, 1995), architecture, zoology, medicine, and other natural sciences. The published examples using the facet approach and arriving at structural lawfulness provide growing evidence that supports the general hypothesis of facet theory. As in all science, attention should be paid to "deviants" from anticipated structural lawfulness, since these may be springboards to further growth.

Cross-References

- ▶ Faceted Action System Theory (FAST)
- ▶ Faceted Definitions
- ▶ RMQoL (Radex Model of Quality of Life)
- ▶ SSA: Similarity Structure Analysis
- ▶ Structural Hypotheses
- ▶ Structure of Well-Being: A Facet Approach

References

Andrews, F. M., & Withey, S. B. (1976). *Social indicators of perceived well being*. New York: Plenum Press.

Bilsky, W. (2003). Fear of crime, personal safety and well being: A common frame of reference. In M. Vanderhallen, G. Vervaeke, P. J. Van Kopen, & J. Goethals (Eds.), *Much to do about crime* (pp. 37–55). Brussels, Belgium: Politeia.

Borg, I., & Lingoes, J. C. (1987). *Multidimensional similarity structure analysis*. New York: Springer.

Borg, I., & Shye, S. (1995). *Facet theory: Form and content*. Thousand Oaks, CA: Sage.

Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life: Perceptions, evaluations and satisfactions*. New York: Russell Sage.

Canter, D. (1984). Putting situations in their place. In A. Fumham (Ed.), *Social behaviour in context*. New York: Allyn and Bacon.

Canter, D. (Ed.). (1985). *Facet theory: Approaches to social research*. New York: Springer Verlag.

Cohen, E. H. (2000). A facet theory approach to examining overall and life satisfaction relationships. *Social Indicators Research, 51*, 223–237.

Coombs, C. (1982). *Psychology and mathematics* (p. 78). Ann Arbor, MI: The University of Michigan Press.

Elizur, D. (1984). Facets of work values: A structural analysis of work outcomes. *Journal of Applied Psychology, 69*(3), 379–389.

Fisher, R. A. (1935). *The design of experiments*. Edinburgh, Scotland: Oliver and Boyd.

Gratch, H. (Ed.). (1973). *Twenty-five years of social research in Israel* (pp. 11–38). Jerusalem: Jerusalem Academic Press.

Guttman, L. (1954). A new approach to factor analysis: The radex. In *Mathematical thinking in the social sciences* (pp. 258–348). Glencoe, IL: Free Press.

Guttman, L. (1959). *Introduction to facet design and analysis.proceedings of the fifteenth international*

congress of psychology (pp. 130–132). Brussels, Belgium: North-Holland.
Guttman, L. (1968). A general non-metric technique for finding the smallest coordinate space for a configuration of points. *Psychometrika, 33*, 469–506.
Guttman, L. (1982). What is not what in theory construction. In R. M. Hauser, D. Mechanic, & A. Haller (Eds.), *Social structure and behavior* (pp. 331–348). New York: Academic Press.
Guttman, L. (1991). The language of science. In *In Memoriam: Chapters from an unfinished textbook on facet theory* (pp. 38–69). Jerusalem: The Israel Academy of Sciences and Humanities, and The Hebrew University of Jerusalem (also in Levy, S. (Ed.). (1994), see below).
Levy, S. (1976). Use of mapping sentence for coordinating theory and research: A cross-cultural example. *Quantity and Quality, 10*, 117–125.
Levy, S. (1985). Lawful roles of facets in social theories. In D. Canter (Ed.), *Facet theory: Approaches to social research* (pp. 59–96). New York: Springer Verlag.
Levy, S. (1990). The mapping sentence in cumulative theory construction: Well being as an example. In J. J. Hox & J. de Jong-Gierveld (Eds.), *Operationalization and research strategy* (pp. 155–177). Amsterdam: Swets & Zeitlinger.
Levy, S. (Ed.). (1994). *Louis Guttman on theory and methodology: Selected writings*. Aldershot, NH: Dartmouth.
Levy, S., & Guttman, L. (1975). On the multivariate structure of well being. *Social Indicators Research, 2*, 361–388.
Levy, S., & Guttman, L. (1989). The conical structure of adjustive behavior. *Social Indicators Research, 21*, 455–479.
Levy, S., & Guttman, L. (2005). *Encyclopedia of social measurement* (Vol. 2, pp. 175–188). Amsterdam: Elsevier.
Levy, S., & Sabbagh, C. (2008). The well being of the self's personality: A structural analysis. *Social Indicators Research, 89*, 473–485.
Lingoes, J. C. (1968). The multivariate analysis of qualitative data. *Multivariate Behavioral Research, 3*, 61–94.
Musek, J. (2007). A general factor of personality: Evidence for the big one in the five factor model. *Journal of Research in Personality, 41*, 1213–1233.
Rebhun, U., & Levy, S. (2006). Unity and diversity: Jewish identification in America and Israel 1990–2000. *Sociology of Religion, 67*(4), 391–414.
Sagie, A., Elizur, D., & Yamauchi, H. (1996). The Structure and strength of achievement motivation: A cross-cultural comparison. *Journal of Organizational Behavior, 17*, 431–444.
Veenhoven, R. (2000). The four qualities of life: Ordering concepts and measures of good life. *Journal of Happiness Studies, 1*, 1–39.
Waks, S. (1995). *Curriculum design: From an art towards a science*. Hamburg, Germany: Tempus Publications.

Faceted Action System Theory (FAST)

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Synonyms

Action systems; Behavioral systems; Complex systems; Facet analysis; Facet theory; Holistic approach; Living systems assessment; Regional hypotheses; Systemic functioning; Systemic paradigm; Systemic quality of life model (SQOL)

Definition

Faceted action system theory (FAST) is a general theory, or metatheory, which, on the basis of elementary considerations, identifies the generic *functioning modes* of *behavioral systems*: conservative, integrative, adaptive, and expressive (Shye, 1985a). The application of FAST to specific system types (such as human individuals, organizations) facilitates:

(a) The systematic construction/selection of observational variables for systems' functioning
(b) The generation of testable hypotheses about the structure of a system
(c) A theory-based measurement of systems' functioning effectiveness (systems' quality)

For these purposes, FAST employs basic logical considerations, simple geometry, and elementary algebra as embodied in modern facet approach to research design and data analysis (Borg & Shye, 1995; Shye, 1985b, 1989, 1999; Shye & Elizur, 1994).

In the context of quality of life research, FAST has been applied to systemic analyses and assessments of institutions and entities that bear on human life quality. Among them are the human individual (see ▶ Systemic Quality of Life Model (SQOL)),

human services, distributive justice, and the psychotherapeutic dyad.

Description

The Systemic Approach to Behavioral Research: Background

Systemic thinking arose as a result of the observation that certain objects of investigation are so complex that they cannot be fruitfully studied by reducing them to their constituent components. This observation is often figuratively summarized by the maxim *the whole is greater than the sum of its parts*, better restated by *the whole is an entity different from the collection of its parts*. That is, the whole as such has qualities and parameters of its own, not inferable from its constituent parts. Moreover, it has been noted (e.g., Miller, 1978) that organized systems of different types, possibly pertaining to different disciplines, often demonstrate similar behaviors and seem to be governed by similar lawfulness.

The challenge for *scientific* systemic thinking has been appropriately formulated by one of its pioneers, the biologist Ludwig von Bertalanffy; thus:

> General System Theory, therefore, is a general science of "wholeness" which up till now was considered a vague, hazy, and semi-metaphysical concept. In elaborate form it would be a logico-mathematical discipline, in itself purely formal but applicable to the various empirical sciences. For sciences concerned with "organized wholes," it would be of similar significance to that which probability theory has for sciences concerned with "chance events": the latter, too, is a formal mathematical discipline which can be applied to most diverse fields, such as thermodynamics, biological and medical experimentation, genetics, life insurance, etc. (von Bertalanffy, 1968, p. 36)

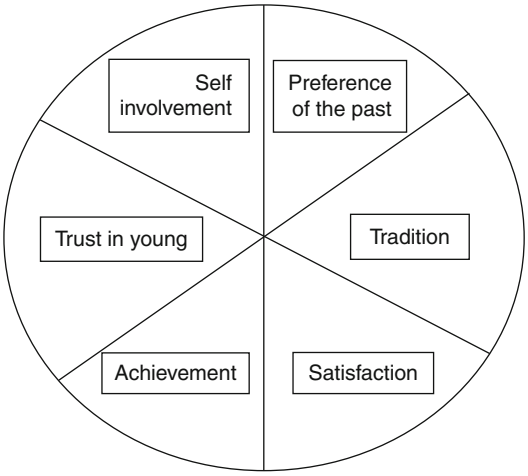
Concurrently, trends in sociology culminating in the works of Parsons have developed a systemic approach to the study of social systems. Parsons' theory makes use of the AGIL scheme of four intuitive concepts to analyze systems: *adaptation* (society's interaction with its environment), *goal attainment* (society's setting goals and making decisions to attain them), *integration* (society's internal harmony with respect to its values and norms), and *latent pattern maintenance* (society's maintaining its integrative elements, i.e., institutions like family and school, which impart values to the new generation).

Parsons' theory has been widely criticized as being too abstract to be used constructively in any significant empirical research (e.g., Ritzer & Smart, 2001). This criticism is aptly represented by the following:

> Parsons does emphasize the fact that his scheme is analytic and abstract by design and, consequently, that a given empirical phenomenon cannot be equated on a strict one-to-one basis to his analytic scheme . . . It is precisely this difficulty of building operational bridges from Parsons' highly abstract formulations to the real world that has led so many empirically oriented investigators simply to abandon attempts to do anything with the scheme, despite its obvious attractions as one of the few systematically coherent, comprehensive approaches to the study of system differentiation and integration. (Laumann & Pappi, 1976)

Abu Gosh and Shye (1971) studied the process of democratization of Arab villages in Israel, recognizing this process to be firmly related to villagers' quality of life. In their data analysis, the authors employed ▶ Faceted SSA, leading to two major insights that proved valuable for developing behavioral system theory as scientific discipline:

1. *The content universe of a behavioral system is continuous*. The mapping of systemic variables into a suitable topological manifold is continuous and has a continuous inverse mapping. In a proper application of ▶ Faceted SSA to system analysis, this means that not only every systemic variable is mapped into a point in the topological manifold (as in any MDS analysis) but, moreover, every point in that manifold represents a possible systemic variable, and the mapping is *homeomorphic*. This is the *continuity principle* (Shye, 1971, 1998, 1999; Shye & Elizur, 1994). Intuitively this means that continuity in meanings of system variables is reflected by continuity in the geometric space and vice versa. The observed variables are regarded as but a *sample* from the



Faceted Action System Theory (FAST), Fig. 1 The circumplex of political attitudes: The social system as a continuum partitionable into regions (Shye, 2009; Adapted from Abu-Gosh & Shye, 1971)

infinite universe of variables, as indeed they typically are in behavioral and psychometric research. (This is in contrast with the interpretation of MDS as merely visualizing observed data. See ▶ Faceted Smallest Space Analysis (Faceted SSA; FSSA)).

2. ▶ *Faceted SSA of systemic variables reveals types of systemic functioning*. The social attitudinal variables, processed by ▶ Faceted SSA, yielded a continuum that could be partitioned into circularly ordered sectors representing traditionality, preference of the past, involvement with local affairs, trusting the young (freedom for the young), achievement orientation, and satisfaction with aspects of life (Fig. 1), interpretable in Parsonian functional terms.

A detailed content analysis of systemic functioning modes has led to the axiomatic formulation of FAST as testable theory (Shye, 1985a).

Foundations of FAST

On the basis of formal definitions proposed for *systems*, *action systems*, and *living systems* (Shye, 1985a), FAST postulates that an *event* (a phenomenon) has two *existence modalities*, *emergence* and *actualization*, and that with reference to a given system, each of the two may be *located* either inside or outside the system (Shye, 1985a). Hence in relation to a given system, there are four types of events, each having its characteristic significance for the system. The four event types are presented in Table 1 with their significance for the system and the systemic *functioning mode* they define.

FAST modifies and sharpens the Parsonian definitions of *functions* and, with ▶ Faceted SSA, subjects them to scientific hypothesis testing procedures. Thus, the spatial pattern implied by the emergence versus actualization in/out analysis, presented in Fig. 2, has been applied, tested, and largely confirmed in various studies in the fields of human quality of life (e.g., Shye, 1989; see also references in ▶ Systemic Quality of Life Model (SQOL)), social work (Wolins, Wozner, & Shye, 1980; Wozner, 1990), criminology (e.g., Fritzon, Canter, & Wilton, 2001), psychology (e.g., Ezrachi, 2008; Wiener, Shye, Shefler, & Wiseman, 1997), as well as studies of the human condition (Shye, 1985a) and of distributive justice (Shye, 1995).

Systemic Hypotheses: Cohesion and Structure

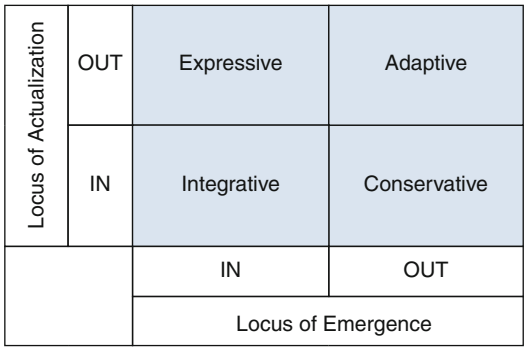
The systemic cohesion hypothesis states that in a population of action systems of a given type that is not selected artificially, the covariance of any two systemic functioning-effectiveness variables (and therefore the correlation between them) will be nonnegative.

The systemic cohesion hypothesis reflects, in statistical language, the idea that, overall, a system's subsystems maintain strong and consistent *pattern* of interactions among themselves. The rationale for this hypothesis is that the variables share a common-meaning range (see ▶ Faceted Smallest Space Analysis (Faceted SSA; FSSA)). This hypothesis has been generally supported by empirical data in quality of life studies as well as in other research domains, with the occasional occurrences of few negative but low correlations.

The notion of *artificially selected population* (and by implication, of *natural* populations) has been introduced by Guttman (e.g., see Gratch, 1973, p. 36) as an intuitive undefined notion.

Faceted Action System Theory (FAST), Table 1 Event types and their systemic significance

Event-Type in terms of loci of event's emergence/ actualization (inside or outside system)		Event's significance for system:	Defining system's functioning in mode of:	Criterion for effective functioning in this mode:
Emergence	Actualization			
Out	In	System's adherence to its constitutive features (Identity)	*Conservation*	Similarity (stability of externally endowed structure)
In	In	Compatibility among system's components	*Integration*	Complementarity (compensatory relations between components)
Out	Out	Compatibility between system & its environment	*Adaptation*	Complementarity (compensatory relations with environment)
In	Out	System's impact upon environment (growth)	*Expression*	Similarity (authentic external reflection of inner qualities)



Faceted Action System Theory (FAST), Fig. 2 Two-way systemic event classification

An attempt to characterize natural populations in terms of the observed joint frequency distribution in certain kinds of data is made by Shye (1985b, p. 111).

The systemic structural hypothesis states that ▶ Faceted SSA of variables assessing the functioning effectiveness of a population of systems of a given type would yield a space:

1. Partitionable into separate regions, each containing the variables pertaining to one functioning mode (the conservative, the integrative, the adaptive, *or* the expressive).
2. Given that (1) holds, the regions representing the functioning modes would be circularly ordered.
3. Given that (2) holds, the circular order of the regions would be conservative, integrative, expressive, adaptive. That is, the expressive would be opposite the conservative and the adaptive opposite the integrative (as in Fig. 2).

A heuristic explanation for this spatial configurations could be this: While the *conservative* function determines the action system's potential for action, the *expression* of this potential in reality is mediated by negotiative processes that take place in two different milieus: the external (*adaptive* processes) and the internal (*integrative* processes).

Empirical studies generally support the systemic structural hypothesis in all its parts, exhibiting the *standard pattern* shown in Fig. 2 (see references in ▶ Systemic Quality of Life Model (SQOL)). Some studies, however, while supporting parts (1) and (2) of the hypothesis, exhibit a circular mode order different from the one specified by in part (3). There are also cases where the mode order is linear (e.g., conservative, integrative, adaptive, expressive) rather than circular and cases where even part (1) of the hypothesis does not fully hold and neighboring mode regions do intermingle. Interestingly, in studies of quality of life where two groups are compared, of advantaged and of disadvantaged people, the advantaged group (in addition to scoring higher than the disadvantaged on the functioning *levels*) exhibits the standard systemic structure conforming to the hypothesis, while the disadvantaged group diverges from it (e.g., Benish-Weisman & Shye, 2011; Davidson-Arad, 2005). Such findings seem to

indicate that the standard pattern represents a preferred, perhaps *healthier*, state of affairs for the system.

Since the set of functionings in a particular mode constitutes a system in its own right, it, too, functions in each of the four modes. For example, the expressive mode of the subsystem of conservative functioning of a given system stands for developments in the defining structure of the system. For example, amendments to the constitution of the USA express its essential spirit by introducing evolutionary changes in it. Such conceptual refinements suggest additional, more refined, and intricate hypotheses that can be formulated and tested. Studies that use finer 16-mode schemes have been conducted in quality of life research (see ▶ Systemic Quality of Life Model (SQOL)) as well as in the study of human services organizations (Wolins et al., 1980; Wozner, 1991) and of ▶ child rights (Veerman, 1992).

While the four systemic functioning modes are helpful in reasonably classifying observable variables, real-life observable variables can be *impure* in that any one of them may contain meanings that pertain, in varying extents, to more than one functioning mode. *Definitional-reliability* tests in which a panel of judges, schooled in FAST, assess the extents to which each variable pertains to each of the modes can and have been successfully conducted. Thus, the set of all conceivable functioning variables does in fact constitute a continuous semantic space as suggested by the continuity principle. But this continuous space is partitioned, for analytic purposes, into four regions (typically sectors) that correspond to the four functioning modes. (As an analogy, consider the continuum of spectral colors, represented by their wavelengths, which may be divided into intervals that correspond to our understanding of red, orange, yellow, green, blue, etc. Indeed, colors, judged for their similarities, have also been so analyzed (Shepard, 1978)).

The Measurement of System Quality

The quality of a system may well be equated with its functioning effectiveness, as defined by FAST. Scores obtained for a balanced selection of observed functioning variables – evenly representing the four modes – may be compiled to obtain an overall assessment of the system functioning effectiveness, for example, by some summation procedure. However, a more careful measurement procedure, one that takes into account the likely multidimensionality of the systemic data, would employ ▶ multiple scaling by ▶ Partial Order Scalogram Analysis (POSAC) (Shye, 1985b). In such a case, a summation is performed on subsets of observed variables pertaining to a single functioning mode, to create compound modal variable. Such a summation is the more justified, the better the set of variables approximates a *Guttman scale* (Guttman, 1944; Shye, 2008b). The compound modal variables thus created are then processed by ▶ multiple scaling (Shye, 1985b) to obtain the minimal number of scales commensurate with the systemic structure.

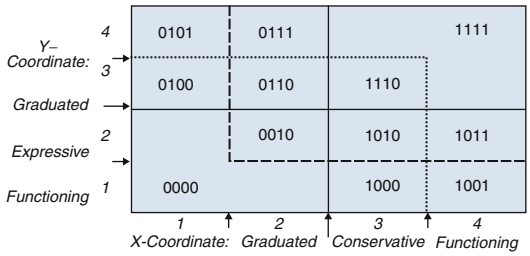
POSAC action system configuration (Shye, 1985b) is the simplest systemic model, or hypothesis, for the outcome of four dichotomous modal variables, v_1,v_2,v_3, and v_4, indicating whether the system functions well ($v_i = 1$) or not ($v_i = 0$) in each of the four modes: conservation, integration, adaptation, and expression, respectively. The *state* of a system is described by its 4-score profile. For example, the profile 1010 indicates good functioning in the conservative (v_1) and the integrative (v_3) modes and weak functioning in the expressive (v_2) and the adaptive (v_4) modes.

Logically, $2^4 = 16$ state profiles are possible in this case, requiring a 4-dimestional space for their representation (with each variable defining a different dimension or axis). But the model postulates the following substantive conditions:

(a) Conservation (v_1) and expression (v_2) are the two poles of a system, and their functioning scores may occur in all their combinations: 00, 01, 10, and 11.

(b) If $v_1 = 1$ and $v_2 = 1$, then $v_3 = 1$ (i.e., good functioning in both the conservative and the expressive modes entails good functioning in the integrative mode). Hence, profiles 1100 and 1101 will not occur.

(c) If $v_4 = 1$, then either $v_1 = 1$ or $v_2 = 1$ (or both) (i.e., if a system functions well in the adaptive



Faceted Action System Theory (FAST), Fig. 3 Theory-based measurement space for the functioning of a simple action system (The order of the scores within each profile is conservation, expression, integration, and adaptation. A partition line separates between 0's and 1's in the respective variable; thus: The two (straight) solid lines partition the measurement space by the (*polar*) conservative mode and by the (*polar*) expressive mode variables. The (L-shaped) broken line partitions the space by the (*attenuator*) integrative mode variable. The (inverted L-shaped) dotted line partitions the space by the (*accentuator*) adaptive mode variable)

mode, it functions well either in the conservative mode or in the expressive mode or in both). Hence, profiles 0001 and 0011 will not occur.

Thus, of the 16 logically possible profiles, four are excluded and only 12 may be actually observed according to this model. These 12 require just a 2-dimensional coordinate space for their order-preserving mapping, as Fig. 3 shows. The two coordinates (X, Y) in Fig. 3 are the basic scales that are necessary and sufficient for measuring action systems that conform to this model. From the partition lines in the measurement space that correspond to the four modes, the meanings of the two coordinates may be derived as follows:

X-coordinate: conservative functioning, graduated by integrative functioning (in the lower part of the scale) and by adaptive functioning (in the upper part of the scale)

Y-coordinate: expressive functioning, graduated by integrative functioning (in the lower part of the scale) and by adaptive functioning (in the upper part of the scale)

Discussion

In the study of quality of life and of QOL-related activities, institutions, and human services, one often deals with a cohesive yet complex set of interrelated phenomena. Hence, a systemic approach to their study seems appropriate.

Faceted action system theory (FAST) is conceived in terms of modes of system functioning that derive from more elementary, undefined (but intuitive) concepts: event, emergence, and actualization. Systemic functioning modes are then understood to encompass *being* (reformulated here in terms of behavior as *conserving* constitutive characteristics), engaging in interactive processes (*integration* and *adaptation*), and growing – impacting on the environment (through *expression*). This conception of systemic functioning resonates with Rapoport's (1968) fundamental aspects of organized systems (*structure*, *function*, *evolution*), with Sen's (1992) human functioning as *being and doing* as well as with Parsons' (e.g., 1953) action system functional imperatives. But FAST (1) rests on explicit axiomatic basis, thereby sharpening the definitions of systemic modes; (2) provides a rationale for the functioning modes and their interrelationships; (3) specifies the data analytic procedure (i.e., the particular aspect of empirical reality embodied in ▶ Faceted SSA) for testing its hypotheses; and (4) specifies a procedure for theory-based measurements of systemic functioning effectiveness (i.e., by applying ▶ multiple scaling by ▶ Partial Order Scalogram Analysis (POSAC) to recorded data or to hypothesized set of possible system-state profiles). Thus, drawing from different branched of mathematics – logic, geometry, and algebra – FAST suggests mathematical language and tools suitable for investigating systems as complex network of interactions (rather than as a heap of causal mechanisms). These mathematical procedures have been developed largely within the field of facet design and analysis proposed as a methodological paradigm for behavioral research (Borg & Shye, 1995; Guttman, 1959a, b, 1968; Shye, 1978a, b, 1985b, 1998, 1999, 2008a; Shye & Elizur, 1994).

Cross-References

▶ Systems of Indicators

References

Abu-Gosh, S., & Shye, S. (1971). *The impact of the Elective Local Council System on Arab Traditional Society in Israel* (Vol. III). Jerusalem: Israel Institute of Applied Social Research.

Benish-Weisman, M., & Shye, S. (2011). Life quality of Russian immigrants to Israel: Patterns of success and of unsuccess. *Social Indicators Research, 101*(3), 461–479.

Borg, I., & Shye, S. (1995). *Facet theory: Form and content*. Thousand Oaks CA: Sage.

Davidson-Arad, B. (2005). Structural analyses of the Quality of Life of children at risk. *Social Indicators Research, 73*(3), 409–429.

Ezrachi, A. (2008). *Patient-psychotherapist adaptation patterns: A faceted systemic analysis of patients' and therapists' evaluations of the therapy and its impact on patient's quality of life* (Ph.D. thesis). Jerusalem: The Hebrew University of Jerusalem.

Fritzon, K., Canter, D., & Wilton, Z. (2001). The application of an action system model to destructive behaviour: The examples of arson and terrorism. *Behavioral Sciences & the Law, 19*(5–6), 657–690.

Gratch, H. (Ed.). (1973). *Twenty five years of social research in Israel*. Jerusalem: Academic Press.

Guttman, L. (1944). A basis for scaling qualitative data. *American Sociological Review, 9*, 139–150.

Guttman, L. (1959a). Introduction to facet design and analysis. In *Proceeding of the fifteenth international congress of psychology, Brussels, 1957* (pp. 130–132). Amsterdam: North-Holland.

Guttman, L. (1959b). A structural theory for intergroup beliefs and actions. *American Sociological Review, XXIV*, 318–328.

Guttman, L. (1968). A General nonmetric technique for finding the smallest coordinate space for a configuration of points. *Psychometrica, 33*, 469–506.

Laumann, E. O., & Pappi, F. U. (1976). *Networks for collective action: A perspective on community influence systems*. New York: Academic Press.

Miller, J. G. (1978). *Living systems*. New York: McGraw-Hill.

Parsons, T. (1953). A revised analytic approach to the theory of social stratification. In R. Bendix & S. M. Lipset (Eds.), *Class, status and power: A reader in social stratification*. Glencoe, IL: Free Press.

Rapoport, A. (1968). Foreword. In W. Buckley (Ed.), *Modern systems research for the behavioral scientist*. Chicago: Aldine.

Ritzer, G., & Smart, B. (2001). *Handbook of social theory*. London: Sage. ISBN 0-7619-5840-1.

Sen, A. (1992). *Inequality reexamined*. Boston: Harvard University Press.

Shepard, R. N. (1978). The circumplex and related topological manifolds in the study of perception. In S. Shye (Ed.), *Theory construction and data analysis in the behavioral sciences*. San Francisco: Jossey-Bass.

Shye, S. (1971). *A note on mapping sentences and their derivation through the use of SSA (Technical Report)*. Jerusalem: The Louis Guttman Israel Institute of Applied Social Research.

Shye, S. (Ed.). (1978a). *Theory construction and data analysis in the behavioral sciences*. San Francisco: Jossey-Bass.

Shye, S. (1978b). Achievement motive: A faceted definition and structural analysis. *Multivariate Behavioral Research, 13*(3), 327–346.

Shye, S. (1985a). Nonmetric models for behavioral action systems. In D. Canter (Ed.), *Facet theory: Approaches to social research*. New York: Springer.

Shye, S. (1985b). *Multiple scaling: The theory and application of partial order Scalogram analysis*. Amsterdam: Elsevier Science.

Shye, S. (1989). The systemic life quality model: A basis for urban renewal evaluation. *Social Indicators Research*, *21*, 343–378. Stable URL: http://www.jstor.org/stable/27520775

Shye, S. (1995). *Facets of distributive justice*. Jerusalem: The Louis Guttman Israel Institute of Applied Social Research.

Shye, S. (1998). Modern facet theory: Content design and measurement in behavioral research. *European Journal of Psychological Assessment, 14*(2), 160–171.

Shye, S. (1999). Facet theory. In *Encyclopedia of statistical sciences, update* (Vol. 3, pp. 231–239). New York: Wiley.

Shye, S. (2008a, September). Faceted models for behavioral systems: Examples from quality of life and intelligence/creativity research. In *The fifth European conference on complex systems*, Jerusalem. Retrieved from http://www.jeruccs2008.org/node/284

Shye, S. (2008b). Guttman scale. In P. J. Lavrakas (Ed.), *Encyclopedia of survey research methods*. Thousand Oaks, CA: Sage.

Shye, S. (2009, June). From the circumplex of political attitudes to the radex of universal values. In *The 12th international facet theory conference*, Jerusalem.

Shye, S., & Elizur, D. (1994). *Introduction to facet theory: Content design and intrinsic data analysis in behavioral research*. Thousand Oaks, CA: Sage.

Veerman, P. E. (1992). *The rights of the child and the changing image of childhood* (International studies in human rights series). Dordrecht, the Netherlands: Martinus Nijhoff.

von Bertalanffy, L. (1968). *General system theory*. New York: Braziller.

Wiener, S., Shye, S. Shefler G., & Wiseman, H. (1997, September). Psychotherapeutic difficulties: faceted action system analysis. In *Proceedings of the sixth international facet theory conference*, Liverpool.

Wolins, M., Wozner, Y., & Shye, S. (1980). Rejuvenating the Asylum: A field study. *Social Work Research & Abstracts, 16*, 17–25.

Wozner, Y. (1990). *People Care in Institutions*. New York: Haworth Press.

Faceted Definitions

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Definition

The *Facet Theory approach* (Guttman, 1954; Levy, 1990, 2005; Shye & Elizur, 1994) provides a systematic way to develop clear theoretical constructs. Facet Theory offers a unique perspective on the issue of construct clarity and is particularly suited to bridging the gap, presented by Suddaby (2010), between Eisenhardt (1989) and Dyer and Wilkins (1991) regarding the role of constructs in theory building. While Eisenhardt sees constructs as essential to theory building, Dyer and Wilkins see constructs as emerging from the data. Faceted definitions of theoretical constructs put together these two views.

Clarity and validity are inseparable. Defining terms in the context of theory development and scientific research is very different from doing the same for a dictionary entry. Dictionary terms can be abstractions that cannot be directly observed, but a theoretical construct has no value if it is not reducible to specific observations. Construct clarity enhances structural validity. Since cumulative science should be one of the main concerns of every scientist, researchers should use the same building blocks to achieve an ongoing accumulation of scientific knowledge. High-level abstraction of a construct may lead to diverse interpretation of the same construct, thus resulting in a situation where the same terms are employed to describe different concepts and phenomena (i.e., the term becomes a homonym). The question is "what properties must characterize a definition in order for that definition to be useful to the scientific community, useful for facilitating empirical research and useful for cumulative findings?" (Dancer, 1990: 366). Facet theory provides an answer to this question in that it enables to define constructs in terms of empirical observations. The current entry explains and exemplifies the term faceted definitions.

Description

Multifaceted Constructs

Complexity is one of the central factors that can impede clarity. One of the basic assumptions of facet theory is that constructs in social science are mostly complex and multifaceted and therefore require a systematic design to define observations and examine the correspondence between observations and theory.

Facet Theory draws on the principles of set theory (a branch of modern mathematics) to define the content universe represented by a set of variables. Like set theory, Facet Theory is structural. "Facet theory is an attractive methodology because it provides a structural framework... that facilitates the precise definitions of the issues being studied" (Clark & Payne, 2006: 27). A set is a collection of certain well-determined objects into a single whole. Guttman (1954), the father of Facet Theory, suggests that our perception regarding a collection of variables leads to identification of perceptual properties that characterize basic components of relevant variables.

The purpose of a definition is to set boundaries and limits and hence separate "good" instances of the construct from "bad" instances. One of the tests of a reliable definition is "whether the thing to be defined has been set off from all other members of the class or category" (Huber & Snider, 2006: 39). In order for this criterion to succeed, the definition must cover a universe or an entirety of content. In the Facet Theory approach the universe is defined in terms of sets that portray its various essential conceptual characteristics. A reliable definition specifies a universe of content included in the construct and thus places boundaries that make it clear what is included in the construct and what is not (Levy, 1985). With a reliable definition it is clear

which instances represent the construct and which are set aside.

Using Facets to Define Constructs

A facet is a set of attributes that belong together and represent underlying conceptual and semantic components of a content universe. For example, in considering the construct *work commitment*, certain aspects of commitment are *cognitive* in nature, such as identifying oneself with one's job, career, and organization. Some other aspects such as the liking of, or feelings toward one's job, are *affective* in nature and form the second element. Items referring to actions, effort invested, and the like constitute another element which is termed *instrumental*. Thus, the modality facet consists of three elements: cognitive, affective, and instrumental (Carmeli, Elizur, & Yaniv, 2007).

This collection of attributes forms a facet because the elements represent categories of modalities relevant to the study of commitment. Similarly, if *work values* (Lyons, Higgins, & Duxbury, 2010) are being investigated, items that represent the construct can be classified according to the modality facet they belong to (instrumental, cognitive, social, prestige-enhancing, altruistic, or freedom-related) or according to a growth orientation facet (growth-oriented, context-oriented). Since each facet reflects an essential component of a content universe of variables that describe the construct, a collection of such facets can be used to articulate a definition of a construct. In other words, each facet is one way of classifying variables according to some rule, where the elements of the facet conform to this rule.

More than one facet can be used in an experimental design of observations. Each additional content facet defines a new classification and further differentiates among items. The multiple classification of a content universe technically results in a Cartesian set, in which each facet constitutes a component set.

Stated more formally, if the definition is presented in terms of N classifications of items, then (a) every item belonging to the universe of the construct items may be classified by each of the N classifications, and, conversely, (b) any selection of a class from each of the N classifications results in an item which, by way of definition, belongs to the universe of the construct. The rationale for seeking a Cartesian structure is based not only on esthetic considerations but also on the assumption that it represents something meaningful about structural properties of concepts and possibly even about the psychological process of concept formation (Shye & Elizur, 1994; Shapira & Zevulun, 1979).

Faceted Definition of the Concept Work Commitment

Defining a universe of observations, in order to study a concept, involves three kinds of sets: (1) the population being studied, (2) the variables which create the criteria for classification, and (3) the range of categories (a set of responses) for each variable (Levy, 1985). In the definitional system of the construct these three sets are linked together; in other words, each pair consisting of one element of the population set and one element of the variables set corresponds exactly to one element of the set of responses. This association of the elements is called a *mapping* or function in mathematical terms (Shapira & Zevulun, 1979). By integrating the formal concepts (facets) and informal verbal connectives, a mapping sentence can emerge.

As an illustration of how facets might be used to define a construct and depict the conceptual components of any item from that universe, consider the following faceted definition of the concept *work commitment*:

An item belongs to the universe of *work commitment* items if and only if it asks of a/an {cognitive/affective/instrumental} attitude of reference group (G) toward some work aspect {job, career, organization}, and the range is ordered from "very positive" to "very negative" attitude toward that work aspect.

The conceptual structure of constructs that are defined in terms of observations can be related to the empirical structure of observations of that universe. This can be done by methods such as nonmetric multidimensional scaling (MDS) or

similarity structure analysis (SSA). MDS techniques enable the organization of a large amount of data such that variables can be systematically positioned in an n-dimensional space that reflects underlying structural properties.

Conclusion

To summarize, "the suitability of facet theory as a tool for formulating definitions of behavioral constructs comes from the clarity and precision it brings to the process of identifying basic components of a set of variables and of relating these components to empirical data" (Dancer, 1990: 367).

Suddaby (2010: 354) argues that the debate between Eisenhardt (1989) and Dyer and Wilkins (1991) is whether constructs are lenses through which data can be analyzed or whether they emerge from the data in the theory-building process. It seems that the facet approach can bridge between these two views. Constructs can be defined a priori according to their facets, but at the same time, the definitional system is an open system in a sense that additional facets can be added at any time (i.e., additional classification rules) and additional elements can be added to the existing facets. The definition can and should be changed according to the level of correspondence of the observations with the proposed structure expressed by this definition.

Cross-References

- ▶ Definitional Framework for the Concept of Well-Being
- ▶ Facet Theory

References

Carmeli, A., Elizur, D., & Yaniv, E. (2007). The theory of work commitment: Facet analysis. *Personnel Review, 36*, 638–649.

Clark, M. C., & Payne, R. (2006). Character-based determinants of trust in leaders. *Risk Analysis, 26*, 1161–1173.

Dancer, S. (1990). Introduction to facet theory and its application. *Applied Psychology: An International Review, 39*, 365–377.

Dyer, W. G., & Wilkins, A. L. (1991). Better stories, not better constructs, to generate better theory: A rejoinder to Eisenhardt. *Academy of Management Review, 16*, 613–619.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review, 14*, 532–550.

Guttman, L. (1954). A new approach to factor analysis: The radex. In P. Lazarsfield (Ed.), *Mathematical thinking in the social science* (pp. 258–348). New York: Columbia University Press.

Huber, R. B., & Snider, A. C. (2006). *Influencing through argument*. USA: IDEA.

Levy, S. (1985). Lawful roles of facets in social theories. In D. Canter (Ed.), *Facet theory: Approaches to social research*. New-York: Springer.

Levy, S. (1990). The mapping sentence in cumulative theory construction: Well-being as an example. In J. J. Hox & G. de Yong (Eds.), *Operationalization and research strategy* (pp. 155–177). Amsterdam: Swetz & Zeitlinger.

Levy, S. (2005). Guttman Louis. *Encyclopedia of Social Measurement, 2*, 175–187.

Lyons, S. T., Higgins, C. A., & Duxbury, L. (2010). Work values: Development of a new three-dimensional structure based on confirmatory smallest space analysis. *Journal of Organizational Behavior, 31*, 969–1002.

Shapira, Z., & Zevulun, E. (1979). On the use of facet analysis in organizational behavior research: Some conceptual considerations and an example. *Organizational Behavior and Human Performance, 23*, 411–428.

Shye, S., & Elizur, D. (1994). *Introduction to facet theory: Content design and intrinsic data analysis in behavioral research*. Thousand Oaks, CA: Sage.

Suddaby, R. (2010). Editor's comment: Construct clarity in theories of management and organization. *Academy of Management Review, 35*, 346–357.

Faceted Multidimensional Scaling (MDS)

▶ Faceted Smallest Space Analysis (Faceted SSA; FSSA)

Faceted Quality of Life Theory

▶ Systemic Quality of Life Model (SQOL)

Faceted Smallest Space Analysis (Faceted SSA; FSSA)

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Synonyms

Cognitive maps; Confirmatory Smallest Space Analysis (SSA); Faceted Multidimensional Scaling (MDS); FSSA; FSSAWIN; Geometric representation; MDS; Multidimensional scaling; Nonmetric MDS; Perceptual mapping; Regional hypotheses; Similarity analysis; Spatial representation; Structural analysis

Definition

FSSA Smallest Space Analysis (faceted SSA or faceted MDS) is a multivariate data analytic procedure for inferring the structure of a content universe under study (containing a large, possibly infinite number of variables) from the correlation matrix of a representative sample of observed variables taken from that content universe. FSSA is useful for constructing theories and testing hypotheses in research domains, such as quality of life, characterized by a multitude of variables not all of which may be observed. FSSA consists of:

1. Processing data by some nonmetric similarity analysis technique such as nonmetric MDS (Borg & Groenen, 2005; Kruskal, 1964) or SSA-I (Guttman, 1968; Lingoes, 1973), yielding a geometric space where observed variables are mapped as points with the pairwise interpoint distances (inversely) ranked by the correlations between the corresponding pairs of variables
2. Finding a one-to-one correspondence between a *content classification* of the variables (a content *facet*) and a *partition into regions* (or hyper-regions) of the resultant geometric space, so that every class of variables is located in one region of that partition (Shye, 1978a, 1998, 1999, 1971; Shye & Elizur, 1994)

Description

The Analysis of Multivariate Data by MDS: Background

Multidimensional scaling (MDS) is a family of statistical procedures used for analyzing and visually representing multivariate data. Given a set of objects and a matrix of similarity or dissimilarity measures between each pair of objects in the set, an MDS procedure aims to represent the objects as points in a geometric space of a given (usually small) dimensionality as well as possible, such that the greater the dissimilarity (or the smaller the similarity) between two objects, the greater the distance between them. MDS may be metric or nonmetric. In the latter case, MDS seeks distances whose rank-order matches that of the corresponding dissimilarities. The mapped objects are often observed variables whose (zero-order) correlation coefficients are taken as *similarity* measures between pairs of variables. Different algorithms have been created for MDS, based on different procedures and loss functions (Borg & Groenen, 2005). One of the popular MDS procedures is Guttman's (1968) SSA.

Typically, MDS is used for visualizing data – for example, the set of all associations among research variables – for data mining, and for relating content similarity of observed variables to their geometric proximity (see, e.g., Foa (1965) contiguity principle). Emphasis is on accuracy of presentation (low values of the loss function employed, such as Kruskal (1964) *stress* or Guttman (1968) *coefficient of alienation*) and in the interpretation stage, attention is often given to clusters of the objects in space.

FSSA, an offshoot of MDS/SSA, differs from traditional MDS/SSA in the interpretative stage and offers a novel computational procedure for partitioning the resultant space by content criteria. FSSA is a data analytic procedure based

on a paradigm of semantic continuity: It is derived from a conception that pictures statistical data in behavioral and social research as *continuous* spaces. Hence, FSSA relies on research design and suggests kinds of hypotheses (and provides tools for their testing) that ensue from that conception.

Semantic Continuity in Behavioral Data

In the statistical study of QOL, as in many domains of behavioral and social research, the number of variables in is very large, even infinite. Thus, for example, in principle, the number of questionnaire items of well-being is potentially endless (considering that any variation in the phrasing of a question defines a separate item or variable) and so is the number of test items in a cognitive ability or intelligence testing. This observation, together with the idea of mapping variables into a geometric space, as effected by the MDS family of statistical procedure, prompted the formulation of the following:

Continuity Principle: The mapping of variables from the content universe to a topological manifold is one-to-one and *onto* (Shye, 1971, 1998, 1999; Shye & Elizur, 1994).

Specifically, the content universe of a studied domain is pictured as a continuum. Every point in the topological manifold representing that universe represents a possible variable of that domain. Moreover, the mapping of variables into a suitable topological manifold is continuous and has a continuous inverse mapping (i.e., the mapping is *homeomorphic*).

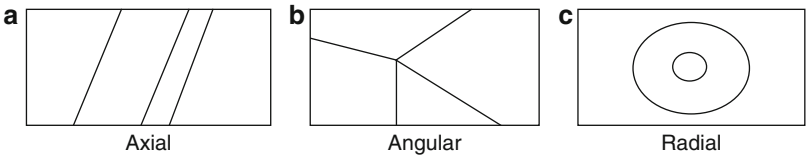
The continuity principle (Shye, 1971, 1998, 1999; Shye & Elizur, 1994) intuitively means that continuity in meanings of a system of variables is reflected by continuity in the geometric space and vice versa and, hence, that the actually *observed* variables in a given study are no more than a *sample* from the infinite universe of variables, as indeed they typically are in behavioral and psychometric research. The continuity principle has led to a new *scientific imagery* within the framework of modern facet theory (Shye, 1998, 1999; Shye & Elizur, 1994). This scientific imagery differs greatly from traditional approaches that tend to treat the observed variables as important in and by themselves (rather than as a sample that represents an unobservable whole), and it suggests and even determines new kinds of questions and hypotheses that observed behavioral sciences could fruitfully deal with.

In practice, only a finite number of variables can be observed. This calls for techniques for *sampling variables* from the universe of the investigated contents and for *making inferences* from that sample to the entire universe. This is much in analogy with the statistical sampling and inferential techniques regarding the investigated population.

Faceted Sampling of Observations

Common-Meaning Range. A prior condition for analyzing data by FSSA is that all variables included in the analysis have a common-meaning range (CMR). This means that numerically coded variables such as answers to psychological tests, responses to attitude questionnaire items, or QOL assessments be all ordered from high to low in the same direction according to the concept under study (e.g., well-being, cognitive ability, favorable attitude towards an object. But the number of possible response categories need not be the same). This ensures that the correlations between variables are computed with unequivocal sign and that, in line with scientific imagery described above, the space obtained uniformly represents the studied concept (i.e., *no* part of that space represents the *opposite* of the concept).

Sampling of Variables: *Faceted Design*. It is usually impossible to conduct a probability sampling of variables (as is often done when sampling respondents). Hence, sampling of variables by facet design resorts to a method akin to *stratified sampling*: the conceived content universe, namely, the set of all conceivable variables pertaining to the studied concept, is classified by the contents of the variables. A classification of variables by a given content criterion is called a *content facet*. The choice of a content facet reflects the expertise, insights, and scope of acquaintance of the researcher with the studied domain (Shye, 1999; Shye & Elizur, 1994).



Faceted Smallest Space Analysis (Faceted SSA; FSSA), Fig. 1 Canonical partition patterns in 2-dimensional space

Then, attempt is made to have all classes of variables well represented in the sample of variables. And, if more than one content facet is desired, an attempt is made to have every cell of the cross-classification represented by variables to be observed.

Faceted Inference of Content Structure

Identifying Regions in Space. A sample of observed variables representative of a well-defined domain – having a common-meaning range and created by faceted design as described above – can be meaningfully processed by one of the MDS/SSA techniques for the purpose of making inferences from the sample of the observed variables to the entire content universe that they represent. The obtained geometric space is regarded as a topological manifold that may be partitioned into regions that correspond to the classes of a facet defined in advance in the faceted design or by a newly conceived facet suggested by the distribution of the variables in MDS space. More than one facet may be so examined, with each facet corresponding to a different partition pattern of the space. When one or more facets are found to correspond to clear partitions, it becomes meaningful to talk about the *structure* of a concept such as intelligence or quality of life (see, e.g., Shye, 1989; ▶ Systemic Quality of Life Model (SQOL)).

The Meaning of Structure. The term *structure* in the present context has a well-defined meaning (Shye, 1978b, p. 338), comprising the following aspects: (1) the optimal MDS *dimensionality* required for the concept representation; (2) the concept *components* validated by regions (hyper-regions) in the MDS space; and (3) *relationships* among the concept components, where these relationships are depicted and cast in geometric terms, that is, in terms of the relative spatial orientation of the respective validated regions (the validated partition patterns).

Types of Partition Patterns. In a given dimensionality, the number of possible partition patterns is of course limitless. Here we describe three canonical partition patterns that may occur in a 2-dimensional space which, because of their simplicity, (1) can be easily generalized to higher dimensionalities, (2) can be easily interpreted in terms of the research substance, and (3) can be expected to recur in replications.

The Axial Partition Pattern. It is a partition into simply ordered stripes by parallel lines (Fig. 1a).

The Angular Partition Pattern. It is a partition into circularly ordered sectors by radii radiating from a common center (Fig. 1b).

The Radial Partition Pattern. It is a partition into simply ordered concentric rings by concentric circles having a common center (Fig. 1c).

Partitioning the MDS space by a content classification of the variables, though a qualitative feature of the data, constitutes in effect a new kind of statistic whose *values* are specific partition patterns. A partition pattern may be hypothesized in advance (confirmatory FSSA) or detected *ex-factum* (exploratory FSSA).

Confirmatory FSSA. While partition patterns can often be detected or verified by inspection and drawn by hand, an algorithm testing for each of the canonical patterns has been created and programmed (Borg & Shye, 1995; Kingsley, 1991; Shye, 1991). Given a set of variables, preclassified by the researcher, and given the 2-d MDS/SSA of this set of variables, FSSA finds, for each of the three canonical partition patterns types, the one specific partition of that type that best separates the points in the space obtained, so that points pertaining to a class of variables fall as closely as possible into one region. The goodness of fit of the obtained separation is called the

separation index (SI) and is computed by the following:

$$\text{SI} = 1 - (\text{loss function})/(\text{normalizing function}),$$

where the *loss function* is made up of the sums of the distances of each deviant point from its prescribed region and where a deviant point is one which does not fall in the region assigned to its class.

The *normalizing function* represents the typical loss function for a set of points randomly (uniformly) distributed in the square 100 * 100. The normalized loss function (i.e., the ratio) falls roughly on a scale between 0 and 1, where 0 represents a perfect separation, with each class of points falling entirely into its assigned region. Hence, the resulting separation index falls between 0 and 1, with 1 indicating a perfect separation by the prespecified content classification of the variables. (Note that the loss function and the separation index are not based on the *number* of deviations but on their *sizes*.)

An intuitive interpretation of the value of the separation index, say, SI = 0.95, could be this: The sum total of the deviations is (about) 5 % of what they would have been if the points were scattered at random.

It is important to realize that with this procedure, FSSA produces *two* measures of goodness of fit. The one (represented by *low* values in one of the loss functions of MDS/SSA, e.g., *stress* or *coefficient of alienation*) assesses how well the distances in the obtained MDS/SSA space of the given dimensionality reflect the input similarities (e.g., correlations). The other (represented by *high* values of SI) assesses how well the obtained space partition separates variables according to their input content classification (content facet).

Running FSSA. In contrast with other statistical procedures, FSSA favors a multitude of variables. In fact, a sufficiently large number of variables are a *necessary* condition for running FSSA meaningfully. (Processing 20–90 variables is not uncommon.) But it is not a *sufficient* condition: It is also necessary that the variables be sufficiently well spread in the resultant space so that partitions may be inferred unambiguously. This is more likely the better is the sampling of the variables (see above).

Unsatisfactory (i.e., high) stress/coefficient of alienation in MDS/SSA of a given dimensionality may mean either that the content universe represented by the variables requires a higher dimensionality (alternatively one may focus on a sub-content universe) or that there is much noise (content fluctuations) present. In the latter case, remaining in the lower dimensionality serves the useful purpose of ironing out perturbations, which facilitates concentrating on the essential structure of the data (Shye, 1985, p. 164). SI, on the other hand, serves to assess the validity of the structure and more generally of the substantive hypothesis or theory that the researcher wishes to test. If a regional hypothesis is confirmed across replications, it can have a compelling power and scientific significance, regardless of possible inaccuracies of the MDS correlation representation, which may reflect noise. (Details on how to run FSSA, and in particular how to decide on the suitable dimensionality, can be found in Shye and Elizur (1994).)

FSSA Compared with Factor Analysis (FA). The two techniques, faceted SSA and factor analysis, have been compared by Guttman (1982) and by Shye (1988). An important difference between FSSA and FA is this: While FA seeks to structure the *observed* variables and does so by identifying *factors*, FSSA seeks to infer the structure of the *entire* content universe, including unobserved variables, and does so by identifying regions, using the observed variables as but a *sample* that provides clues to the content universe structure. This difference can be dramatic: For example, a cluster of variables that would define a factor in FA may be split into two different regions by FSSA. And conversely, two variables that are far apart and pertain to two different factors in FA may pertain to one and the same region in FSSA, even if the space between them is empty, a fact which FSSA would dismiss as an artifact of the procedure by which variables had been sampled.

External Variables in FSSA. Researchers often wish to explore the relationship between the investigated content universe and an *external*

variable – one that does not (or not necessarily) belong to that universe. For this purpose, Denesh and Shye (1993) have proposed a simple procedure that is most in line with the spirit of the *facet approach*: On the FSSA interpreted map, one tries to identify a region or regions where the correlations of the external variable with the *internal* variables (those pertaining to the investigated content universe and have been analyzed by FSSA) are relatively high (above some specified value). Then, an attempt is made to interpret that region in substantive terms as a sub-content universe of the originally investigated content universe.

An instructive example of faceted external variable analysis that served to identify the most important quality of life components for *successful immigration* (as external variable) can be found in Benish-Weisman and Shye (2011). In that study, the high correlation region suggested a compact QOL-sub-universe coined in the language of the ▶ Systemic Quality of Life model (SQOL) as *directional intra-human* (i.e., QOL components defined as the conservative and expressive modes of the social and of the personality subsystems). Indeed, the study's substantive conclusions hinge on this finding.

Cross-References

- ▶ Facet Theory
- ▶ Faceted Action System Theory (FAST)
- ▶ SSA: Similarity Structure Analysis
- ▶ Systemic Quality of Life model (SQOL)

References

Benish-Weisman, M., & Shye, S. (2011). Life quality of Russian immigrants to Israel: Patterns of success and of unsuccess. *Social Indicators Research, 101*(3), 461–479.

Borg, I., & Groenen, P. (2005). *Modern multidimensional scaling: Theory and applications* (2nd ed., pp. 207–212). New York: Springer. ISBN 0387948457.

Borg, I., & Shye, S. (1995). *Facet theory: Form and content*. Thousand Oaks, CA: Sage.

Denesh, I., & Shye, S. (1993, August). Facet-inducing external variables: A new procedure for the FSSA. In *Proceedings of the fourth international facet theory conference*, Prague.

Foa, U. G. (1965). New developments in facet design and analysis. *Psychological Review, 72*(4), 262–274.

Guttman, L. (1968). A General nonmetric technique for finding the smallest coordinate space for a configuration of points. *Psychometrica, 33*, 469–506.

Guttman, L. (1982). Facet theory, smallest space analysis, and factor analysis. *Perceptual and Motor Skills, 54*, 491–493. (Addendum to Guttman, R., & Shoham, I. (1982). The structure of spatial ability items: A faceted analysis. *Perceptual and Motor Skills, 54*, 487–493).

Kingsley, R. (1991). *Description of the routines for separation of points in the square into separate regions*. Unpublished Technical Report. Jerusalem: The Louis Guttman Israel Institute of Applied Social Research.

Kruskal, J. B. (1964). Multidimensional scaling by optimizing goodness of fit to a nonmetric hypothesis. *Psychometrike, 29*, 1–27.

Lingoes, J. C. (1973). *The guttman-lingoes nonmetric program series*. Ann Arbor, MI: Mathesis Press.

Shye, S. (1971). *A note on mapping sentences and their derivation through the use of SSA* (Technical Report). Jerusalem: The Louis Guttman Israel Institute of Applied Social Research. (Also in Abu Gosh, S., & Shye, S. (1971). *The impact of the elective local council system on Arab traditional society in Israel* (Vol. III). Jerusalem: The Louis Guttman Israel Institute of Applied Social Research).

Shye, S. (Ed.). (1978a). *Theory construction and data analysis in the behavioral sciences*. San Francisco: Jossey-Bass.

Shye, S. (1978b). Achievement motive: A faceted definition and structural analysis. *Multivariate Behavioral Research, 13*(3), 327–346.

Shye, S. (1985). *Multiple scaling: The theory and application of partial order scalogram analysis*. Amsterdam: North-Holland.

Shye, S. (1988). Inductive and deductive reasoning: A structural reanalysis of ability tests. *Journal of Applied Psychology, 73*, 308–311 (Appendix: Multidimensional scaling versus factor analysis: A methodological note).

Shye, S. (1989). The systemic life quality model: A basis for urban renewal evaluation. *Social Indicators Research, 21*, 343–378. Stable URL: http://www.jstor.org/stable/27520775

Shye, S. (1991, June). The integration of research contents and topological spaces: Confirmatory SSA (a new program for the PC). In *The third international facet theory conference*, Jerusalem.

Shye, S. (1998). Modern facet theory: Content design and measurement in behavioral research. *European Journal of Psychological Assessment, 14*(2), 160–171.

Shye, S. (1999). Facet theory. In *Encyclopedia of statistical sciences, update* (Vol. 3, pp. 231–239). New York: Wiley.

Shye, S., & Elizur, D. (1994). *Introduction to facet theory: Content design and intrinsic data analysis in behavioral research*. Thousand Oaks, CA: Sage.

Facets of Quality of Life of Older Adults, International View

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Synonyms

Domains of qol in older adults; Subscales

Definition

For the purpose of this discussion, ▶ *quality of life* (QOL) is defined as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment" (WHO, 1997, p. 1).

The term *facets* refers to areas or aspects of QOL that pertain to larger domains (e.g., physical, psychological, social relationships, level of independence, environment, and spirituality religion and personal beliefs). Facets of QOL for all adults include overall QOL; general health; physical health; energy and ▶ fatigue; ▶ pain and discomfort; sleep and rest; bodily image and appearance; negative feelings; positive feelings; ▶ self-esteem; thinking, learning, memory, and concentration; ▶ mobility; ▶ activities of daily living; dependence on medicinal substances and medical aids; work capacity; personal relationships; ▶ social support; sexual activity; financial resources; freedom; physical safety and security; health and social care: accessibility and quality; home environment; opportunities for acquiring new information and skills; participation in and opportunities for ▶ recreation/leisure; physical environment (pollution/noise/traffic/climate); transport; and spirituality/religion/personal beliefs (WHOQOL Group, 1995). In addition, facets of quality of life added for older adults include sensory abilities; autonomy; past, present, and future activities; social participation; death and dying; and intimacy (Power, Quinn, Schmidt, & WHOQOL-OLD Group, 2005).

For the purpose of this discussion, *older adults* refers to people over the chronological age of 60. It is recognized that there is debate about the beginning of this stage of life, but the age of 60 was used as the lower limit for inclusion in a number of studies described in this essay.

Description

Many facets of quality of life (QOL) have been identified. These facets guide researchers in development of instruments to measure specific aspects of QOL. Research conducted internationally has focused on both *ratings of QOL* on specific facets as well as ratings of importance of facets of QOL. In this entry, we discuss both ratings of QOL and ratings of importance of facets of QOL, where we have found relevant and available data.

Facets of QOL that are *important* to younger adults are also important to older adults, but there are some significant differences in perceived importance of facets between older and younger people. Further, there are some additional facets of QOL that are important to older adults that are less relevant to younger people. Ratings of importance vary on some facets, depending on age category, gender, health status, and country of origin.

As part of the process to develop a new add-on measure of QOL for older adults, to augment the existing World Health Organization Quality of Life-100 (WHOQOL-100) and WHOQOL-BREF measures that were designed for a general population (Power et al., 2005), focus groups were held in 21 centers around the world to explore facets of QOL for older adults. Each center conducted four focus groups with older adults as well a focus group with lay caregivers and one with health professionals working with older adults (for a total of six focus groups).

The results showed that social relationships and participation, physical aspects, psychological aspects, independence, environment, finances, recreation/leisure, and religion/spirituality were important aspects of QOL for older adults. All WHOQOL facets were found to be important to older adults. Additional facets included sensory abilities, concerns regarding residential care, and leisure activities. In the end, six additional facets were included in the add-on WHOQOL-OLD module including sensory abilities; autonomy; ▶ social participation; death and dying; past, present, and future activities; and intimacy (Conrad et al., 2008; Power et al., 2005). The intent was that the module would be used in conjunction with one of the general instruments to augment the standard facets of QOL.

The WHOQOL-OLD Group also quantitatively assessed the *importance* of all the facets from the original WHOQOL instruments and the new facets for older adults. With one exception (sex life), all facets were important or very important to older adults. Highest importance was attributed to ability to perform ▶ activities of daily living (ADL), general health, sensory abilities, mobility, autonomy, and energy. Least important was sex life, opportunity to learn new skills, social participation, and a positive body image and appearance (Molzahn, Skevington, Kalfoss, & Schick Makaroff, 2010).

Age

Power et al. (2005) compared two older age groups (60–80 years and 81+ years). They found that *ratings of QOL* of those >80 years old were lower on all facets of the WHOQOL-OLD (sensory abilities, autonomy, social participation, death and dying, past present and future activities, and intimacy) with the exception of the death and dying scale where those 60–79 years old had significantly more apprehension about dying than their older counterparts.

Importance ratings of facets of QOL seem to differ by age. When comparing younger adults (Saxena, Carlson, Billington, & Orley, 2001) to older adults (Molzahn et al., 2010), the facet *rankings* of importance of QOL were similar. For instance, ability to conduct ADLs was rated highest by both older adults (mean 4.52 vs. 4.29 on a 5-point scale) and the younger population, but the mean ratings were higher for older adults. Similarly, sex life was lowest in both samples, but the mean importance rating of older adults was 2.39, notably lower than the younger sample at 3.29. In both studies, gender differences were evident with men rating sex life as more important than women. When comparing two older age groups, aged 60–79 and 80+ years, eight dimensions were seen by the younger group as more important: overall QOL, freedom from pain, feeling happiness/enjoyment in life, feeling content, ability to take care of ADL, ability to work, home environment, and adequate social help.

Gender

Typically, gender differences in ratings of QOL facets are relatively small. Power et al. (2005) noted higher facet scores for men on the death and dying subscale. Some studies note differing patterns of association with QOL based on gender. For instance, Li, Lin, and Chen (2011), in a study of community-dwelling Chinese elders, found that the association of social activity was weaker among women than men and that for women, religious activity was positively related to QOL.

It seems that there are some differences in the ways that men and women view the importance of various aspects of their lives. In a study of older adults, both genders rated the ability to perform ADL as most important, but there were significant gender differences in the *importance* of most aspects of QOL. Least important to both genders was sex life which was rated significantly higher by men than women (1.98 ± 1.19 for women; 2.73 ± 1.28 for men). On other facets, women rated the importance of the various facets significantly higher than did men (Molzahn et al., 2010).

Health Status

Ratings of health status are often highly correlated with ratings of QOL in both younger and older adults. As might be expected, Paskulin and Molzahn (2007) found that satisfaction with health was the strongest contributor to QOL in older adults in both Canada and Brazil.

People who perceived themselves to be healthier rated all aspects of their QOL higher.

Perceived health status also seems to affect perceptions of *importance* of facets of QOL for older adults. Power et al. (2005) examined the responses of 7,401 older people with one or more comorbid conditions and found that 92 % considered themselves to be "healthy." In another study, unhealthy participants considered the importance of the following items to be more important than for healthy people: being able to get adequate health care, being free from pain, having restful sleep, having support from others, and gaining access to adequate social care (Molzahn et al., 2010).

Development Level of Country

Dragomirecká et al. (2008) found that the overall *ratings of QOL* for older adults living in the Czech Republic, a postcommunist country, were lower than the QOL reported by older adults living in five countries with unbroken democratic tradition (▶ Denmark, Germany, ▶ Norway, Sweden, and Switzerland). Older adults from the Czech Republic were also significantly less satisfied with physical health, psychological health, social relationships, and the environment. Subjective QOL measurements identified distinctions between countries that aligned with objective statistics of national wealth. In contrast, Sotgiu, Galati, Manzano, and Rognoni (2011) compared components of happiness for 395 older adults living in either Italy or Cuba. While the scores on the ▶ Human Development Index were not that different (Italy = 0.93 and Cuba = 0.82), GDP per person differed markedly (Italy = $30,073 and Cuba = $2,862). Sotgiu found that ▶ subjective well-being did not fully depend on economic well-being. Clearly more research is needed to investigate development bands and facets of QOL for older adults.

Importance of facets of QOL were compared for countries in the high development ($n = 19$) and medium development bands ($n = 3$), i.e., China, Turkey, and Brazil (Molzahn, Kalfoss, Schick Makaroff, & Skevington, 2011). Overall, participants in highly developed countries rated the importance of most facets higher than those from the medium development group. However, eight facets of QOL were rated higher by people living in medium development countries: health, freedom from pain, energy, restful sleep, freedom from dependence on medication or treatment, support from others, financial resources, and access to adequate social care. There were no differences between development bands in terms of perceived home environment and very small differences for energy or happiness, and these facets were considered to be very important.

Country/Culture

Country and likely cultural differences in the *importance* given to various aspects of QOL have been noted in studies of older adults. In the WHOQOL-OLD pilot study of 7,401 older people, culture explained 15.9 % of the variance in the importance ratings of QOL, but the effect was reduced when health status, gender, and age were taken into account (Molzahn et al., 2011).

As might be expected, importance of specific facets of QOL differs among countries, likely because of cultural differences. For example, Grant and Bowling (2011) found some significant differences in self-reported importance of various aspects of QOL between two groups of older adults in Great Britain: White British people and four ethnic minority groups (from India, Pakistan, Caribbean, and China). Across 22 countries, Molzahn et al. (2011) reported that the highest mean importance ratings were found in Uruguay and the lowest in Lithuania, although there are differences for each specific facet by culture. Ability to perform activities of daily living had the highest mean in all participating countries except Japan, mainland China and ▶ Hong Kong, Brazil, Turkey, and Lithuania. Health was of the highest importance in East Asia (Japan, China, and Hong Kong) and Turkey. The mean importance of overall health was above 4.0 for all countries except for Lithuania, but general QOL was not so highly rated in this country. Sex life was ranked of lowest importance to QOL in every country studied, from 1.71 in China to 3.09 on a 5-point scale in

Uruguay. Spiritual, religious, and personal beliefs were of least importance (2.38) in China and most importance to QOL (4.26) in Uruguay. In Brazil, sensory ability was most highly rated (Molzahn et al., 2011).

Discussion

Ratings on specific facets of QOL can provide useful data to health-care professionals regarding areas where interventions may be useful on an individual basis. Policy makers may find it useful to consider older adults' perceptions of what is an important facet of QOL, prior to developing new programs/policies. It appears that many of the physical aspects of QOL such as energy, freedom from pain, and ability to do activities of daily living and to move around are particularly important to older adults around the world. Preserving physical health through exercise and activating programs that enhance physical well-being and increase energy are worth considering as priorities, as noted in the WHO Active Ageing Policy Framework (WHO, 2002).

Cross-References

- ▶ Aging Population
- ▶ Cross-Cultural Comparison
- ▶ Dimensions and Values of Elderly People, Quality of Life
- ▶ Health-Related Quality of Life Measures
- ▶ Quality of Life Questionnaire
- ▶ Quality of Life Self-Assessment
- ▶ World Health Organization World Health Reports

References

Conrad, I., Kilian, R., Hawthorne, G., Ramona Lucas, R., McCrate, F., Molzahn, A. E., Quinn, K., & The WHOQOL-OLD Group (2008). *Quality of life in later life: An international focus group study* (unpublished manuscript).

Dragomirecká, E., Bartonová, J., Eisemann, M., Kalfoss, M., Kilian, R., Martiny, K., von Steinbüchel, N., & Schmidt, S. (2008). Demographic and psychosocial correlates of quality of life in the elderly from a cross-cultural perspective. *Clinical Psychology and Psychotherapy, 15*, 193–204. doi:10.1002/cpp. 571.

Grant, R. L., & Bowling, A. (2011). Challenges in comparing the quality of life of older people between ethnic groups, and the implications for national well-being indicators: A secondary analysis of two cross-sectional surveys. *Health and Quality of Life Outcomes, 9*, 109–114. doi:10.1186/1477-7525-9-109.

Li, Y.-P., Lin, S.-I., & Chen, C.-H. (2011). Gender differences in the relationship of social activity and quality of life in community-dwelling Taiwanese elders. *Journal of Women and Aging, 24*, 305–320. doi:10.1080.08952841.2011.611052.

Molzahn, A. E., Kalfoss, M., Schick Makaroff, K., & Skevington, S. M. (2011). Comparing the importance of different aspects of quality of life to older adults across diverse cultures. *Age and Ageing, 40*(2), 192–199.

Molzahn, A. E., Skevington, S. M., Kalfoss, M., & Schick Makaroff, K. (2010). The importance of facets of quality of life to older adults: An international investigation. *Quality of Life Research, 19*(2), 293–298. doi:10.1007/s11136-009-9579-7.

Paskulin, L. M. G., & Molzahn, A. (2007). Quality of life of older adults in Canada and Brazil. *Western Journal of Nursing Research, 29*, 10–26. doi:10.1177/0193945906292550.

Power, M., Quinn, K., Schmidt, S., & WHOQOL-OLD Group. (2005). Development of the WHOQOL-OLD module. *Quality of Life Research, 14*, 2197–2214. doi:10.1007/s11136-005-7380-9.

Saxena, S., Carlson, D., Billington, R., & Orley, J. (2001). The WHO quality of life assessment instrument: The importance of its items for cross-cultural research. *Quality of Life Research, 10*, 711–721.

Sotgiu, I., Galati, D., Manzano, M., & Rognoni, E. (2011). Happiness components and their attainment in old age: A cross-cultural comparison between Italy and Cuba. *Journal of Happiness Studies, 12*, 353–371. doi:10.1007/s10902-010-9189-6.

WHO. (1997). *Measuring quality of life*. Retrieved from http://www.who.int/mental_health/media/68.pdf on 29 Mar 2012

WHO. (2002). *Active ageing: A policy framework*. Retrieved from http://whqlibdoc.who.int/hq/2002/WHO_NMH_NPH_02.8.pdf on 7 Apr 2012

WHOQOL Group. (1995). *Field trial WHOQOL-100*. Retrieved from http://www.who.int/mental_health/who_qol_field_trial_1995.pdf on 29 Mar 2012

Facial Displays and Emotion

- ▶ Measuring Emotion Recognition Ability

Facilities

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Synonyms

Services

Definition

Generally speaking, a facility may refer to an installation, contrivance, or other things which facilitate something or to a place for doing something, such as a hospital or school.

Description

The *International Society for Quality of Life Studies* assumes that "Quality of life usually refers to the degree to which a person's life is desirable versus undesirable, often with an emphasis on external components, such as environmental factors and income" (Diener, 2006, p. 401). This definition is related to classical sociological works by Smith (1977) and Liu (1978) and is also indebted to other definitions from more economics-based approaches (Mulligan, Carruthers, & Cahill, 2004), which stress the external conditions that affect individuals rather than their subjective needs or perceptions which are related more to happiness and other dimensions of well-being.

As Dasgupta and Weale (1992) argue, quality of life not only considers the *constituents* of well-being, such as health, welfare, freedom of choice, and basic liberties, but also *determinants* of well-being: availability of food, clothing, potable water, education and health ▶ *facilities*, and income in general.

Consequently, we understand that a facility is a place or building capable of producing services that would enter the utility function of individuals improving their well-being or quality of life.

Some examples of the implication of the amount of facilities in the quality of life definition can be found in several studies, such as Liu (1978); Blomquist, Berger, and Hoehn (1988); Rogerson, Findlay, Morris, and Coombes (1989); and Stover and Leven (1992). In Royuela, Suriñach, and Reyes (2003), when building the composite quality of life index for municipalities in the province of Barcelona (Spain), some indicators of quality of life concepts, such as education or health, are built computing the ratio of facilities per inhabitants. Similarly, Gonzalez, Carcaba, Ventura, and Garcia (2011) define a quality of life index for Spanish municipalities computing the amount of education, health, and culture facilities, while Chasco and others (La Caixa, 2004) use facilities to define an objective index of quality of life in Spain.

Cross-References

- ▶ Environmental Amenities and Disamenities
- ▶ Objective Index of Quality of Life Developed for the Municipalities of the Barcelona Province
- ▶ Objective Index of Quality of Life in Spain

References

Blomquist, G. C., Berger, M. C., & Hoehn, J. P. (1988). New estimates of quality of life in urban areas. *American Economic Review, 78*, 89–107.

Dasgupta, P., & Weale, M. (1992). On measuring quality of life. *World development, 20*(1), 119–131.

Diener, E. (2006). Guidelines for national indicators of subjective well-being and ill-being. *Journal of Happiness Studies, 7*, 397–404.

Gonzalez, E., Carcaba, A., Ventura, J., & Garcia, J. (2011). Measuring quality of life in Spanish municipalities. *Local Government Studies, 37*(2), 171–197.

La Caixa. (2004). *Anuario Social de España 2004*. Barcelona: Author.

Liu, B. C. (1978). Variations in social quality of life indicators in medium metropolitan areas. *American Journal of Economics and Sociology, 37*(3), 241–260.

Mulligan, G., Carruthers, J., & Cahill, M. (2004). Urban quality of life and public policy: A survey. In R. Capello & P. Nijkamp (Eds.), *Urban dynamics and growth, advances in urban economics* (pp. 729–802). Amsterdam: Elsevier.

Rogerson, R. J., Findlay, A. M., Morris, A. S., & Coombes, M. G. (1989). Indicators of quality of life: Some methodological issues. *Environment and Planning A, 21*, 1655–1666.

Royuela, V., Suriñach, J., & Reyes, M. (2003). Measuring quality of life in small areas over different periods of time. Analysis of the province of Barcelona. *Social Indicators Research, 64*(1), 51–74.

Smith, D. M. (1977). *Human geography: A welfare approach*. Londres: Edward Arnold.

Stover, M. E., & Leven, C. L. (1992). Methodological issues in the determination of the quality of life in urban areas. *Urban Studies, 29*(5), 737–754.

FACIT-Sp

► Health-Related Quality of Life and Reliance on God's Help

Fact/Value Dichotomy

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Synonyms

Hume's Guillotine; Hume's Law; Is/ought problem; Open question argument

Definition

The fact/value dichotomy is a philosophical, ontological distinction between categories of claims: facts, which are claims verifiable through logic or empirical observation, and values, which are claims situated in collective agreement in small groups, broader communities, or entire cultures. This distinction is vital for quality of life researchers to address. Following this distinction, that which should be sought (or "quality" in "quality of life") is necessarily a subjective (though not unscientific) definition best reached using a confluence of qualitative and quantitative methods.

Description

The fact/value dichotomy is a philosophical distinction between categories of claims: facts, (or "is" propositions) which are claims verifiable through logic or empirical observation, and values (or "ought" propositions), which are claims situated in collective agreement in small groups, broader communities, or entire cultures. "Is" propositions, sometimes referred to as a positive premise or factual proposition, are universal, objective, timeless, and cultureless – derived through reason alone. "Ought" propositions, sometimes referred to as normative or value propositions, are contextual, relational, subjective, and time and culture filled. Stated simply, the fact/value dichotomy dictates that brute data in the world can never be the source of moral truth. For example, the statement "Torture is painful" does not directly give rise to the proposition "We ought not to torture."

The origins of the ontological distinction between a fact and a value are most often traced to Scottish philosopher David Hume's seminal work *A Treatise of Human Nature* (1739, 1740) (Hume, 1978). Hume famously argued the impossibility of deriving an "ought" from an "is." Hume based his argument on the premise that there is a fundamental and unbridgeable difference between the two types of claims. (It should be noted that Hume does not use the anachronistic term "value" to mean "intrinsically good moral belief" as this usage has a twentieth-century origin.) The brief but heavily cited passage is from Book 3, Part 1, Section 1.

> In every system of morality which I have hitherto met with, I have always remarked that the author proceeds for some time in the ordinary way of reasoning, and establishes the being of a god, or makes observations concerning human affairs; when of a sudden I am surprised to find that instead

> of the usual copulation of propositions is and is not, I meet with no proposition that is not connected with an ought or an ought not. This change is imperceptible, but is, however, of the last consequence. For as this ought or ought not expresses some new relation or affirmation, it is necessary that it should be observed and explained; and at the same time that a reason ought to be given for what seems altogether inconceivable, how this new relation can be a deduction from others which are entirely different from it.

So influential was Hume's thought on the dichotomy between facts and values that the dichotomy is sometimes referred to as "Hume's Law" or "Hume's Guillotine" – the guillotine severing is from ought propositions and creating an irreparable break. If true, this means that ethical and moral judgments are always founded on a normative rather than a positive premise.

Hume's description of the chasm between ought and is came about in the context of his critique of ethical naturalism. Not surprisingly, his analysis has been controversial since its inception. Three prominent critiques of Hume (or of the traditional interpretation of Hume) include an epistemic critique, a teleological critique, and an obligation critique. The epistemic critique was advanced by Hilary Putnam (2002). He argues that all scientific investigation is deeply dependent on so-called value judgments. This is evident in many areas of scientific investigation, such as theory selection (theories are always underdetermined by evidence), method selection, and even the evaluation of data (for "coherence" and "simplicity" which are not themselves strictly empirical or rational ideas). Therefore, Putnam argues, elevating scientific "facts" over nonscientific "values" is undermined because the scientific enterprise depends heavily on nonrational, nonempirical values. The teleological critique consists of defending the derivation of "ought" from "isby looking at the history of language and the utility of value judgments. Alasdair MacIntyre (1984) argues, for instance, that a "good" watch can be rationally identified though this may appear to be a groundless value judgment. A good watch is a watch which performs its intended function. The obligation critique, as advanced by John Searle, centers on a distinction between "institutional facts" and "brute facts" (Searle, 1964). Institutional facts are facts that are embedded in a broader context – for example, a promise made in a relationship between two lovers or a financial transaction between a customer and business. In these institutional settings, actions can imply both an is and an ought, collapsing the distinction. If an actor makes a promise in a relationship, it is implied that the actor ought to follow through on the promise, independent of the actor's desires. The brute fact that the actor made a commitment necessarily means that he ought to meet the obligation. More than refutation, each of these three critiques serves the purpose of refining Hume's assertion and creating room for special cases.

A special case of the fact/value dichotomy that is particularly relevant for quality of life researchers is what is sometimes termed the natural fallacy, first identified by G. E. Moore in 1903 (Moore, 1978). This is the fallacy that ethical dilemmas can be resolved by appealing to nature. In other words, goodness is equated with the pleasant, natural, or premodern, and therefore, "good" and "natural" become synonyms. Moore argued that "good" cannot be derived from nature and that it is an inherently nonnatural description. Even within the name of the research area, "quality" may be either descriptive or evaluative. The definition of quality may therefore be a "fact" or a "value." There is an assumption within quality of life research that "high" quality of life is desirable. In other words, one ought to seek to improve one's quality of life.

Philosophically sophisticated quality of life research must, therefore, recognize that high or low quality of life requires an explicit discussion of values and that quality is never directly derived from nature. For example, the World Health Organization includes six domains in their definition of ▶ quality of life. These domains are ▶ life satisfaction, physical health, psychological health, independence, social well-being, environmental factors, and spiritual well-being. Each domain reflects particular (nonuniversal, nonnatural) values. The selection of these indicators to make up a construct called ▶ quality of life is not derived from data. According to Hume,

such a derivation is indeed impossible. Instead, researchers can identify their own values or the values of the communities they study as such and proceed with the shared understanding that these values are de facto local values. At its best, this is done using qualitative and quantitative methods in a process similar to that used to establish ▶ content validity for psychological measures.

If Hume was correct (and there has been no widely accepted refutation of his thought), then the implication for quality of life researchers is that they must bear the burden of defining "quality" intersubjectively and then justifying the definition using qualitative and quantitative methods.

Cross-References

- ▶ Community Values
- ▶ Content Validity
- ▶ Cultural Values
- ▶ Health-Related Quality of Life Measures
- ▶ Life Satisfaction
- ▶ Qualitative Methods
- ▶ Quality of Life
- ▶ Social Well-being

References

Hume, D. (1978). *A treatise of human nature: Being an attempt to introduce the experimental method of reasoning into moral subjects*. Oxford, England: Clarendon Press (Original work published 1739).

MacIntyre, A. (1984). *After virtue: A study in moral theory* (2nd ed.). Notre Dame, IN: University of Notre Dame Press.

Moore, G. E. (1978). *Principia ethica*. Cambridge: Cambridge University Press. (Original work published 1903).

Putnam, H. (2002). *The collapse of the fact/value dichotomy and other essays*. Cambridge, MA: Harvard University Press.

Searle, J. R. (1964). How to derive "ought" from "is". *The Philosophical Review, 73*, 43–58.

FACT-G

- ▶ Functional Assessment of Cancer Therapy (FACT)

Factor Analysis

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Description

Factor analysis was first developed in psychology to identify unobserved latent variables – such as general intelligence – among a series of measures. Those latent variables are derived as combinations of the measured variables. The method is now widely used across the social sciences to identify general patterns in the relationships between a set of variables, usually displayed through their correlation coefficients.

As an example of a factor analysis, a large sample of British voters was asked at the time of the 2010 general election: How much trust they had in Parliament, MPs, the police, the courts, political parties, and the banks, on 11-point scales where 0 indicated no trust and 10 indicated a great deal of trust. The correlations among those six variables show some strong relationships and some that are less strong: Those who trust Parliament also tend to trust both MPs (a correlation of 0.813) and the political parties (0.780), for example.

		x_1	x_2	x_3	x_4	x_5	x_6
x_1	Trust Parliament	1.000	0.813	0.428	0.535	0.780	0.460
x_2	Trust MPs	0.813	1.000	0.406	0.485	0.834	0.459
x_3	Trust Police	0.428	0.406	1.000	0.588	0.408	0.365
x_4	Trust Courts	0.535	0.485	0.588	1.000	0.466	0.400
x_5	Trust Political Parties	0.780	0.834	0.408	0.466	1.000	0.436
x_6	Trust Banks	0.460	0.459	0.365	0.400	0.436	1.000

But are all these relationships so interlinked that we can derive a single measure of trust in society? Factor analysis addresses this question by creating a new variable that is the average of all six. It is placed as close to all six as it can be – just as in linear regression, a line is fitted as close to all of the individual points as possible. The closeness is also indentified by a correlation

coefficient, usually known as a factor loading. For the correlations above, the loadings are:

x_1 0.882
x_2 0.880
x_3 0.655
x_4 0.728
x_5 0.864
x_6 0.643
λ 3.671

The largest loadings are on the three political trust variables – x_1, x_2, and x_5 – but all six are strongly correlated with it. A measure of overall fit is given by the eigenvalue – λ – which is the sum of the squared loadings, in this case 3.671. As there are six variables, the maximum possible value is 6.0 (i.e., all loadings would be 1.000, as would all correlations), so this factor accounts for 61.2 % of all the variation in those six trust measures across the 16,816 individuals who responded.

Having identified the latent variable – a general trust factor – it is then possible to calculate a value on it – the factor score – for each of the 16,816 individuals. These scores are usually expressed in standardized units, with a mean of 0 and a standard deviation of 1.0: Somebody with a score of 2.13, therefore, would display a relatively high average degree of trust across all six; somebody with a score of −1.67 would express a low degree.

Extracting a single factor provides a general trust latent variable, therefore, an average over all six of the individual variables. But the loadings on three of those variables – x_3, x_4, and x_6 – are substantially smaller than those on the other three, suggesting that whereas most people who trust Parliament in general also trust MPs and political parties, they may have less trust in the police, the courts, and the banks. Perhaps, there is a second factor, therefore, which covers those institutions?

Factor analysis can extract as many latent variables as there are individual variables. Having extracted the first, it then creates a second which is unrelated to the first. It takes the residual variation from the first factor and locates a new variable which occupies the average position within the correlations among those residual values. The loadings on the two factors (F_1 and F_2) are:

	F_1	F_2
x_1	0.882	−0.257
x_2	0.880	−0.335
x_3	0.655	0.607
x_4	0.728	0.461
x_5	0.864	−0.338
x_6	0.643	0.126
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λ	3.671	0.889

The second factor suggests that – irrespective of their general trust over all six institutions shown by the first factor – those who trust the police also tend to trust the courts, but not also the banks. This provides a second dimension to patterns of trust, and scores on both factors can be derived for the individual respondents.

When more than one factor is extracted, the second must be uncorrelated (or orthogonal) to the first – i.e., there is a zero correlation between the individual scores on the two factors. This may underestimate the strength of the second and subsequent factors. To get every variable as close as possible to one of the factors, the loadings matrix is rotated to identify what is usually referred to as "simple structure." The commonest form of rotation is the Varimax, which keeps the factors uncorrelated but does not allow the first factor to dominate the solution; it maximizes the correlation between (i.e., the loading for) each of the individual variables and one of the latent variables.

The Varimax rotation for the example used here is shown by the two columns VF_1 and VF_2.

	F_1	F_2	VF_1	VF_2
x_1	0.882	−0.257	0.862	0.317
x_2	0.880	−0.335	0.907	0.254
x_3	0.655	0.607	0.166	0.877
x_4	0.728	0.461	0.311	0.804
x_5	0.864	−0.338	0.896	0.242
x_6	0.643	0.126	0.442	0.484
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λ	3.671	0.889	2.688	1.873

This provides a much clearer distinction than the unrotated solution; variables x_1, x_2 and x_5 have very high loadings on the first rotated factor – a latent variable reflecting political

trust – whereas x_3 and x_4 have much higher loadings on the second – a latent variable reflecting trust in the justice system. Variable x_6 does not load highly on either (recall that a squared loading is the same as a squared correlation coefficient, so only 20 % of the variation in x_6 can be accounted for by the political trust dimension and 23 % by the trust in justice dimension); whether people trust the political system and/or the justice system does not accurately estimate whether they also trust the banks. (Note also that after rotation, the eigenvalue for the first factor has decreased in value whereas that for the second has increased; this is a consequence of moving the first factor away from the overall average.)

Rotation to the Varimax solution retains the orthogonality of the latent variables; each factor must be uncorrelated with the others. There may be some intercorrelation, however; people who have high trust in the political system also tend to have higher trust in the justice system, but the relationship is not as strong between the two as it is within each of the latent variables. To cater for this, it is also possible to use oblique rotations (of which several are available) which maintain the Varimax goal – of maximizing each variable's loading on one of the latent variables – but does not require those variables to be uncorrelated.

The loadings for an oblique rotated solution (using the Direct Oblimin method) are shown as the two columns OF_1 and OF_2:

	F_1	F_2	VF_1	VF_2	OF_1	OF_2
x_1	0.882	−0.257	0.862	0.317	0.917	0.544
x_2	0.880	−0.335	0.907	0.254	0.942	0.495
x_3	0.655	0.607	0.166	0.877	0.416	0.889
x_4	0.728	0.461	0.311	0.804	0.533	0.858
x_5	0.864	−0.338	0.896	0.242	0.927	0.481
x_6	0.643	0.126	0.442	0.484	0.564	0.587
---	------	------	------	------	------	------
λ	3.671	0.889	2.688	1.873	3.078	2.643

The simple structure produced here is even clearer, as shown by the higher loadings for all six variables than achieved by the Varimax rotation, and the correlation between the two (0.547) indicates that almost 30 % ($0.547^2 = 0.299$) of the variation in each can be accounted for by the other (i.e., there is a 0.3 probability that somebody with a high level of trust in the political system also has a high level of trust in the judicial system).

Whether to extract a single latent variable to derive the overall average pattern of trust or to extract two and identify separate (but related) patterns of trust in two sets of institutions is a decision to be taken by the analyst reflecting the purpose for which the factor analysis has been undertaken. (A third factor could be extracted; it separately identifies trust in the banks from the other two.)

Although it technically refers to one of a family of variance reduction techniques, factor analysis is generally employed as a collective term covering all of those techniques – such as principal components analysis. Strictly, however, factor analysis identifies latent variables within the common variance in a correlation matrix – i.e., that proportion of the variation in each variable that is correlated with one or more of the others – whereas principal components analysis, for example, explores the entire variation. Many applications rarely distinguish between the two, however, and in most cases, the differences in the outcomes depending on the exact choice are very small. For example, if one is analyzing three variables, *A*, *B*, and *C*, and the multiple correlation coefficients from regressing each against the other two are:

A: B, C −0.696
B: A, C −0.763
C: A, B −0.726
.....2.185

Then the common variance – i.e., the patterns that the three have in common – is the sum of those three squared multiple correlations, which is 2.185; those individual common variances are known as the communalities. Factor analysis focuses on this common variance, whereas principal components analysis looks at all of the variance – i.e., the common variance plus the residual not accounted for by the intercorrelations. This produces slightly different factor loadings:

	PCA	FA
A	0.925	0.872
B	0.945	0.933

(*continued*)

	PCA	FA
C	0.933	0.894
---	-------	-------
λ	2.619	2.430

Those for the factor analysis (FA) are slightly smaller than those for the principal components analysis (PCA), as also is the eigenvalue. The differences are only likely to be large, however, when the communalities are low and many analysts rarely distinguish between the two.

Factor analysis and its variants are generally used as inductive procedures, searching for general patterns in a large data matrix. In some situations, such as the example here, this is done to obtain a general index which is better than any of the individual variables from which it is derived: Each variable has its own "noise," but by combining variables, you reduce the relative importance of the noise and stress the general – in that case, the level of trust in institutions. In other cases, the goal is to identify multiple patterns, as in the widely used factorial ecology method which characterizes neighborhoods on a number of dimensions – such as the socioeconomic status of their residents, the composition of their households, and the ethnicity of their populations (Davies, 1984). Factor analysis can also be used in deductive tests, however, as in confirmatory factor analysis.

References

Davies, W. K. D. (1984). *Factorial ecology*. Aldershot: Gower.

Factor Loadings

► Varimax Loadings

Factor Rotation

► Varimax Loadings

Factorial Design

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Synonyms

Experimental design; Multifactor design; Randomized clinical trial; Randomized trial

Definition

Factorial design is a type of research methodology that allows for the investigation of the main and interaction effects between two or more independent variables and on one or more outcome variable(s).

Description

It has been argued that factorial designs epitomize the true beginning of modern behavioral research and have caused a significant paradigm shift in the way social scientists conceptualize their research questions and produce objective outcomes (Kerlinger & Lee, 2000). Factorial design can be categorized as an experimental methodology which goes beyond common single-variable experimentation. In the past, social scientists had been transfixed on singular independent variable experiments and foreshadowed the importance of extraneous variables which are able to attenuate or diminish research findings. With widespread adoption of factorial design, social scientists could now involve multiple variables and examine their inherent and combined impact on a dependent outcome (Keppel & Wickens, 2004). As a continuing example, the attainment of academic achievement is well understood to be linked to intellectual ability (Sattler, 2004). However, if researchers wanted to know if intellectual ability had differential impact on academic achievement when measuring weekly study habits, a factorial

design would be most appropriate. Thus, the purpose of factorial design is to provide an empirical rubric which permits the use of univariate and multivariate statistical techniques to examine a host of main and interaction effects occurring between independent variables.

Within this approach, the term factorial refers to a design which has two or more independent variables, also known as factors (Kerlinger & Lee, 2000). In the above-mentioned example, intellectual ability and weekly study habits would both be considered factors. To examine the main and interaction impact of these two factors, a researcher could categorize intellectual ability into two levels (high ability, low ability) and weekly study habits into two levels (less than 3 h, more than 3 h). This design structure is represented as a 2 × 2 (two by two) factorial design because there are two factors, and each factor has two levels. This four-celled structure is considered the simplest factorial design (Mee, 2009).

In a 2 × 2 factorial design, both factors have the ability to be manipulated or held as a constant. In the latter case, a non-manipulated factor is commonly referred to as a control variable. Control variables are commonly mental or physical attributes which are static and inherent to the sample of individuals a researcher has chosen (e.g., executive functioning, gender) (Kerlinger & Lee, 2000). In the running example, cognitive ability can be considered a control variable, while weekly study habits offer a great deal of variability.

When statistically analyzing simple factorial designs, a factorial analysis of variance is most commonly utilized. This statistical technique provides researchers with information regarding the main effect of both factors and highlights whether significant interaction effects have also occurred. In this situation, a main effect represents that significant differences have emerged between the levels of one or both factors, on the dependent variable. On the other hand, an interaction effect exists when the outcome is attenuated or diminished through the combination of levels from both factors (Mukerjee & Wu, 2006). For example, if a significant factorial analysis of variance result was obtained, a main effect of intellectual ability could indicate that individuals with high intellectual ability perform better on academic achievement, when compared to their low intellectual ability counterparts. Further, if a significant interaction was highlighted, it could be possible that individuals with high intellectual ability perform significantly better on academic achievement when more than three hours of weekly study are introduced.

F

Discussion

Factorial designs are extremely useful to social scientists for their ability to expand upon single-variable empirical approaches. This approach reduces experimental error and allows for the control of confounding variables. The main disadvantage is the difficulty of interpreting the results from large factor and levels structures; however, approaches need to be planned carefully, as an error in one of the factorial domains will endanger the entire research project.

Cross-References

- ▶ Cluster Randomized Trial
- ▶ Control Groups
- ▶ Experimental Design
- ▶ Mean Differences
- ▶ Statistical Experimental Design

References

Keppel, G., & Wickens, T. D. (2004). *Design and analysis: A researcher's handbook*. Newmarket, ON: Pearson.

Kerlinger, F. N., & Lee, L. B. (2000). *Foundations of behavioral research*. Florence, KY: Wadsworth Publishing.

Mee, R. (2009). *A comprehensive guide to factorial two-level experimentation*. New York: Springer Publishing.

Mukerjee, R., & Wu, C. F. J. (2006). *A modern theory of factorial designs*. New York: Springer Publishing.

Sattler, J. M. (2004). *Assessment of children: Cognitive applications* (4th ed.). San Diego: Author.

Factorial Invariance

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Synonyms

Measurement invariance

Definition

Factorial invariance is a concept applied in the context of psychometric analysis of questionnaires. The concept postulates that the psychometric properties of a questionnaire, used either by multiple groups or by the same group over time, have to be identical to ensure an unbiased comparison of factor means.

Description

Factorial invariance is a concept applied in the context of ▶ psychometric analysis of questionnaires, for example, quality of life (QOL) measures. Although applied in both analyses of multiple groups and repeated measures, the concept was originally used in situations involving the analyses of multiple groups (cross-sectional design) (Byrne, Shavelson, & Muthén, 1989; Mulaik, 1972). The concept postulates that the instrument's psychometric properties that are identified in ▶ factor analysis, particularly ▶ Confirmatory Factor Analysis, have to be identical across groups to ensure an unbiased comparison of factor means. Hence, before interpreting group differences, it has to be ruled out that these differences, for example, differences in ▶ self-rated health, are not due to specific group attributes (Meredith, 1993).

In the same manner as for multiple groups, the concept of factorial invariance can be applied to repeated measures. That is, if the psychometric properties of a questionnaire used at time 1 (T_1) are identical to those at time 2 (T_2), a comparison of factor means and according interpretation of ▶ mean differences is unbiased (Byrne et al., 1989). While largely similar to the cross-sectional design, two aspects are specific to the analysis of factorial invariance in repeated measures. Firstly, in addition to parameters defined in the analysis of multiple groups, it is important to allow for across-occasion correlations as the two data sets (T_1; T_2) are related (Jöreskog, 2002–2005). This includes correlated errors between the same item over time and across-occasion correlations of the same factor. Secondly, the interpretation of non-invariant parameters is different. As in repeated measures the two data sets are obtained from the same individuals, it has been proposed to interpret non-invariance in the context of ▶ response shift, with respective non-invariant parameters being linked to either ▶ recalibration response shift, ▶ reconceptualization response shift, or ▶ reprioritization response shift (Oort, 2005).

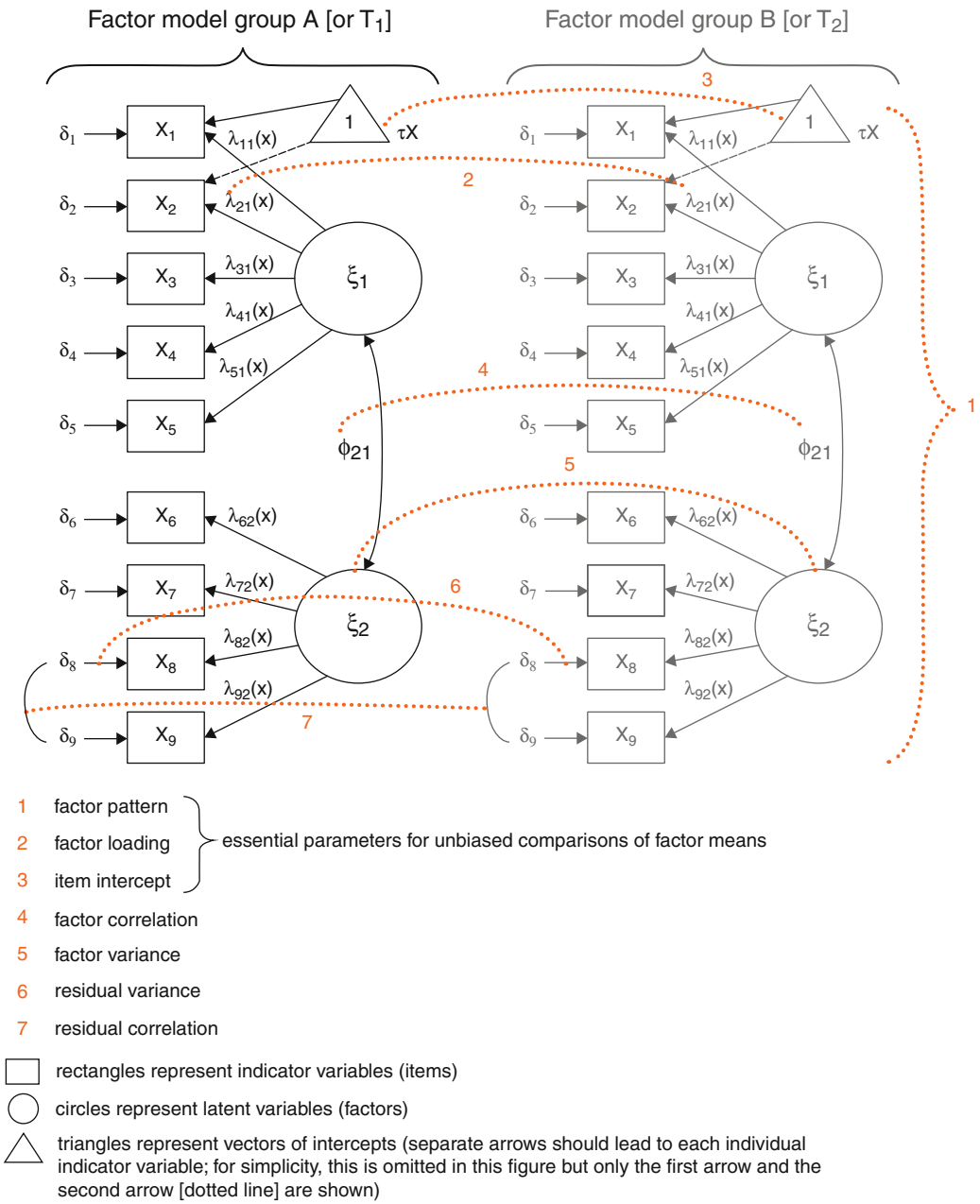
As shown in the Fig. 1, the test of factorial invariance involves the following model parameters: factor pattern, factor loadings, factor variances, factor correlations, item intercepts, error/residual variances, and error/residual correlations. While all of these should be tested for invariance across groups and/or occasions (the dotted lines between group A [or T_1] and group B [or T_2] indicate respective invariance tests), the following hierarchy of model parameters – as they pertain to an unbiased comparison of factor means – has been suggested (Steenkamp & Baumgartner, 1998):

Configural Invariance

This type of invariance is the highest level of invariance. It postulates that the factor patterns of two models have to be identical. That is, the same items load on the same factors across conditions.

Metric Invariance

This constraint postulates equality of factor loadings and is the second most important constraint of invariance tests. As factor loadings relate latent and observed variables, it is essential that



Factorial Invariance, Fig. 1 Illustration of parameters involved in a test of factorial invariance across groups [or across time], that is, group A [or T1] versus group B [or T2], using the example of a two-factor model; this illustration is largely following Jöreskog and Sörbom's (1996–2001) LISREL notation for Structural Equation Models as well as illustrations shown in Hoyle (2012)

these are stable across conditions (Steenkamp & Baumgartner, 1998). If factor loadings were not stable, a change in the latent variable would have a different implication for its indicator variable of group A [or T_1] compared to the indicator variable of group B [or T_2], rendering the comparison of factor means meaningless. Therefore, configural and metric invariance are

regarded as the minimum requirements for mean comparisons (Bollen, 1989; Steenkamp & Baumgartner, 1998).

Scalar Invariance

While being a necessary condition, metric invariance is not a sufficient condition for an unbiased comparison of mean scores that are derived from observed variables. Only if item intercepts are equal across groups can a change in the mean of an observed variable be attributed to a change in the mean of the latent variable (Steenkamp & Baumgartner, 1998).

The remaining parameters, as introduced before, are not essential to ensure an unbiased comparison of factor means. However, particularly in repeated measures, non-invariance of the parameters can be interpreted as follows: true change in variances (non-invariant factor variances), higher-level reconceptualization or reprioritization (non-invariant factor correlations), nonuniform recalibration (non-invariant error/residual variances), and lower-level reconceptualization or reprioritization (non-invariant error/residual correlations) (Oort, 2005).

To test whether the psychometric properties of two questionnaires (multiple groups or repeated measures) are invariant, a forward or backward search approach can be chosen (Millsap & Meredith, 2007). In a forward search, constraints, commencing with those specifying configural invariance (number of factors, pattern of zero loadings), are successively imposed on the model until it is no longer a satisfactory fit to the data. In contrast, in a backward search all model parameters are constrained at once to test for overall invariance. Parameters, both across and within sets such as those listed in the Fig. 1, are then de-constrained until a satisfactory fit is obtained.

Cross-References

- ▶ Confirmatory Factor Analysis (CFA)
- ▶ Factor Analysis
- ▶ Mean Differences
- ▶ Psychometric Analysis
- ▶ Recalibration Response Shift
- ▶ Reconceptualization Response Shift
- ▶ Reprioritization Response Shift
- ▶ Response Shift
- ▶ Self-Rated Health

References

Bollen, K. (1989). *Structural equations with latent variables*. New York: Wiley.

Byrne, B. M., Shavelson, R. J., & Muthén, B. (1989). Testing for the equivalence of factor covariance and mean structures: The issue of partial measurement invariance. *Psychological Bulletin, 105*, 456–466.

Hoyle, R. H. (2012). *Handbook of structural equation modeling*. New York: The Guilford Press.

Jöreskog, K. (2002–2005). *Structural equation modeling with ordinal variables using LISREL. Karl's Corner*. Retrieved January 27, 2013, from http://www.ssicentral.com/lisrel/techdocs/ordinal.pdf.

Jöreskog, K. G., & Sörbom, D. (1996–2001). *LISREL 8: User's reference guide* (2nd ed.). Lincolnwood, IL: Scientific Software International.

Meredith, W. (1993). Measurement invariance, factor analysis, and factorial invariance. *Psychometrika, 58*, 525–543.

Millsap, R. E., & Meredith, W. (2007). Factorial invariance: Historical perspectives and new problems. In: Cudeck, R. & R. C. MacCallum (Eds.), *Factor Analysis at 100: Historical Developments and Future Directions*. Mahwah, N. J.: Lawrence Erlbaum Associates.

Mulaik, S. (1972). *The foundations of factor analysis*. New York: McGraw-Hill.

Oort, F. J. (2005). Using structural equation modeling to detect response shift and true change. *Quality of Life Research, 14*(3), 587–598.

Steenkamp, J.-B., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research, 25*, 78–90.

Factorial Validity

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Definition

Factorial validity examines the extent to which the underlying putative structure of a scale is recoverable in a set of test scores. Any

measure of individual differences will have an internal structure that is one of the following: *unidimensional*: where all of the items of the scale will cohere around a single latent dimension; *multifaceted*: The items will form multiple factors that are all significantly correlated with one another. These different "facet" scales all contain sufficient uniquely reliable variance to warrant their separate interpretation, but when aggregated do form a coherent single dimension; or *multidimensional*: Items on the scale form multiple *independent* dimensions – items cannot be aggregated to form a single factor. In defining the constructs underlying scores on a test, an expected factor structure is articulated. This is done by: (1) specifying what the factors are; and (2) what items define each factor. It is therefore necessary to determine whether that expected structure can be recovered in a set of actual test scores (Cohen & Swerdlik, 2005). Usually, confirmatory factor analysis or structural equation modeling is used to examine the extent to which the predicted items do indeed form the expected factors. The use of such techniques allows one to empirically determine the degree of "fit" found between an expected structure and the obtained structure. Recovery of the expected structure lends additional validity evidence that the individual-differences construct being assessed by the scale is in fact that one intended by the test developers.

Cross-References

- ▶ Bi-factor Analysis
- ▶ Confirmatory Factor Analysis (CFA)
- ▶ Exploratory Factor Analysis
- ▶ Factor Analysis

References

Cohen, R. J., & Swerdlik, M. E. (2005). *Psychological testing and assessment: An introduction to tests and measurement* (6th ed.). New York: McGraw-Hill.

Factors for Maintenance of Financial Support

▶ Trust, Satisfaction, and Donor Retention

Failed States Index

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Synonyms

FSI

Definition

The Failed States Index (FSI) is an annual report by The Fund for Peace (FfP) that measures the pressures on states, which if not addressed or managed can lead to internal conflict or instability. The FSI is intended to help policymakers, analysts, and others, such as those making ▶ development investment decisions, to better understand the underlying causes of state weakness, failure, and internal conflict, as well as areas that need to be addressed to prevent such problems. The FSI is not a forecasting tool. It does not imply that there will be conflict within a particular country within a particular time. It does not suggest that all the indicators are equally important in every country for increasing conflict risk. Rather, it is a tool that provides an understanding of the deeper context in which governments and states operate. Foreign Policy magazine devotes an annual feature article to the FSI that focuses on the 60 states with the worst FSI scores. The full FSI, which covers 177 states, is available at The Fund for Peace website (www.fundforpeace.org).

Description

The Fund for Peace (FfP), which produces the FSI, is an independent, nonpartisan, educational, and research nonprofit organization based in

Washington, D.C. Its mission is to prevent conflict and promote sustainable security. Much of its work focuses on reducing conflict stemming from the underlying causes of weak and failing states.

For the purposes of the FSI, state failure is defined as consisting of several attributes: the loss of physical control of its territory or a monopoly on the legitimate use of force; the erosion of legitimate authority to make collective decisions; an inability to provide basic public services; and the inability to interact with other states as a full member of the international community.

The FfP uses the CAST (Conflict Assessment System Tool) framework of 12 social, economic, and political indicators to create the Failed States Index. These indicators are demographic pressures, refugees or displaced persons, group grievance, human flight/brain drain, uneven economic development, economy, legitimacy of the state, public services, ► human rights, security apparatus, factionalized elites, and external intervention.

The FfP uses data from three primary sources to create the scores for the FSI: computerized content analysis, quantitative data, and qualitative analysis.

First, the FfP downloads millions of documents, including news and magazine articles, speeches, and government and nongovernment reports (blogs or other social media are not included) drawn from 115,000 English-language publications from around the world, including translations of foreign language media. Then, the FfP's content analysis software scans the documents using Boolean phrases on indicators within the CAST framework. A series of built-in filters flag irrelevant documents and correct for false positives. Normalization procedures control for uneven coverage and media drift.

Second, quantitative data is incorporated from reputable institutions, such as the UNHCR, WHO, UNDP, Transparency International, World Factbook, Freedom House, World Bank, and other sources.

Third, the results are compared with insights from a separate qualitative review of each indicator for each country.

The three sources of data serve as internal checks to ensure major trends and events are accurately reflected in the final scores. Aggregated data are normalized and scaled from 0 to 10 to obtain final scores for the 12 social, economic, and political/military indicators for 177 countries. These results are then critically reviewed by analysts to ensure accuracy and ► consistency. This multistage process has several layers of scrutiny to ensure the highest standards of methodological rigor, the broadest possible information base including both quantitative and qualitative expertise, and the greatest accuracy.

The FSI is widely cited and used. Policymakers in the USA, such as Secretaries Clinton and Gates, cite it in their strategic planning documents and presentations to the congress. American and European international development policymakers use the FSI in their work. Analysts in major international financial institutions also use the FSI. Academics around the world cite the FSI or have done research based on it.

Cross-References

► Content Analysis

References

Baker, P. H., & Ausink, J. A. (1996). State collapse and ethnic violence: Toward a predictive model. *Parameters, 26*(Spring), 19–31.

Haken, N., Burbank, J., & Baker, P. H. (2010). Casting globally: Using content analysis for conflict assessment and forecasting. *Military Operations Research, 15*(2), 5–19.

Van Veen, E. (2011). *Global developments in state failure: A brief analysis of the failed states index 2005–2010*. The Hague: Clingendael Institute.

Failure-Time Modeling

► Event History Analysis

Failure-Time Models

▶ Survival Analysis

Fairness

▶ Equity

Faith in God's Help

▶ Health-Related Quality of Life and Reliance on God's Help

Faith in People

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Synonyms

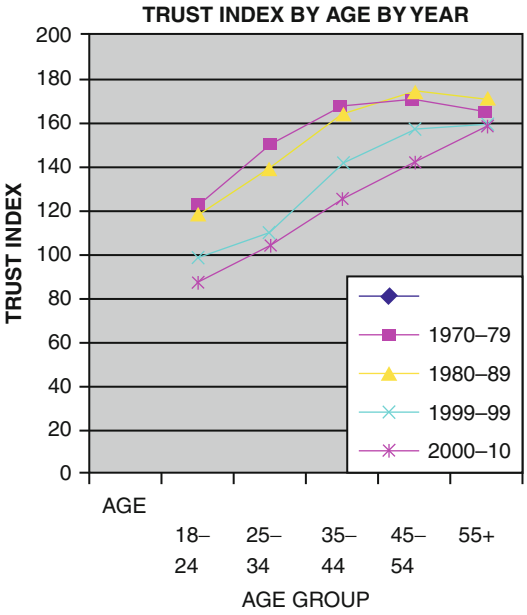
Trust in people

Definition

Trust or faith in people refers to a set of attitude questions that ask about the degree to which a person has a general tendency to trust other people.

Description

Trust in other people is a fundamental need in a functioning society in order for work to be done, friendships to prosper, and families to function. We use it to justify our own behavior and make sense of the behavior of others. Its serious and periodic measurement in social sciences began with the development of items created by Rosenberg (1957), who demonstrated that these items revealed dramatic differences across people in differing occupations, depending on how much people in these occupations were required to work closely and trustingly with others (e.g., social workers, clergy) or not (mechanics, engineers).



Faith in People, Fig. 1 Declining GSS trust trends: 1974–2010 (Source: sda.berkeley.edu)

These items have been monitored extensively over the decades since then in surveys tracking social trends, like the ▶ General Social Survey (GSS) and the ▶ American National Election Survey (ANES). There are three forced choice items in the GSS version of the trust scale, one asking about whether other people can be trusted, another about people being helpful, and third about whether people try to be fair.

Putnam (2000) relied heavily on trends in these items to bolster his case for a declining social capital in the USA over the last half a century. This decline is evident in Fig. 1, which tracks GSS scores on a trust index based on these three questions since 1974. It can be seen there have been notable and consistent declines in the index since the 1970s within each successive age group. In each decade, older people are most trusting, and these older age groups have become progressively more trusting up to about age 55, when trust level reaches a plateau.

A popular variant of the trust scale is the Machiavellianism scale measuring how much one feels that other people can be manipulated for one's political or personal goals. It was developed by Christie and Geis (1970) directly from the writings of that political philosopher. The psychometric properties of the Mach scale, along with other measures of trust in people or other attitudes about human nature, are reviewed in Wrightsman (1991).

Cross-References

▶ Trust

References

Christie, R., & Geis, F. (1970). *Studies in Machiavellianism*. New York: Academic.
Putnam, R. (2000). *Bowling alone*. New York: Simon and Schuster.
Rosenberg, M. (1957). *Occupations and values*. Glencoe, IL: Free Press.
Wrightsman, L. (1991). Interpersonal trust and attitudes toward human nature. In J. Robinson, P. Shaver, & L. Wrightsman (Eds.), *Measures of personality and social psychological attitudes*. New York: Academic.

Falls in Seniors

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Synonyms

Seniors injuries

Definition

A fall is defined as "sudden and unintentional change in position resulting in an individual landing at a lower level such as on an object, the floor, or the ground" (Public Health Agency of Canada [PHAC], 2005).

Description

Falls are a major threat to the health of older adults in Canada and around the world. It is well documented that falls are common with 30–50 % of seniors suffering a fall each year and are costly due to the physical, psychological, and economical consequences (PHAC, 2005). As the leading cause of injury admissions in Canada's acute care hospitals, falls cost $6.2 billion annually (Institute for Health Information [CIHI], 2010; SMARTRISK, 2009). In Canada, the injury costs per capita and potential years of life lost were estimated to be an average of $337 and $993 per 100,000 population, respectively. As the population ages, the problem is expected to grow and pose an even greater challenge to health service systems and individuals' quality of life.

Given that falls are common and costly, considerable advancement has been made in falls and injury research. Up to 25 % of falls result in serious injuries such as a fracture requiring hospitalization. Although only 1–2 % of falls result in hip fractures, 90 % of hip fractures are due to falls. Also, 20 % of such fractures lead to mortality within the first year (Scott, Wagar, & Elliott, 2010). In Canada, the rate of hospitalization nationally is 15.5/1,000 population (Scott et al., 2010). Available data suggests a linear trend in falls and related injuries with increased age as well as higher rates among older women, compared to their male counterparts. Crude fall-hospitalization rates have been shown to be higher for women (19.2 per 1,000) than men (10.8 per 1,000) and higher with advancing age. Older women in the 65–74 year age group had a fall-hospitalization rate of 7.2 per 1,000 compared to 52.7 per 1,000 in the 85+ age group. Similarly, a trend was observed among men with lower hospitalization rates in both age cohorts (5.2 per 1,000 in the 65–74 age group versus 35 per 1,000 in the 85+ age group). After a fall hospitalization, 40–50 % of seniors are discharged to long-term care (LTC) facilities. Unfortunately, fall-related injuries occur much more frequently in these residential care facilities than in the community. For example, although only about 7 % of seniors live in LTC

facilities, these residents still account for about 20 % of deaths from falls and 15 % of fall-related hospitalizations. Likewise, the average length of stay (LOS) for fall-related hospitalizations for those in LTC is 19 % longer than the average for those not living in a LTC facility. For women living in LTC, the risk of sustaining a hip fracture is 10.5 times higher than for women living in the community (PHAC, 2005). While falls account for 54.4 % of all injury hospitalization (85 % for those over 65 years of age), it accounts for 75.7 % of all in-house hospital deaths indicating high mortality rates associated with falls. Also, the survival rates following fall injury hospitalization are lower in men, compared to their female counterparts (Johnson, Kelly, & Rasali, 2011).

The empirical data has further contributed to our understanding of the risk factors involved in fall-related injuries. Researchers agree that falling is a complex problem influenced by a multiplicity of risk factors including functional limitations, psychotropic medications, cognitive impairment, comorbid conditions, history of previous falls, environmental hazards, and psychological aspects such as fear of falling. It is understood that as the number of risk factors increases, the higher the risk for falling and being injured (PHAC, 2005). For instance, older persons who have had four or more risk factors are 78 % more likely to have a fall. This is significantly higher than for those with one or no risk factors; they have a 27 % chance of falling. Although differentiating risk factors can be complex, in general, a few common categories of risk have been identified. Firstly, physical impairments such as gait disorders and poor balance have been found to increase fall risk. Older adults have higher postural sway and less postural control; these factors are also far more pronounced in the elderly with fall history. Secondly, the use of medication is widely accepted as a major risk factor for falls. When older adults are on three or more medications, it was found to increase the risk of initial or recurrent falls by 48–66 %. Thirdly, it is not surprising that environmental hazards affect fall risk to some extent. Between 25 % and 75 % of falls in older adults involved an environmental component. Approximately 80 % of homes have at least one hazard, while 40 % have five or more. Other factors, like age (older), gender (female), income (lower), education (less), chronic illnesses, and behavioral patterns (risky behaviors), are also common themes in the literature.

Given the multiplicity of risk factors involved, many promising falls prevention strategies have been reported. The Cochrane Review (Gillespie et al., 2010) has identified 111 intervention studies addressing various fall risk factors. The fall interventions include exercise programs, assessment of environmental hazards with modification, assessment of assistive device use, vision, footwear, educational programs, and medication management, to name a few. The American Geriatrics Society (2010) also lists similar interventions in their recent best practices guidelines. However, the Cochrane Review (Gillespie et al., 2010) notes that only exercise and gait training was found to reduce *both* risk and rate of falls. Multiple component group exercise, Tai Chi, and individually prescribed exercises carried out at home were among the most efficacious exercises. Moreover, exercise and gait training was found to have the best value per dollar invested. In addition to exercise intervention, the review identified gradual withdrawal of psychotropic drugs as useful in reducing fall rates, although not fall risk. Aside from these more specific interventions, both the Cochrane Review and the AGS best practice guidelines concurred in that they recommend individual and multifactorial intervention programs.

The consensus in the literature certainly illustrates the fact that injurious falls are a major threat to the health of elderly Canadians. With the aging population, the situation will further deteriorate in the years to come. Proactive action as well as sound research addressing trends and risk factors will equip practitioners, academics, and policy makers in this emerging health landscape.

Cross-References

▶ Elder Abuse and Neglect, Institutional
▶ Elderly Activity and Engagement with Life

References

American Geriatrics Society. (2010). *Clinical practice-guidelines*. Retrieved from http://www.american-geriatrics.org/health_care_professionals/clinical_practice/clinical_guidelines_recommendations/prevention_of_falls_summary_of_recommendations/Canadian

Gillespie, L. D., Robertson, M. C., Gillespie, W. J., Sherrington, C., Gates, S., Clemson, L. M., & Lamb, S. E. (2012). Interventions for preventing falls in older people living in the community. *Cochrane Database of Systematic Reviews*, *9*:CD007146. doi: 10.1002/14651858.CD007146.

Institute for Health Information [CIHI]. (2010). *Series on seniors: Seniors and falls*. Retrieved from http://www.cihi.ca/CIHI-ext-portal/pdf/internet/SENIORS_FALLS_INFO_EN

Johnson, C., Kelly, S., & Rasali, D. (2011). Age, sex and regional differences in fall injury hospitalization and survival rates among older adults living in Saskatchewan. In *Falls prevention in seniors across the continuum of care conference*. Saskatoon: Falls Prevention Conference.

Public Health Agency of Canada [PHAC]. (2005). *A report on seniors' falls in Canada*. Ottawa: Author.

Scott, V., Wagar, L., & Elliott, S. (2010). *Falls & related injuries among older Canadians: Fall-related hospitalizations & intervention initiatives*, Victoria. Retrieved from http://www.hiphealth.ca/media/research_cemfia_phac_epi_and_inventor_20100610.pdf

SMARTRISK. (2009). *The economic burden of injury in Canada*. Toronto: SMARTRISK. Retrieved from http://www.smartrisk.ca/downloads/burden/Canada2009/EBI-Eng-Final.pdf

FAMCARE-Patient Scale and Oncology Palliative Care

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Definition

Satisfaction with ▶ palliative care is related to both ▶ quality of life (Kaasa & Loge, 2003) and quality of death (Hales, Zimmermann, Rodin, 2008) but is a distinct concept that includes accessibility, coordination, and personalization of care; symptom management; communication; emotional support; and support around decision-making (Dy, Shugarman, Lorenz, Mularski, Lynn, 2008). To measure patient satisfaction with outpatient ▶ palliative care, we developed and validated the FAMCARE-Patient scale (FAMCARE-P; Lo et al. 2009a ; Lo, Burman, Rodin, Zimmermann 2009b). This scale was based on the FAMCARE scale, a 20-item self-report measure designed to measure satisfaction with palliative cancer care, as reported by caregivers (Kristjanson 1986, 1993). We modified the items so that they were phrased from a patient perspective, and performed an exploratory ▶ psychometric analysis (Lo et al., 2009a), followed by confirmatory analyses (Lo et al., 2009b). The resulting validated 13-item scale, the FAMCARE-P-13, has a one-factor structure with high ▶ reliability and good ▶ responsiveness to change. It may be used to assess satisfaction with outpatient ▶ palliative care interventions for patients with advanced cancer.

Description

The FAMCARE-P was developed from the FAMCARE scale, a 20-item self-report measure designed to measure informal caregiver satisfaction with palliative cancer care (Kristjanson 1986, 1993). Validation of the latter measure demonstrated that 19 of the 20 items load onto a single factor assessing family satisfaction (Ringdal, Jordhoy, Kaasa, 2003). The FAMCARE is generally completed by a caregiver one month after the death of a patient (Kristjanson, Leis, Koop, Carriere, Mueller, 1997). Given the paucity of validated measures of patient satisfaction with palliative ▶ oncology care and the face validity of the FAMCARE items for patient satisfaction, we modified the FAMCARE scale to generate a prospective measure of patient satisfaction with outpatient ▶ palliative care, the FAMCARE-P. An ▶ exploratory factor analysis (Lo et al., 2009a) and subsequent confirmatory analyses (Lo et al., 2009b) were conducted and are described in greater detail below.

Exploratory Psychometric Study

For the exploratory psychometric study, the study sample consisted of 145 patients recruited for a Phase II study evaluating the efficacy of an outpatient palliative care intervention in metastatic cancer (Follwell et al., 2009). In addition to the FAMCARE-P, patients completed the Edmonton Symptom Assessment Scale (ESAS) (Chang, Hwang, Feuerman, 2000), a validated, self-administered instrument used to measure the severity of common symptoms in patients with advanced incurable illness, and their physicians completed the Eastern Cooperative ▶ Oncology Group (ECOG) scale, a 6-point measure ranging between 0 (fully active) and 5 (dead) that assesses the patient's ability for self-care and ambulation (Oken et al., 1982). The ESAS Distress Score (EDS) was based on summing the 9 main ESAS symptom ratings (Bruera, Kuehn, Miller, Selmser, Macmillan, 1991). Data was collected from patients at three time points: at baseline, 1 week, and 1 month after their Oncology Palliative Care Clinic (OPCC) consultation. All analyses for this study were based on baseline measures only, completed prior to any contact with the ▶ palliative care team.

To construct the FAMCARE-P scale, we reworded items from the original 20-item FAMCARE to assess patient rather than caregiver satisfaction with care, by rewording relevant items, (e.g., "availability of doctors to the family" was changed to "availability of the doctor to your family"). We also dropped the following three items from the original scale: "time required to make a diagnosis," "availability of a hospital bed," and "family conferences held to discuss the patient's illness." The first item was found in a previous ▶ psychometric analysis to lack association with other FAMCARE items (Ringdal et al., 2003), the second was not relevant to outpatient settings, and the third was redundant with another item assessing family inclusion. This resulted in a FAMCARE-Patient scale with 17 items rated from 1 (very dissatisfied) to 5 (very satisfied).

An ▶ exploratory factor analysis was conducted on the 17 items to investigate their factor structure. Items loading poorly on a factor were dropped from further study. A total satisfaction score was based on summing the remaining items. To incorporate data from individuals who were missing up to 25 % of their items, we calculated a prorated summed total for each individual. This was done by calculating the average of the items that were actually completed by the participant and then multiplying by the total number of items in the scale (e.g., in the case of a 16-item scale, this would mean multiplying by 16). For individuals with more than 25 % missing items, we used multiple imputation to estimate their values. Lastly, to demonstrate ▶ construct validity, we calculated correlations between patient satisfaction and performance status and symptom burden.

With one exception, the items cohered into a single dominant factor representing patient satisfaction. Item 1 (your pain relief) loaded poorly on this factor and was dropped, producing a 16-item scale which we named the FAMCARE-P16 (Table 1). Of note, this was the sole item

FAMCARE-Patient Scale and Oncology Palliative Care, Table 1 The 16-item FAMCARE-Patient scale (FAMCARE-P-16) **1** = very dissatisfied, **2** = dissatisfied, **3** = undecided, **4** = satisfied, **5** = very satisfied (Reproduced with permission from Lo et al., 2009a.)

How satisfied are you with:	
1.	Doctor's attention to your description of symptoms.
2.	How thoroughly the doctor assesses your symptoms.
3.	Information given about how to manage pain.
4.	Information given about side effects.
5.	Speed with which symptoms are treated.
6.	Information given about your tests.
7.	The way tests and treatments are performed.
8.	The way tests and treatments are followed up by the doctor.
9.	Information provided about your prognosis.
10.	Answers from health professionals.
11.	Referrals to specialists.
12.	The availability of doctors to answer your questions.
13.	The availability of nurses to answer your questions.
14.	The way the family is included in treatment and care decisions.
15.	Coordination of care.
16.	The availability of the doctor to your family.

assessing an outcome of intervention, as opposed to its process. Many validated measures exist to separately assess severity of pain and other symptoms.

The total satisfaction score was uncorrelated with ECOG, but was negatively associated with EDS, $r = -0.19$, $p = 0.02$. In terms of individual ESAS items, satisfaction was negatively associated with depression ($r = -0.18$, $p = 0.03$) and ▶ anxiety ($r = -0.20$, $p = 0.01$). There were also marginal negative associations with ▶ fatigue ($r = -0.16$, $p = 0.06$) and poor appetite ($r = -0.15$, $p = 0.07$). Using a cutoff score of ≥ 64 (which equates to rating of 4 or "satisfied" across the 16 items), we found that 55 % of the sample could be classified as being generally satisfied with their care.

Confirmatory Psychometric Study

A subsequent study was undertaken to confirm the factor structure of the FAMCARE-P and to examine in greater detail its ▶ construct validity (Lo et al., 2009b). Patients with advanced cancer and their primary caregivers, who had been recruited as part of a ▶ cluster randomized controlled trial comparing early ▶ palliative care intervention with standard ▶ oncology care at Princess Margaret Cancer Centre, Toronto, were sampled. Patients had Stage IV gastrointestinal, genitourinary, breast or gynecological cancer; Stage III/IV lung cancer; hormone refractory prostate cancer; or locally advanced pancreatic cancer; age ≥ 18 years, ECOG 0–2, and an estimated prognosis of 6 months to 2 years.

Patients completed FAMCARE-P16, ESAS, and two additional scales. The Communication with Health Care Providers Medical Interaction Subscale (CARES) assesses the extent to which patients have negative interactions with healthcare personnel (Schag et al., 1990). The QUAL-E Relationship with Healthcare Provider Subscale assesses the degree to which patients feel informed and actively involved in their treatment (Steinhauser et al., 2004). ECOG was also estimated for each patient. Caregivers completed the 19-item version of the FAMCARE scale. The item "time required to make a diagnosis" was omitted as it was found to be poorly associated with the other items in a validation study of the original 20-item measure (Ringdal et al., 2003). This amended caregiver version of FAMCARE is subsequently referred to as FAMCARE-C19. Of 678 patients and 262 caregivers approached, 331 patients and 140 caregivers were recruited, and 314 patients and 136 caregivers provided usable baseline data.

Confirmatory factor analysis (CFA) was used to test the hypothesis that the FAMCARE-P16 items cohere into a single factor. A good fit of this structure to the data is indicated by a comparative fit index (CFI) ≥ 0.90, a non-normed fit index (NNFI) ≥ 0.90, and a root mean square error of approximation (RMSEA) ≤ 0.10. In the event of poor fit, we used modification indices to suggest sources of error and revisions to the scale. To assess ▶ construct validity, patient satisfaction with care was correlated with performance status, symptom burden, communication and relationship with healthcare providers, and caregiver satisfaction with care. To assess responsiveness of the scale to change, data from our former trial was reexamined (Follwell et al., 2009). We calculated confidence intervals to examine changes in satisfaction from baseline to 1 week and from baseline to 1 month.

A one-factor structure had slightly poor fit to the items of the FAMCARE-P16, CFI = 0.88, NNFI = 0.86, and RMSEA = 0.11. The lack of fit was attributable to certain items being too similar or redundant in content, such that they suggested the presence of smaller factors. Item 15 (coordination of care) and item 16 (the availability of doctors to your family) were dropped from the scale due to multiple dependencies with other items. Item 1 (doctor's attention to your description of symptoms) was removed as it overlapped considerably with item 2 (how thoroughly the doctor assesses your symptoms). Item pair 3 (information given about to manage pain) and 4 (information given about side effects) and item pair 9 (information provided about your prognosis) and 10 (answers from health professionals) were problematic, but it was unclear which item from each pair should be dropped. Instead, correlated error terms were specified within each pair. Following these changes, a one-factor model had good fit to the remaining 13 items,

FAMCARE-Patient Scale and Oncology Palliative Care, Table 2 The 13-item FAMCARE-Patient scale (FAMCARE-P13) **1** = very dissatisfied, **2** = dissatisfied, **3** = undecided, **4** = satisfied, **5** = very satisfied (Reproduced with permission from Lo et al., 2009a)

How satisfied are you with:	
1.	How thoroughly the doctor assesses your symptoms.
2.	Information given about how to manage pain.
3.	The availability of nurses to answer your questions.
4.	Information provided about your prognosis.
5.	Speed with which symptoms are treated.
6.	Information given about your tests.
7.	The way tests and treatments are performed.
8.	The availability of doctors to answer your questions.
9.	Answers from health professionals.
10.	Referrals to specialists.
11.	The way tests and treatments are followed up by the doctor.
12.	Information given about side effects.
13.	The way the family is included in treatment and care decisions.

CFI = 0.95, NNFI = 0.94, RMSEA = 0.076. This 13-item version of the scale is referred to as FAMCARE-P13 (Table 2). Internal reliabilities for the 13- and 16-item scales were high, with ▶ Cronbach's alpha 0.93 and 0.94, respectively.

Summed scores for FAMCARE-P13 were calculated and correlated with ECOG, EDS, individual ESAS items, CARES Medical Interaction Subscale, QUAL-E Relationship with Healthcare Provider Subscale, and FAMCARE-C19. All correlations were significant at $p < .05$. Patient satisfaction as assessed by the 13-item instrument was negatively associated with ECOG ($r = -0.15$), EDS ($r = -0.36$), and CARES Medical Interaction ($r = -0.50$). Significant negative associations were found with all individual ESAS symptoms, ranging from $r = -0.12$ to -0.34. The 13-item scale was also positively associated with QUAL-E relationship with healthcare provider ($r = 0.55$) and caregiver satisfaction with care as measured by the FAMCARE-C19 ($r = 0.54$). The 16-item version of the scale performed no differently from the 13-item version.

For the 13-item scale, 63 % could be categorized as generally satisfied with their medical care based on a cutoff value of ≥ 52 (which equates to rating of 4 or "satisfied" across 13 items). For the 16-item scale, 62 % of patients could be categorized as generally satisfied based on a cutoff value of ≥ 64 (which equates to rating of 4 or "satisfied" across 16 items).

We reanalyzed data from our Phase II trial (Follwell et al., 2009) to examine the responsiveness of the 13-item scale to change over time. Relative to baseline, we found a significant mean increase of 4.4 points, 95 % CI (2.5, 6.3), at 1 week, and a significant mean increase of 3.6 points, 95 % CI (1.5, 5.8), at 1 month in response to intervention. These findings also held for the 16-item version of the scale which showed a mean increase in satisfaction of 5.7 points, 95 % CI (3.4, 8.0), at 1 week compared to baseline, and a mean increase of 4.7 points, 95 % CI (2.1, 7.2), at 1 month compared to baseline.

Discussion

We have developed and validated a modified FAMCARE scale for the assessment of patient satisfaction with ▶ palliative care in outpatients with advanced cancer. The FAMCARE-P specifically measures patient satisfaction with ▶ palliative care and includes items considered particularly important at the end of life. It was developed and validated in a ▶ palliative care outpatient setting, and we recommend its use in this setting both clinically and in research. This may be of particular relevance, given the growing interest in palliative outpatient care. Given the specific nature of its development and validation, we cannot recommend its use in non-oncology palliative populations or in inpatient ▶ palliative care settings. There is a need for specific measures for satisfaction with palliative inpatient care and non-oncology ▶ palliative care that are developed and validated in these populations and settings.

Both the FAMCARE-P16 and FAMCARE-P13 are appropriate for use in clinical and research settings to assess satisfaction with outpatient ▶ palliative care. Both were associated in hypothesized directions with related constructs, including symptom severity, satisfaction with communication, caregiver satisfaction with care,

and patient ▶ quality of life, and both were responsive to change. We would recommend using the 13-item scale, which has a stronger one-factor structure and is also slightly shorter, thereby minimizing patient burden.

The FAMCARE-P may be useful to ▶ palliative care and ▶ oncology clinicians, researchers, and other health professionals in evaluating satisfaction with palliative outpatient care in patients with advanced and progressive cancer. Furthermore, its development from a preexisting caregiver tool, FAMCARE, allows for simultaneous patient and caregiver measurement across similar domains of satisfaction with care, so that patient and caregiver ratings can be readily compared. Its ▶ responsiveness to change adds an additional dimension to its utility for prospective studies and clinical trials assessing satisfaction with oncology palliative care.

Cross-References

▶ Medical Care, Satisfaction with

References

Bruera, E., Kuehn, N., Miller, M. J., Selmser, P., & Macmillan, K. (1991). The Edmonton symptom assessment system (ESAS): A simple method for the assessment of palliative care patients. *Journal of Palliative Care, 7*, 6–9.

Chang, V. T., Hwang, S. S., & Feuerman, M. (2000). Validation of the Edmonton symptom assessment scale. *Cancer, 88*, 2164–2171.

Dy, S. M., Shugarman, L. R., Lorenz, K. A., Mularski, R. A., & Lynn, J. (2008). Systematic review of satisfaction with care at the end of life. *Journal of American Geriatric Society, 56*, 124–129.

Follwell, M., Burman, D., Le, L., Wakimoto, K., Seccareccia, D., Bryson, J., et al. (2009). Phase II study of an outpatient palliative care intervention in patients with metastatic cancer. *Journal of Clinical Oncology, 27*, 206–213.

Hales, S., Zimmermann, C., & Rodin, G. (2008). The quality of dying and death. *Archives of Internal Medicine, 168*, 912–918.

Kaasa, S., & Loge, J. H. (2003). Quality of life in palliative care: Principles and practice. *Palliative Medicine, 17*, 11–20.

Kristjanson, L. J. (1986). Indicators of quality of palliative care from a family perspective. *Journal of Palliative Care, 1*, 8–17.

Kristjanson, L. J. (1993). Validity and reliability testing of the FAMCARE scale: Measuring family satisfaction with advanced cancer care. *Social Science & Medicine, 36*, 693–701.

Kristjanson, L. J., Leis, A., Koop, P., Carriere, K. C., & Mueller, B. (1997). Family members' care expectations, care perceptions, and satisfaction with advanced cancer care: results of a multi-site pilot study. *Journal of Palliative Care, 13*, 5–13.

Lo, C., Burman, D., Hales, S., Swami, N., Rodin, G., & Zimmermann, C. (2009). The FAMCARE-Patient scale: Measuring satisfaction with care of outpatients with advanced cancer. *European Journal of Cancer, 45*, 3182–3188.

Lo, C., Burman, D., Rodin, G., & Zimmermann, C. (2009a). Measuring patient satisfaction in oncology palliative care: Psychometric properties of the FAMCARE-patient scale. *Quality of Life Research, 18*, 747–752.

Oken, M. M., Creech, R. H., Tormey, D. C., Horton, J., Davis, T. E., McFadden, E. T., & Carbone, P. P. (1982). Toxicity and response criteria of the eastern cooperative oncology group. *American Journal of Clinical Oncology, 5*, 649–655.

Ringdal, G. I., Jordhoy, M. S., & Kaasa, S. (2003). Measuring quality of palliative care: Psychometric properties of the FAMCARE scale. *Quality of Life Research, 12*(2), 167–176.

Schag, C. A., Heinrich, R. L., Aadland, R. L., & Ganz, P. A. (1990). Assessing problems of cancer patients: Psychometric properties of the cancer inventory of problem situations. *Health Psychology, 9*(1), 83–102.

Steinhauser, K. E., Clipp, E. C., Bosworth, H. B., McNeilly, M., Christakis, N. A., Voils, C. I., & Tulsky, J. A. (2004). Measuring quality of life at the end of life: Validation of the QUAL-E. *Palliative & Supportive Care, 2*(1), 3–14.

Families of Individuals with Developmental Disabilities in Israel

▶ Israel, Personal Well-Being Index; Application to Different Population Group

Family

▶ Caregiving, Family

Family Adaptability, Partnership, Growth, Affection, and Resolve (Family APGAR)

► Mothers' Reports of Child Outcomes in Those with New-Onset Epilepsy

Family and Individual Factors Associated with Risky Sex

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Synonyms

Casual sex; Early sexual debut; Sociosexuality; Unprotected or unsafe sex

Definition

Risky sexual behaviors are defined in the research literature as early sexual debut, sex without condoms, and sex with multiple casual partners.

Description

Risky sexual behavior is a source of major concern for parents, practitioners, researchers, and public policy makers. Risky sexual behaviors include early sexual debut, low rates of condom use, and high rates of partner change, including having multiple casual partners (Landor, Simons, Simons, Brody & Gibbons, 2011; Simons, Burt & Peterson, 2009; Simons, Burt & Tambling, 2013). Participation in such behaviors has many serious implications related to matters associated with quality of life. For instance, having unprotected sex is associated with higher rates of unplanned pregnancy. Further, adolescent women who become pregnant are likely to achieve a lower education level than their peers who delay pregnancy. For example, only about 50 % of teen mothers graduate high school by the time they are 22-years-old compared with 90 % of women who did not have a child during their teenage years (Hoffman & Maynard, 2008).

Risky sex can also have serious implications for physical and mental health. With unprotected sex, there is an increased risk of contracting sexually transmitted infections including HIV/AIDS and HPV, the latter of which, according to the National Cancer Institute, is the cause of almost all cancers of the cervix and more than half of cases of throat cancer. Other sexually transmitted infections, such as chlamydia and gonorrhea, are related to infertility, especially in women (Center for Disease Control [CDC], 2011). Risky sexual behaviors also have important implications for mental health. Having sex with a series of casual partners is associated with greater psychological distress, including depression and anxiety, especially among women (Regnerus & Uecker, 2011).

Recent research indicates that the average age at first intercourse for males declined from 18.2 years in the mid-1960s to 15.1 years in the late 1990s (Wells & Twenge, 2005). During the same period, the average age for females declined from 18.5 years to 15.2 years (Wells and Twenge). Importantly, early sexual debut is positively correlated with the number of lifetime partners which is, in turn, positively related to incidence of extramarital sex (O'Connor, 2001). Both number of premarital sex partners and infidelity are predictive of marital instability (Teachman, 2003). Therefore, risky sexual behavior during adolescence and emerging adulthood can potentially have negative consequences in both the short and long term. Thus, early sexual debut, sex without condoms, and multiple sexual partners can potentially launch an adolescent on a troublesome life course trajectory of cumulative disadvantage, which can seriously compromise overall quality of life.

There have been a number of factors examined as potential predictors of participation in risky

sexual behavior. One of the most influential factors is the family of origin. For most individuals, the dominant developmental context is the family. The family serves as the primary agent of socialization and social control for children and adolescents. There is strong evidence that experiences in the family of origin are related to later participation in risky sex. For example, research has established that certain parental behaviors are associated with adolescents' risky sexual behaviors.

Specifically, many studies have found that having warm and supportive parents is a protective factor against participation in risky sex (Landor et al., 2011; Miller, Benson, & Galbraith, 2001; Simons et al., 2013). In general, parents want their offspring to develop a safe, responsible approach to sex. Warm, supportive parents tend to have open lines of communication with their teens and engage in discussion of difficult topics such as sex. Parent-youth discussions about sexual risks have been linked to delayed onset of intercourse and avoidance of risk behavior among adolescents (Landor et al., 2011). This is particularly true for females. Women who report supportive, protective parenting, which includes frank discussions about sexual risk, are more likely to use condoms consistently (Kogan, Simons, Chen, Burwell, & Brody, 2013). Further, offspring who have a close relationship with their parents are more likely to espouse values similar to those of their parents.

Parenting that is characterized by high levels of warmth and nurturance is related to a variety of positive youth outcomes while parents who display little warmth or support may increase their child's chances of problem behaviors, including participation in risky sex. One avenue through which this occurs is the insecure attachment styles and associated relational models fostered by their parenting behavior. Parents low in warmth and support tend to foster a cynical view of intimate relationships on the part of children, and this view of relationships is, in turn, associated with an offspring's preference for short-term sexual liaisons involving little commitment or intimacy. Further, exposure to harsh, rejecting parenting is related to the development of a distrustful view of others, and the romantic relationships of such individuals are often superficial, volatile, and unstable (Simons, Burt, & Simons, 2008). Such a troubled, distant relationship with parents can promote an avoidant attachment style accompanied by an emotionally uninvolved approach to relationships in which sex is considered a casual enjoyment rather than an expression of love and intimacy (Simons et al., 2008).

On the other hand, an unstable or unpredictable relationship with parents may foster an anxious attachment style in offspring that includes a model of relationships in which the child craves love but fears rejection. This may lead to promiscuity in an attempt to achieve intimacy. Indeed, there is evidence that anxiously attached individuals may use sex early in a relationship or engage in casual sex as a means of gaining acceptance from a partner (Bogaert & Sadava, 2002). Either of these two approaches to sex and relationships is associated with behaviors that have an increased risk in terms of health outcomes and their attending consequences.

Parental monitoring regarding dating partners and peers of offspring is also a key factor in deterring some risky sexual behaviors (Landor et al., 2011). Parents play a major role in the peer affiliations of their offspring, and, in turn, peers exert significant influence on adolescents' attitudes and behaviors about a number of issues including sex. Affiliation with sexually active peers is associated with participation in risky sex by adolescents (Landor et al., 2008). Having a high proportion of friends who are (or are thought to be) engaging in sex and believing that one can gain friends' acceptance or respect by having sex are predictive of early sexual debut among adolescents (Kogan et al., 2013). Sexually active peers appear to exert their impact on risky sexual behaviors both directly, as well as indirectly, by promoting more favorable attitudes about sex (Roberts et al., 2012). Alternatively, the norms and values associated with a less sexually permissive peer group are associated with delayed sexual debut and fewer sexual partners during adolescence. Because a child's friendship

choices are influenced by authoritative parenting practices, parents who are involved and engage in high levels of monitoring can influence the peer group with whom offspring affiliate. Monitoring can also help parents keep track of who their offspring are dating. This can be important because, among other reasons, dating older boys is associated with earlier sexual debut for girls.

Parental monitoring and supervision also play an important role in adolescents' sexual behavior by providing fewer opportunities to engage in sex. An example of this includes having a parent or caretaker at home after the youth returns from school. This is important because there is evidence that the most common place and time for adolescents to engage in sex is in their empty home in the hours at the end of the school day prior to a parent(s) returning home from work. Having an adult supervising the adolescent dramatically reduces the chances of this occurring.

The ability to effectively supervise adolescents is compromised when there is only one parent or caretaker in the role of supervisor. Single and divorced parents' ability to exert control over or to monitor and discipline their offspring is lessened, especially when that adult is employed full time. This, in turn, is associated with more unsupervised time for the adolescent. Lower levels of control, monitoring, and discipline have all been linked to a variety of problem behaviors, including early sexual debut (Breivik, Olweus, & Endresen, 2009). Thus, individuals who live in single parent homes tend to engage in sexual intercourse earlier and to have more sexual partners than their peers from homes with two parents or caretakers (Miller et al., 2001), in part because of differences in some aspects of parenting such as monitoring.

A reduced ability to supervise on the part of the custodial parent is not the only reason that individuals reared in single parent homes are at greater risk for participation in risky sexual behaviors. Indeed, a large body of research indicates that family structure is related to adolescents' attitudes and behaviors regarding sex for a variety of reasons. For both males and females, parental separation or divorce is related to teen pregnancy, participation in casual sex, and frequency of intercourse (Miller et al., 2001). Other studies report that post-divorce parental relationship transitions such as dating and re-partnering are related to adolescents' early sexual debut, lower rates of contraceptive use, and an increased risk of teen pregnancy (Lohman & Billings, 2007). Research suggests that this is partly due to the fact that divorced mothers develop less restrictive attitudes toward sex and that their daughters perceive this shift in attitude, subsequently developing a more casual attitude toward sex themselves (Whitbeck, Simons, & Kao, 1994).

Such attitudes about sex are important because they can have important consequences for later sexual behavior. For instance, a psychological preference for casual or uncommitted sex, also known as high sociosexuality, is positively related to earlier sexual debut and engaging in casual sex (Simons et al., 2013) as well as having a greater number of partners (Kan, Cheng, Landale, & McHale, 2010). Individuals who have a preference for casual sex versus sex within a meaningful relationship may have early sexual encounters that color how they perceive future relationships, though this varies by gender. For instance, when sexual debut is accompanied by negative feelings about the experience, females, but not males, are likely to have increased numbers of casual sex partners in the future (Simons et al., 2009). This may be because, in addition to the often emotionally unsatisfying aspect of casual sex, the initial experience is often less physically satisfying for girls than boys. If the first sexual encounter does not live up to expectations, girls may then try to seek out additional opportunities to experience a positive sexual encounter. Conversely, females who first experience sex in a close, committed relationship are more likely to report positive feelings about the experience and, in turn, fewer casual sex partners in the future.

Sociosexual orientation is important when it comes to the characteristics one desires in a sexual partner as well. Research shows that casual sexual encounters in which the partner is a stranger or friend are often superficial, based on

sexual desire or physical attraction, spontaneous, and frequently involve drugs or alcohol. Individuals who choose partners based upon such criteria are more likely to engage in casual sex with multiple partners, thus potentially putting them at risk for the type of negative outcomes identified previously. Alternatively, individuals who seek high commitment partners, such as potential marital partners, tend to desire and pursue sex as part of a loving, committed relationship (Simons et al., 2013).

Often an individual's attitudes about sex, relationships, and desirable partner characteristics can be traced to the family of origin. For instance, belief that one can sustain a long-term marriage may color one's sexual behavior during adolescence. Individuals who have experienced divorce in their family of origin are more likely to believe that their own marriage will end in divorce (Amato & DeBoer, 2001). On the other hand, individuals from continuously married families are more committed to marriage and have a less casual approach to sex, both of which reduce the probability of engaging in risky sexual behavior. This suggests that attitudes such as one's orientation toward marriage, an important factor in understanding an individual's approach to sex and relationships, have their origins in the family.

Another important factor in understanding individuals' approach to sex and relationships is religiosity. The higher the degree of religious commitment and participation, the less likely an individual is to engage in early sex or to have multiple sexual partners (Landor et al., 2011; Simons et al., 2009). Children tend to be exposed to religious teachings through parents, and such teachings are one mechanism by which parents may socialize their offspring to family values and behavioral expectations. Because youth with supportive, involved parents are more likely to adopt their parents' values, authoritative parenting by religious parents may increase the chances that adolescent offspring will adopt their conventional values and eschew risky sexual behavior.

Further, religious parents influence their child's social context by encouraging involvement in religious services and activities where they are exposed to a network of peers with conventional beliefs and values who eschew permissive sex (Landor et al., 2011). Having such peers is, in turn, associated with reduced participation in some risky sexual behaviors. Specifically, this more conservative perspective on sex among religious adolescents is associated with an older age at sexual debut and the likelihood that first intercourse is with a fiancé or spouse. Both of these, in turn, reduce the probability of having a large number of subsequent sexual partners.

However, there is evidence of an interesting paradox regarding religiosity and one aspect of risky sexual behavior: condom use (Landor & Simons in press). Though highly religious individuals delay sexual debut, when they do have sex, it is often unprotected sex. This may be because highly religious youth may be exposed to "abstinence-only" sex education which does not include messages about safer sex. Thus, such individuals may not be prepared to make informed decisions about protecting their sexual health. Despite this caveat, religiosity is, overall, negatively associated with engaging in risky sex.

In summary, family of origin factors, such as parenting and family structure, are highly influential in the sexual behaviors of adolescents and emerging adults. These factors are related to risky sex through their influence on an individual's attitudes, beliefs, working models of relationships, and selection of peers and romantic partners. The most important things that parents can do to reduce risky behaviors among youth are to engage in high levels of warm, supportive parenting that includes vigilant monitoring of activities and peers as well as open discussions about sex, intimate relationships, desirable partner attributes, and safer sex practices.

References

Amato, P. R., & DeBoer, D. D. (2001). The transmission of marital instability across generations: Relationship skills or commitment to marriage? *Journal of Marriage and Family, 63*, 1038–1051.

Bogaert, A. F., & Sadava, S. (2002). Adult attachment and sexual behavior. *Personal Relationships, 9*, 191–204.

Breivik, K., Olweus, D., & Endresen, I. (2009). Does the quality of parent-child relationships mediate the increased risk for antisocial behavior and substance use among adolescents in single-mother and single-father families? *Journal of Marriage and Divorce, 50*, 400–426.

Center for Disease Control. (2011). *Teen pregnancy: Improving the lives of young people and strengthening communities by reducing teen pregnancy*. Atlanta, GA. Retrieved December 1, 2012, from http://www.cdc.gov/chronicdisease/resources/publications/aag/pdf/2011/Teen-Pregnancy-AAG-2011_508.pdf

Hoffman, S. D. & Maynard, R. A. (Eds.) (2008). Kids having kids: Economic costs and social consequences of teen pregnancy. Washington, D.C.: Urban Institute Press.

Kan, M. L., Cheng, Y. A., Landale, N. S., & McHale, S. M. (2010). Longitudinal predictors of change in number of sexual partners across adolescence and early adulthood. *Journal of Adolescent Health, 46*, 25–31.

Kogan, S., Simons, L. G., Chen, Y. F., Burwell, S. B., & Brody, G. (2013). Protective parenting, relationship power equity, and condom use among rural African Americans in emerging adulthood. *Family Relations, 62*, 341–353.

Landor, A., Simons, L. G., Simons, R. L., Brody, G. H., & Gibbons, F. X. (2011). The influence of religion on African American adolescents' risky sexual behavior. *Journal of Youth and Adolescence, 40*, 296–309.

Landor, A. M., & Simons, L. G. (in press). Why virginity pledges succeed or fail: The moderating role of religiosity. *Journal of Child and Family Studies*.

Lohman, B. J., & Billings, A. (2007). Protective and risk factors associated with adolescent boys' early sexual debut and risky sexual behaviors. *Journal of Youth and Adolescence, 37*, 723–735.

Miller, B. C., Benson, B., & Galbraith, K. A. (2001). Family relationships and adolescent pregnancy risk: A research synthesis. *Developmental Review, 21*, 1–38.

O'Connor, M. L. (2001). Men who have many sexual partners before marriage are more likely to engage in extramarital sex. *International Family Planning Perspectives, 27*, 48–49.

Regnerus, M., & Uecker, J. (2011). *Premarital sex in America: How young Americans meet, mate, and think about marrying*. New York: Oxford University Press.

Roberts, M., Gibbons, F., Gerrard, M., Weng, C. Y., Murry, V., Simons, L. G., et al. (2012). From racial discrimination to risky sex: Prospective relations involving parents and peers. *Developmental Psychology, 48*, 89–102.

Simons, L. G., Burt, C. H., & Tambling, R. (2013). Identifying mediators for the influence of family factors on risky sexual behavior. *Journal of Child and Family Studies, 22*, 460–470.

Simons, L. G., Burt, C. H., & Peterson, F. R. (2009). The effect of religiosity on risky sexual behaviors among college students. *Deviant Behavior, 30*, 467–485.

Simons, L. G., Burt, C. H., & Simons, R. L. (2008). A test of explanations for the effect of harsh parenting on the perpetration of dating violence and sexual coercion among college males. *Violence and Victims, 23*, 66–82.

Teachman, J. (2003). Premarital sex, premarital cohabitation, and the risk of subsequent marital dissolution among women. *Journal of Marriage and Family, 65*, 444–455.

Wells, B. E., & Twenge, J. (2005). Changes in young people's sexual behavior and attitudes, 1943-1999: A cross-temporal meta-analysis. *Review of General Psychology, 9*, 249–261.

Whitbeck, L. B., Simons, R. L., & Kao, M. (1994). The effects of divorced mothers' dating behaviors and sexual attitudes on the sexual attitudes and behaviors of their adolescent children. *Journal of Marriage and the Family, 56*, 615–621.

Family Background

▶ Socioeconomic Status (SES)

Family Boundaries

▶ Family Differentiation

Family Care

▶ Care, Residential

Family Caregiver Well-Being

▶ Well-Being of Spouses of Persons with Mild Cognitive Impairment

Family Caregiving

▶ Caregiving, Family

Family Change or Transition

▶ Family Stress

Family Closeness

▶ Family Intimacy Measures

Family Cohesion

▶ Family Intimacy Measures

Family Components

▶ Family Structure

Family Conflicts

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Definition

Family conflict refers to active opposition between family members. Because of the nature of family relationships, it can take a wide variety of forms, including verbal, physical, sexual, financial, or psychological. Conflicts may involve different combinations of family members: it can be conflict within the couple or between parents and children or, again, between siblings.

All interpersonal conflicts, whether they occur between family members, romantic partners, or groups, have certain elements in common. One of the popular definitions of conflict offered by Coser (1956) asserts that conflict is a "struggle over values and claims to scarce status, power, and resources in which the aims of the opponents are to neutralize, injure or eliminate the rival" (p. 8).

In 1973, Deutsch maintained that conflict "exists whenever incompatible activities occur. . . an action which prevents, obstructs, interferes with, injures or in some way makes (resolution) less likely or less effective" (p. 156). Other definitions add to incompatibility of action and also to incompatibility regarding cognition and perceptions: Pruitt and Rubin (1986) assert that conflict is a perceived divergence of interests or the belief that the aspirations of the parties involved cannot be reached simultaneously. Perceptions of reality as well as those of the self, of others, and of relations are, at core, all of conflict. Moreover, conflict is present when there are joint communicative representations of it (Wilmot & Hocker, 2007).

In the 1990s, various definitions proposed, besides underscoring the behavioral, cognitive, affective, and social aspects, repeatedly highlight the role that "purpose" covers plays within the conflictual process.

In 1994, Boardman and Horowitz define conflict as an incompatibility of behaviors, cognition (including purposes) and/or affects between individuals and groups which can lead, or not, to an aggressive expression of this social incompatibility. In the latter definition, also shared by others (see Glasl, 1997), behavioral, cognitive, and affective behaviors are thus present, all held to be equally important within the conflictual process, as well as an explicit reference to the social context in which the conflict takes place and within which, therefore, it must be interpreted.

Description

Often family conflict has been interpreted as a sign of family decline (Widmer, 2010). Laursen and Collins (1994) instead suggest that the majority of developmental theories predict significant alterations in parent-child interactions as a function of maturation (see psychoanalytic models and sociobiological models).

Margolin (1988) noted that imprecision in the definition of conflict led to several areas of confusion. First, the term conflict is used when what is really meant is destructive conflict; it is important that destructive conflict be differentiated from benign or even constructive conflict. Second, in the marital literature, conflictual relationship sometimes is used interchangeably with distressed marriage. This leads to the mistaken conclusion that all distressed marriages are conflicted and the term "conflicted" itself is problematic in that calling some families conflicted over resources and power are related. Finally, Margolin noted that the term "conflicted" itself is problematic and suggests that there are families without conflict. In any close-knit group, conflicts over resources and power are related, and the implication that there are family relationships without some conflict is probably misleading.

Each family's members' own ► interdependence often creates tensions and ambivalences. In the majority of cases, family members do not develop conflictual attitudes because they want the relation to end: on the contrary, they try to maintain it but to change some of its aspects (Widmer, 1999). If a family member has a conflict with another one, it is because the interdependence that connects him/her to other individuals is the object of evaluation: through conflict, new interdependencies are sought.

A further source of confusion can be found in the term disagreement. This term designates the individual perception of incompatibility and divergence of ideas and goals. It expresses, in fact, even etymologically, negation (*dis*agreement). Van de Vliert and De Dreu (1994) speaks of disagreement as a cognitive and/or affective experience that is generated when a person perceives himself/herself to be hindered or irritated by another person and has the perception of the impossibility of achieving his/her own goals. The breadth or intensity of the disagreement can vary: a conflict decreases when the disagreement decreases and increases when the disagreement increases. Disagreement thus indicates a precise event; it points to a static image, while conflict points to a dynamic image, a relational process of which disagreement represents the first stage.

The term conflict refers more precisely to the interactive modality with which disagreement is managed, that is, to how the relation evolves following a disagreement. In this case, as well, the etymology carries out an explanatory function. The prefix *cum-* immediately calls to mind the idea of relation, even if in terms of "struggle" (*cum-fligo*). We could thus say that the term conflict implies the term disagreement.

An interesting distinction in this connection was proposed by Deutsch (1973), who distinguished between destructive and constructive conflict. The first was described as an interpersonal process in which there is escalation beyond the initial issue and reliance on threats and coercion as strategies. Constructive conflict was characterized as issue focused and involving negotiation and mutual problem solving. In line with these notions, Shantz and Hobart (1989) proposed that conflict is a process that contributes to individual and social development. Gottman and Katz (1989) suggest that conflict may be a process that contributes to the maintenance of closeness and intimacy in couple relationships. This more subtle view of conflict stands in contrast to a view of conflict as completely negative and something that must be avoided, with harmony as the ideal state for families. They considered the role conflict might have in establishing and maintaining individuation and connectedness in suggesting that "everyday give-and-take, the minor and major conflicts with parents, siblings, and peers also contribute to individuation – precisely because such conflicts highlight, at the moment they occur, one's differences from others" (p.89).

Three characteristics distinguish family conflict from other types: intensity, complexity, and the duration of relationships. First, relationships between family members are typically the closest, most emotionally intense of any in the human experience (Bowlby, 1982). The bonds between adult partners, between parents and children, or between siblings involve the highest level of attachment, affection, and commitment. There is typically daily contact for many years

that bonds individuals together. When serious problems emerge in these relationships, the intense positive emotional investment can be transformed into intense negative emotion Family conflicts are typically more intense than conflict in other groups. This intensity means that managing conflicts may be more difficult in families and that their consequences can be more damaging.

The second distinguishing feature of family conflicts, complexity, is especially important for understanding their sometimes baffling characteristics. Positive emotional bonds outweigh the pain involved with the conflicts (e.g., Wallace, 1996). These are examples of the most pertinent type of complexity in family relationships-ambivalence. The person is loved, but they do things that produce hate as well. The web of family relationships includes dimensions such as love, respect, friendship, hate, resentment, jealousy, rivalry, and disapproval. Several of these dimensions are typically present in any given family relationship. Frequent family conflict may not be a problem if there are even more frequent displays of bonding behaviors. The course of conflict often depends on which dimensions are active in a relationship. Recognizing the multiple dimensions of conflict is a prerequisite for helping families deal more effectively with their problems.

The third distinguishing feature of family conflict is the duration of the relationships, the duration of some conflicts, and the long-term effects of dysfunctional conflict patterns. Family relationships last a lifetime (White, 2001). A person's parents and siblings will always be their parents and siblings. Thus serious conflictual relationships within families can continue for longer periods. Such extended exposure increases the risk of harm from the conflict. It is possible to escape such relationships through running away from home, divorce, or estrangement from family ties. But even after contact has been stopped, there are residual psychological effects from the conflict.

Family conflict often involves more than two individuals. A third family member can be drawn into dyadic conflict to take sides in disputes. Such coalitions may be short-lived or become a permanent part of family life. They are common and can be beneficial. For example, parents typically side with each other in disputes with their children. This helps parents maintain order and is especially useful in large families.

Conflict is normal given that a marriage is a merger between two different family systems and different generations. These conflicts can become severe if there are also ethnic, cultural, or religious differences involved.

Recent research has emphasized the*bidirectionality* of parent-child conflict (Eisenberg, 1992; Patterson, 1982). Bidirectionality means that just as parents' behaviors influence children, children's behaviors influence parents. For example, Gerald Patterson's theory of coercive control suggests that parents adapt their conflict management behaviors to children's coercive behaviors (e.g., yelling and ignoring the parent) rather than the reverse.

Families show different styles in managing conflict. There are (1) avoidant families, (2) collaborative families, or (3) aggressive families.

The impact of conflict on the well-being of family members depends on the way in which conflict is resolved. From an analysis of the literature, in fact, two concepts emerge that indicate the negative or positive outcome of conflict, identifiable in escalation or intimacy (Gugliemetti, Iafrate, & Lanz, 1997; Honess et al., 1997).

The term intimacy describes the perception of closeness and of intimacy which is reached following a conflict conducted with constructive modalities: once the conflict has been exhausted, the spouses reach an emotional reconciliation that reassures them and reaffirms the positive nature of their bond, sometimes leading to an improvement of the quality of their marital relation (Scabini & Greco, 1999). In this way, the conflict not only would not intensify but, on the contrary, starting from many areas of disagreement, would be reduced to progressively more delimited topics (De-Escalation) (Pruitt, 1981).

On the other hand, *escalation* of conflict, that is, the negative outcome, describes the expansion and progressive accentuation of the intensity and the areas involved in the conflict, which

reaches a destructive conclusion: there emerge tensions, resentment, recriminations, feelings of delusion, and incomprehension (Scabini, 1995). It is the escalatory spiral in which the relationship continues to circle around to more and more demanding ends.

Cross-References

► Interdependence

References

Boardman, S. K., & Horowitz, S. V. (1994). Constructive conflict management and social problems: An introduction. *Journal of Social Issues, 50*(1), 1–12.

Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). New York: Basic Books.

Coser, L. A. (1956). *The functions of social conflict*. Glencoe, IL: The Free Press.

Deutsch, M. (1973). *The resolution of conflicts: Constructive and destructive processes*. New Haven, CT: Yale University Press.

Eisenberg, A. R. (1992). Conflicts between mothers and their young children. *Merrill-Palmer Quarterly, 38*, 21–43.

Glasl, F. (1997). *Konfliktmanagement. Ein handbuch für führungskräfte, beraterinnen und berater*. Bern-Stuttgar, Germany: Paul Haupt-Freies Geistesleben.

Gottman, J. M., & Katz, L. F. (1989). Effects of marital discord on children's peer interaction and health. *Developmental Psychology, 25*, 373–381.

Gugliemetti, C., Iafrate, R., & Lanz, M. (1997). Stili ed esiti di conflitto coniugale: differenze di genere e di prospettiva [Styles and outcomes of conjugal conflict: Differences in gender and perspective]. *Archivio di Psicologia, Neurologia e Psichiatria [Archive of psychology, neurology and psychiatry], 58*, 599–610.

Honess, T. M., Charman, E. A., Zani, B., Cicognani, E., Xerri, M. L., Jackson, A. E., & Bosma, H. A. (1997). Conflict between parents and adolescents: Variation by family constitution. *British Journal of Developmental Psychology, 15*, 367–385.

Laursen, B., & Collins, W. A. (1994). Interpersonal conflict during adolescence. *Psychological Bulletin, 115*, 197–209.

Margolin, G. (1988). Marital conflict is not marital conflict is not marital conflict. In R. D. V. Peters & R. J. McMahon (Eds.), *Social learning and systems approaches to marriage and family* (pp. 193–216). New York: Brunner/Mazel.

Patterson, G. R. (1982). *Coercive family processes*. Eugene, OR: Castalia.

Pruitt, D. G. (1981). *Negotiation behavior*. Orlando, FL: Academic Press.

Pruitt, D. G., & Rubin, J. Z. (1986). *Social conflict: Escalation, stalemate, and settlement*. New York: Random House.

Scabini, E. (1995). *Psicologia sociale della famiglia [Family social psychology]*. Torino, Italy: Bollati Boringhieri.

Scabini, E., & Greco, O. (1999). La transizione alla genitorialità, [The transition to parenthood]. In M. Andolfi (Ed.), *La crisi di coppia [The marriage crisis]*. Milano: Cortina.

Shantz, C. U., & Hobart, C. J. (1989). Social conflict and development: Peers and siblings. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 71–94). New York: Wiley.

Van de Vliert, E., & De Dreu, C. K. W. (1994). Optimizing performance by stimulating conflict. *International Journal of Conflict Management, 5*, 211–222.

Wallace, H. (1996). *Family violence: legal, medical and social perspectives*. Boston: Allyn and Bacon.

White, L. (2001). Sibling relationships over the life course: A panel analysis. *Journal of Marriage and the Family, 63*, 555–568.

Widmer, E. D. (1999). *Les relations fraternelles des adolescents*. Paris: Presses Universitaires de France.

Widmer, E. D. (2010). *Family configurations. A structural approach to family diversity*. London: Ashgate Publishing.

Wilmot, W. W., & Hocker, J. L. (2007). *Interpersonal conflict*. Boston: McGraw-Hill.

Family Connectedness

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Definition

Family connectedness is defined as a particular *characteristic* of the family bond, also referred as family or parental closeness, support, warmth, or responsiveness.

This characteristic of the family can be observed when families maintain emotional connections with each other through encouragement of shared family celebrations, family rituals, and

family traditions. These situations provide a way for family members to share affection, to offer emotional support and reassurance in difficult times, and to strengthen family bonds by promoting emotional, open and clear communication, and joint problem-solving.

Description

Family connectedness is a major area in which collective cultures can differ from individualistic cultures. For example, adolescents in Western societies are expected to be individuated from their families, having their own attitudes and values, emotional detachment, and self-reliance (Hofstede, 2001; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988), and some studies found higher connectedness in Eastern cultures compared to Western ones (Dwairy & Achoui, 2010). Hardway and Fuligni (2006) investigated multiple dimensions of American adolescents' connectedness with their families and suggested the role of cultural background, immigrant status, and socioeconomic background in shaping the nature of family connectedness during adolescence: for some adolescents, particularly those from immigrant families, family connectedness included a stronger emphasis on family obligation and assistance than for others. Georgas et al. (2001) investigated the psychological and functional closeness between students and their nuclear and extended families in 16 Western and non-Western countries: they found a significant effect of culture on closeness between individuals and their relatives; nevertheless, the patterns of closeness across the different relatives were systematically similar across cultures.

The influence of family connectedness on adolescents' behavior has been well acknowledged in psychosocial literature about family. According to a recent synthesis of more than 300 main research findings on the parenting of adolescents, parent-child connectedness represents the central way in which parents influence healthy adolescent development, together with specific parenting practices such as guidance, monitoring, and open communication (Simpson, 2001). Other scholars found that family connectedness may be a protective factor related to sexual risk taking, even among high-risk youth (Markham et al., 2003), and that parental involvement is related to students' motivation and academic success (e.g., Gonzalez-DeHass, Willems, & Doan Holbein, 2005).

References

Dwairy, M., & Achoui, M. (2010). Adolescents-family connectedness: A first cross-cultural research on parenting and psychological adjustment of children. *Journal of Children and Family Studies, 19*, 8–15.

Georgas, J., Mylonas, K., Bafiti, T., Poortinga, Y. H., Christakopoulou, S., Kagitcibasi, C., et al. (2001). Functional relationships in the nuclear and extended family: A 16 culture study. *International Journal of Psychology, 36*, 289–300.

Gonzalez-DeHass, A. R., Willems, P. P., & Doan Holbein, M. F. (2005). Examining the relationship between parental involvement and student motivation. *Educational Psychology Review, 17*, 96–123.

Hardway, C., & Fuligni, A. J. (2006). Dimensions of family connectedness among adolescents with Mexican, Chinese, and European backgrounds. *Developmental Psychology, 42*, 1246–1258.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage.

Markham, C. M., Tortolero, S. R., Escobar-Chaves, S. L., Parcel, G. S., Harrist, R., & Addy, R. C. (2003). Family connectedness and sexual risk-taking among urban youth attending alternative high schools. *Perspectives on Sexual and Reproductive Health, 35*, 174–179.

Simpson, A. R. (2001). *Raising teens: A synthesis of research and a foundation for action*. Boston: Center for Health Communication, Harvard School of Public Health.

Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology, 54*, 323–338.

Family Development

▶ Family Life Cycle Stages

Family Differentiation

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Synonyms

Family boundaries; Family practices; Family regulation; Family roles; Family systems theory; Mutual differentiation in families

Definition

Family differentiation is defined as a particular *characteristic* of the family bond (see also ▶ family connectedness), and it is related to the perception that family has of its boundaries during the life span.

Description

The concept of boundary and, in particular, the focus on boundary definition or boundary dissolution within the family is one core aspect of family systems theory. According to this theory, like the membrane around a cell, family boundaries need to be firm enough to ensure the integrity of the family and its members and permeable enough to allow emotional exchanges.

Family scholars have emphasized the importance of considering two kinds of boundaries in the family context: (1) interpersonal boundaries within the family and (2) boundaries between the family and the community or social environment. The first kind of boundary reflects the amount of care for the psychological difference of each individual in the family or, on the opposite side, the failure to acknowledge the psychological distinctiveness of family members (Kerig, 2005). The second kind of boundary refers to the relationship between the family and its social context: when a family builds rigid boundaries to the outside world, individual members are forced to meet their needs and find gratification only within the family. Thus, a lack of family differentiation involves both weakly defined interpersonal boundaries within the family and a highly rigid boundary between the family and the outside world.

In the family literature, this pattern of family functioning has been analyzed from two convergent perspectives: the system perspective, i.e., levels of differentiation in the whole family system, and the individual perspective, i.e., the individual process of differentiation within the family context, also called individuation.

In keeping with the *symbolic-relational perspective*, Scabini and Manzi (2011) have recently proposed an integrative model that combines these two perspectives into an analysis of the *mutual differentiation process*. Mutual differentiation is the dialectic process of individuals and families freeing themselves from each other, while at the same time remaining emotionally related. The term *mutual* is used because the boundary definition of a family member involves other family members – the overall family system. Thus, not only does the individual have to differentiate from the family, but the family itself must also allow and encourage this process.

Indeed, Bowen (1976, 1978) viewed family differentiation as the primary indicator of the family's and individual's emotional health and ▶ quality of life. When differentiation is not achieved in the family, we find what has been called the undifferentiated family ego mass, a situation of emotional fusion in which all members are similar in emotional expression and assume that they know each others' thoughts, feelings, and fantasies. In times of relative calm, undifferentiated families may appear to function normally, but ▶ stress causes them to break down. Typically, research has documented that, under stressful conditions, this kind of family presents higher levels of emotional reactivity, emotional cutoff, and lower effortful control behavior (e.g., Skowron, Kozlowski, & Pincus, 2010).

At the individual level, a lack of differentiation serves as a detrimental factor for the

formation of healthy marital and parenting relations. Undifferentiated individuals show low capacities for self-regulation of emotions and behavior. According to Bowen, a person's level of differentiation is determined by the level of differentiation of his/her parents, by the type of relationship the child has with parents, and by the way a person's unresolved emotional attachment to his/her parents is handled in young adulthood.

A key issue in contemporary research on family differentiation is whether this concept can be empirically validated for non-Western populations. Some studies challenge the cross-cultural universality of the concept of family differentiation and show that differentiation may not necessarily result in psychological health in some cultural contexts. On the other hand, other empirical results show that the concept of differentiation is a sign of healthy functioning in collectivistic contexts as well. Finally, some other studies suggest that the aspects of differentiation leading to health may be different in different cultural contexts. Thus, the question is still open and requires further study (for an overview of this topic, see Scabini & Manzi, 2011).

Cross-References

- ▶ Emotional Well-Being
- ▶ Emotions, Sociology of

References

Bowen, M. (1976). Theory in the practice of psychotherapy. In P. J. Guerin Jr. (Ed.), *Family therapy: Theory and practice* (pp. 42–90). New York: Garner Press.

Bowen, M. (1978). *Family therapy in clinical practice*. New York: Jason Aronson.

Kerig, P. K. (2005). Revisiting the construct of boundary dissolution. *Journal of Emotional Abuse, 5*, 5–42.

Scabini, E., & Manzi, C. (2011). Family processes and identity. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 569–588). New York: Springer.

Skowron, E. A., Kozlowski, J. M., & Pincus, A. (2010). Differentiation, self-other representations, and rupture-repair processes: Predicting child maltreatment risk. *Journal of Counseling Psychology, 57*, 304–316.

Family Environment Scale

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Definition

The Family Environment Scale (FES) is a self-report instrument developed by Rudolf Moos and colleagues in 1974 to assess the social climates of the families. It focuses on the measurement and description of the interpersonal relationships among family members, on the directions of personal growth which are emphasized in the family, and on the basic organizational structure of the family (Moos, Insel, & Humphrey, 1974, p. 3). It was administered to family members (parents and adolescent children) as a paper-and-pencil inventory with true or false answers. It is one of the ten social climate scale developed to assess the social climate in different setting: community, educational, treatment and residential care, and institution. According to the authors the measurement of social climate represents one of the major ways in which human environments may be characterized, and it may have an important impact on his attitude and ▶ mood, his behavior, his ▶ health and overall sense of ▶ well-being, and his social, personal, and intellectual development (Moos, 1973).

Description

Scale Development

The initial choice and wording of FES items were guided by information obtained from observations and interviews with families and by a conceptual formulation of three general areas and a number of specific dimensions that

might differentiate among families. These procedures resulted in an initial 200-item form of the FES. Each of the 200 items chosen for pilot testing identified an aspect of the family environment that reflects the quality of interpersonal relationships (such as the degree of cohesion), the focus on an area of personal growth (such as the degree of achievement or moral-religious emphasis), or the emphasis in system maintenance (such as family organization) (Moos, 1990).

This form was administered to over 1,000 individuals in a sample of 285 families. Data were collected from a wide range of families to insure that the resulting scale would be applicable to the broadest possible variety of families (Moos, 1990).

From 1974 until now, the authors do not change any items of the FES while different versions of the Manual have been published (Moos et al., 1974; Moos & Moos, 1981, 1986, 1994, 2009) to update data and add an extensive literature review tied to careful interpretation of the FES subscales.

The FES consists of 90 true or false items organized into 10 subscales of 9 items each. It measures 10 dimensions of family interaction in three conceptual domains: relationship dimensions, personal growth or goal orientation dimensions, and system maintenance dimensions.

The Family Environment Scale has three parallel forms:

1. The Real Form (Form R) measures people's perceptions of their current family environment.
2. The Ideal Form (Form I) measures people's preferences about an ideal family environment.
3. The Expectation Form (Form E) measures people's expectations of what a family will be like (cf. about a life transition or after a particular event).

In addition, there is a 30-item pictorial children's version for use with children between the age of 5 and 11.

Moreover, a 27-item index of the quality of social relationships in the family environment was derived from the Family Environment Scale. The Family Relationships Index was based on the three subscales that compose the relationship domain of the Family Environment Scale. These subscales are cohesion, expressiveness, and conflict. Scoring on conflict was reversed so that all subscales would be scores in the same direction (Holahan & Moos, 1983).

This instrument is useful for understanding both the individuals' perceptions of family climate and the family perception. It is also useful for clarifying the nature and extent of disagreement in families when using the Ideal Form and Real Form.

Family Typologies

The FES has been utilized for the taxonomic classification of families. Moos and Moos (1976) reported on a multivariate cluster analysis of 100 family profiles to identify six types of family environment. Three were oriented toward personal growth (independence, achievement, moral-religious emphasis), two toward interpersonal relationships (conflict, expressiveness), and one toward system maintenance (structure).

Billings and Moos (1982) made an effort to develop a family typology that applies to representative groups of families and should be useful in clinical settings, that is:

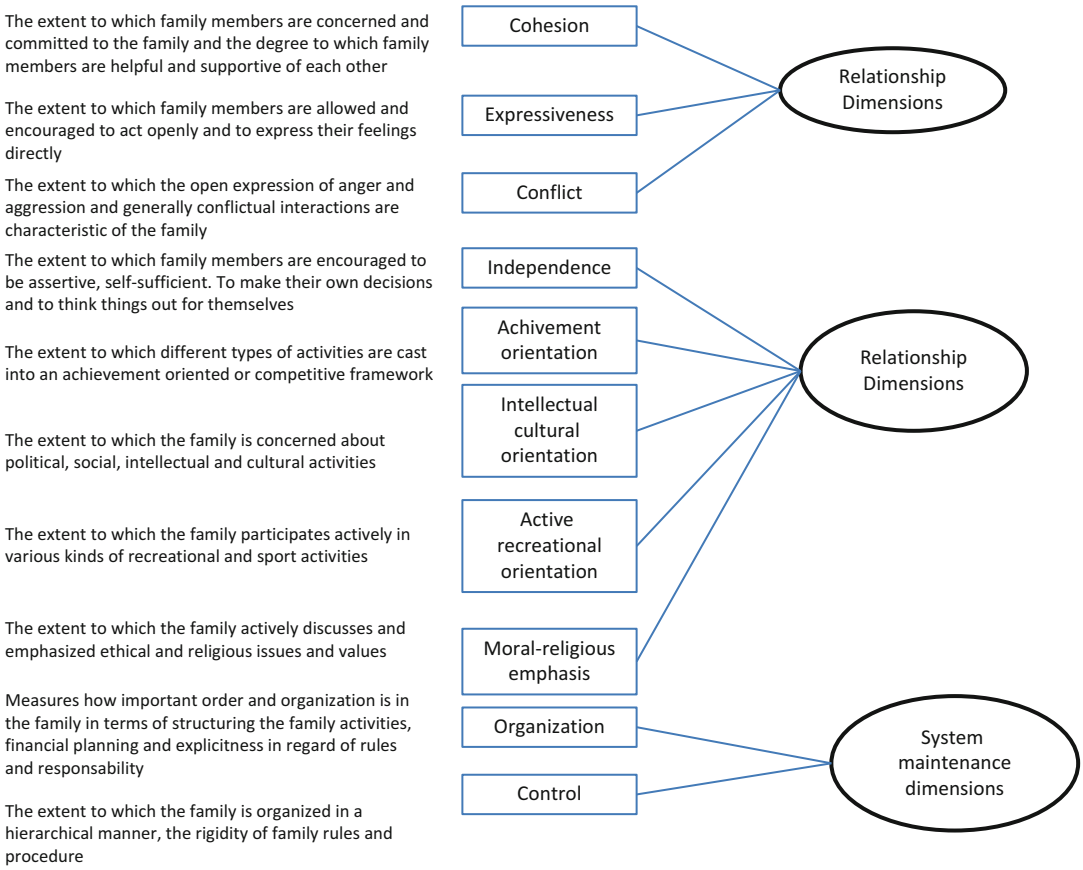
1. Independence-oriented families
2. Achievement-oriented families
3. Moral-/religious-oriented families
4. Intellectual-/cultural-oriented families
5. Support-oriented families
6. Conflict-oriented families
7. Disorganized families

Method of Scoring

The respondents are asked to rate each item as true or false according to whether or not they agree that each item reflects an accurate picture of their family. The responses are then scored, living a maximum total of nine points for each nine-item subscale. Individual and family scores may be calculated. Moreover, a Family Incongruence Score may also be calculated and used to describe the level of disagreement within a family.

Factorial Structure

Factor analyses of the FES tend to identify three-factor solutions. These solutions commonly



Family Environment Scale, Fig. 1 FES 10 subscales and 3 conceptual domains

include three second-order factors: (1) positive emotional climate as defined by high cohesion and low conflict; (2) active and stimulating climate as defined by intellectual, recreational, and moral-religious orientation; and (3) structured climate as defined by high organization and control. However, some factor analyses of the FES have resulted in two-factor solutions (Boake & Salmon, 1983; Boyd, Gullone, Needleman, & Burt, 1997; Chipuer & Villegas, 2001; Fowler, 1981; Waldron, Sabatelli, & Anderson, 1990). A few investigators have obtained four or more factor solutions.

Internal Consistencies and ▶ Test-Retest Reliability

The 10 subscales of the Family Environment Scale have moderate to high internal consistencies (ranging from .61 to .78) and acceptable 2-month test-retest reliabilities (ranging from .68 to .86). Test-retest reliabilities were also relatively high for the 4-month interval (ranging from .54 to .91) (Moos & Moos, 2009). Similarly, the Family Relationship Index has high internal consistency: Cronbach's alpha = .89 (Holahan & Moos, 1983).

Content and Construct Validity

Content and construct validity tested with several instruments: the Family Adaptability and Cohesion Evaluation Scales (FACES-II; Dickerson & Coyne, 1987), FACES-III (Edman, Cole, & Howard, 1990), Structural Family Interaction Scale – Revised (Perosa & Perosa, 1990), Family System Test (FAST; Gehring & Feldman, 1988), Family Sculpture Test and an adapted version of the Bowerman and Bahr Identification Scale (Russell, 1980), Family

Assessment Device (FAD) (Epstein, Baldwin, & Bishop, 1983), Parental Bonding Instrument (Parker, Tupling, & Brown, 1979), Social Support Appraisals (SS-A; Vaux et al., 1986), Social Support Questionnaire (Sarason et al., 1987), Locke-Wallace Marital Adjustment Scale (Waring et al., 1981), and Spanier Dyadic Adjustment Scale (DAS; Abbot & Brody, 1985), the authors did not report any statistics on the magnitude of the relationships.

Cross-References

- ▶ Family Connectedness
- ▶ Family Support

References

Abbot, D. A., & Brody, G. H. (1985). The relation of child age, gender, and number of children to the marital adjustment of wives. *Journal of Marriage and the Family, 47*, 77–84.

Billings, A. G., & Moos, R. H. (1982). Family environments and adaptation: A clinically applicable typology. *American Journal of Family Therapy, 10*, 26–38.

Boake, C., & Salmon, P. G. (1983). Demographic correlates and factor structure of the Family Environment Scale. *Journal of Clinical Psychology, 39*, 95–100.

Boyd, C. P., Gullone, E., Needleman, G. L., & Burt, T. (1997). The Family Environment Scale: Reliability and normative data for an adolescent sample. *Family Process, 36*, 369–373.

Chipuer, H. M., & Villegas, T. (2001). Comparing the second-order factor structure of the Family Environment Scale across husbands' and wives' perceptions of their family environment. *Family Process, 40*, 187–198.

Dickerson, V., & Coyne, J. C. (1987). Family cohesion and control: A multitrait-multimethod study. *Journal of Marital and Family Therapy, 13*, 275–285.

Edman, S. O., Cole, D. A., & Howard, G. S. (1990). Convergent and discriminant validity of FACES III: Family adaptability and cohesion. *Family Process, 29*, 95–103.

Epstein, N. B., Baldwin, L., & Bishop, D. S. (1983). The McMaster family assessment device. *Journal of Marital and Family Therapy, 9*, 171–180.

Fowler, P. C. (1981). Maximum likelihood factor structure of the Family Environment Scale. *Journal of Clinical Psychology, 37*, 160–164.

Gehring, T. M., & Feldman, S. S. (1988). Adolescents' perceptions of family cohesion and power: A methodological study of the Family System Test. *Journal of Adolescent Research, 3*, 33–52.

Holahan, C. J., & Moos, R. H. (1983). The quality of social support: Measures of family and work relationships. *British Journal of Clinical Psychology, 22*, 157–162.

Moos, R. H. (1973). Conceptualizations of human environments: An overview. *American Psychologist, 28*, 652–665.

Moos, R. H. (1990). Conceptual and empirical approaches to developing family-based assessment procedures: Resolving the case of the family environment. *Family Process, 29*, 199–208.

Moos, R. H., Insel, P. M., & Humphrey, B. (1974). *Preliminary manual for Family Environment Scale, Work Environment Scale, Group Environment Scale*. Palo Alto, CA: Consulting Psychologists Press.

Moos, R. H., & Moos, B. S. (1976). A typology of family social environments. *Family Process, 15*, 357–371.

Moos, R. H., & Moos, B. S. (1981). *Family environment scale manual*. Palo Alto, CA: Consulting Psychologists Press.

Moos, R. H., & Moos, B. S. (1986). *Family environment scale manual* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.

Moos, R. H., & Moos, B. S. (1994). *Family environment scale manual* (3rd ed.) Palo Alto, CA: Consulting Psychologists Press (**since 2002** – Redwood City, CA: Mind Garden).

Moos, R., & Moos, B. (2009). *Family Environment Scale manual and sampler set: Development, applications and research* (4th ed.). Palo Alto, CA: Mind Garden.

Parker, G., Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology, 52*, 1–10.

Perosa, L. M., & Perosa, S. L. (1990). Convergent and discriminant validity for family self-report measures. *Educational and Psychological Measurement, 50*, 855–868.

Russell, C. S. (1980). A methodological study of family cohesion and adaptability. *Journal of Marital and Family Therapy, 6*, 459–470.

Sarason, I. G., Sarason, B. R., Shearin, E. N., & Pierce, G. R. (1987). A brief measure of social support: Practical and theoretical implications. *Journal of Social and Personal Relationships, 4*, 497–510.

Vaux, A., Phillips, J., Holly, L., Thomson, B., Williams, D., & Stewart, D. (1986). The Social Support Appraisals (SS-A) Scale: Studies of reliability and validity. *American Journal of Community Psychology, 14*, 195–219.

Waldron, R. J., Sabatelli, R. M., & Anderson, S. A. (1990). An examination of the factor structure of the Family Environment Scale. *American Journal of Family Therapy, 18*, 257–272.

Waring, E., McElrath, D., Lefcoe, D., & Weisz, G. (1981). Dimensions of intimacy in marriage. *Psychiatry, 44*, 169–175.

Family Features and Violent Behavior

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Synonyms

Antisocial behavior; Criminal behavior in families; General strain theory and violence; Merton's strain theory and violence; Problem behavior; Self-control theory and violence; Social control theory and violence; Social learning theory and violence; Violent behavior

Definition

► Meta-analysis is a set of techniques for standardizing evidence from multiple studies to a common metric and then combining evidence from those studies to estimate the average relationship and the dispersion of results around that average. Using these techniques, we summarize the literature examining the covariation between 20 family constructs with the current or later display of violent behavior. The 86 relations, based on 509 correlations, show that although family features and characteristics are often identified as central to the development of violent behavior, they correlate only modestly with these outcomes (grand mean across all outcomes r = .12; median = .11). Unwanted pregnancy showed the strongest relationship with the display of violent behavior (r = .454; k = 1; n = 1,400). Family SES was the most frequently reported relationship (k = 16), followed by maltreated as a child (k = 12). Predictors measured below age 6 showed often negative relations with later violent behavior, but none were significant. These findings are discussed with reference to Rutter's (1987) conceptualization of protective mechanisms, suggesting that family features may protect against these outcomes in the presence of other developmental and situational risk factors but are not, in and of themselves, strongly predictive of later antisocial outcomes.

Description

The Role of the Family in Criminology Theory

Family influences are often identified in scientific journals and in popular press as a principal cause of problem, aggressive, criminal, and violent behaviors. This consensus suggests that preventive intervention directed either at the families of troubled youth or at how youth experience their families will decrease the likelihood that youth antisocial behavior will occur. The family also figures prominently in many criminological theories, particularly those that explicitly discuss parenting and families as socializing and restraining factors.

For example, poor parenting, lack of discipline, and poor child-rearing skills may all contribute to low self-control and impulsivity. In the self-control theory articulated by Gottfredson and Hirschi (1990), low self-control or impulsivity is theorized to be the key ingredient in violent offending. Similarly, bonds to parents and conventional ► norms and institutions are viewed as critical to persons remaining law abiding in Hirschi's (1969) earlier social control theory. Parents encourage these bonds through their education and expectations, supervision and involvement, and warmth and relationship.

The "life-course" theory of crime incorporates Hirschi's conceptions of informal social bonds and argues that "age-graded" informal social control explains the start, continuance, and desistance of criminal behavior (Laub, Sampson, & Sweeten, 2006). The family is central to nearly all life-course developmental theories. For example, family dysfunction, such as abuse and other negative characteristics, could increase the propensity of the individual's life-course trajectory toward criminal behavior. On other hand, informal social control by parents in the form of discipline, supervision, and attachment helps to establish social bonds that dissuade

individuals from criminality. Subsequent family transitions at critical later ages, such as marriage as an adult, help explain desistance from crime.

In 1966 Burgess and Akers articulated a version of social learning theory which hypothesized that crime results from differential association and reinforcement. In essence, crime and delinquency will occur, according to the theory, if the social forces that encourage lawbreaking outweigh social forces that discourage lawbreaking. Implicit in the Burgess and Akers (1966) theory is how families may encourage crime (e.g., parent or sibling criminality or antisocial conduct) or discourage crime (e.g., proper supervision, modeling law-abiding behavior).

"Structural" theories of crime place crime in the context of larger social institutions and structural forces. For example, traditional strain theory, as credited to Merton (1938), focuses on how the desire to achieve "the American dream" and accumulate wealth leads to "strain" because there are few legitimate opportunities for some persons to reach those goals. Although the family is not explicit to such traditional formulations of strain theory, variables like family socioeconomic status (SES) – and proxies for economic distress, such as urban housing and residential mobility – would be of interest. Agnew's (1992) general strain theory expands Merton's formulation to include noneconomic motives and strains as key ingredients. For example, Agnew posited that negative stimuli in life, such as those within the family (and represented by variables such as being maltreated as a child, home discord and stability, and family ▶ stress), lead to feelings of loss or ▶ anger. This emotional outcome results in a strain vis-à-vis the expected or idealized condition (i.e., the healthy and emotionally supportive birth family), and persons may compensate for this strain by engaging in wrongdoing to revenge the loss, target their anger, or otherwise compensate for this perceived feeling of loss.

The direct contribution of these and other family features in producing crime can be estimated by examining the covariation of the presence, absence, or amount of these factors with later violent behavior. Features that are changeable and that show a nontrivial relationship with delinquency merit consideration for direct preventive intervention targeting those risk factors directly. Family features that are not changeable (e.g., father's criminal history) or that are difficult to alter through public intervention (e.g., single parenting) may also be useful to prevention planners when selecting at-risk youth for preventive intervention.

If, on the other hand, the direct empirical relationship of family with later antisocial problems is weak, then a more sophisticated model of the development of these outcomes is required. Family features may still affect crime but only through their interaction with other factors (e.g., attachment to prosocial organizations and activities, access to resources). In this view, family features may enhance or suppress the influence of other factors in producing antisocial behavior but are not directly responsible for crime. In this case, the claim that family features cause later violent behavior is specious.

For family features to represent attractive targets for intervention as risk factors, the relationship of family features with antisocial behaviors should be large enough to justify intervention. The possibility that a direct causal relation exists can be estimated using the ▶ Pearson product moment correlation. As a statistic, correlations range from −1 to +1, with +1 equaling perfect positive covariation and 0 indicating no systematic relationship and −1 indicating perfect negative covariation. In policy terms, correlations specify the *maximum* amount of change in an outcome that *might* be expected through changes in the predictor (Hansen & McNeil, 1996). We emphasize the words *maximum* and *might* because correlation coefficients are only one of the necessary conditions for presuming cause; correlation alone is not sufficient for inferring cause (e.g., White, 1990).

Method

To estimate the covariation of family features with later antisocial behaviors, we examined the

findings from over 500 independent prospective longitudinal studies and identified 509 estimates from 86 studies that could be transformed into correlations estimating the risk relation of one of 20 categories of family feature or characteristic with later violent behavior (Derzon, 2010). This was not an empirical clustering but rather a process of iterative judgments based on the measures used in the primary literature and the constructs they describe. We also recorded the age of each sample when the family feature was measured and the age when antisocial behavior was measured. These age estimates were then clustered into four groups: less than 6 years of age, aged 6–12 years, aged 13–18 years, and greater than 18 years. This allowed us to estimate the average magnitude of relation across studies for each family factor with antisocial outcome by age of measurement, to estimate whether the variation in results could be explained by sampling error and to estimate whether there are significant differences in the relationship based on the ages when family features or outcomes were measured.

Preparing the data for synthesis required several adjustments and corrections. Predictors that were reported as protective factors were recoded (sign reversed) to reflect the risk relation of the predictor to antisocial behavior (e.g., low parental supervision and involvement, large family size, low warmth and relationship, high family stress). When researchers dichotomized inherently continuous predictors, attenuation of the estimate was corrected prior to synthesis using the Hunter and Schmidt procedure (1990a; 1990b). When the same study sample provided multiple estimates of similar relations, we averaged such partially redundant estimates so that each study sample contributed only a single representative correlation to any given synthesis. Averaging multiple estimates within each study sample prior to synthesis across samples allows all the data to contribute to the analysis and prevents studies with multiple reports of conceptually similar relations from biasing the results. We controlled for study differences by statistically adjusting each estimate using mixed-effects multiple regression to remove the systematic bias associated with three method and procedure variables and three subject characteristics variables (i.e., number of subjects, data reported as a correlation, outcome data collected using a survey, normal population sampled, study done in United States, percent of sample that was White). Finally, to prevent the 29 largest studies from overwhelming the contribution of smaller studies, we truncated sample size at $n = 700$. All correlations were temporarily Z-transformed and weighted by their inverse variance during synthesis. Further information on these procedures and study characteristics may be found in Derzon (2010).

Results

Amount of Evidence Relating Family Features with Antisocial Behavior

Table 1 shows the average strength of relationship for each family feature with later violent behavior adjusted for study characteristics, the number of correlations from the original database that were averaged to produce the mean correlation in each category, and the total number of subjects upon which each average correlation was based. It should be noted that, while the number of aggregated correlations contributing to each mean value is often limited for any given category of predictor, the aggregated correlations generally summarize information from a larger number of observed correlations and, in most cases, represent a substantial number of subjects.

Family features are often cited in the literature, although some features are much more frequently reported. The average family feature has been reported 25 times, but the typical feature is reported considerably less frequently (median = 8). Controlling for multiple reports from the same sample, family SES with violent behavior is the most extensively examined relationship. This relationship was reported 128 times in 16 independent samples. All told 74,377 persons contributed to that synthesis. Although family SES stands out, also

Family Features and Violent Behavior, Table 1 Aggregated correlations for family predictors of violent behavior

Family feature	Adj r[a]	K[b]	O[c]	N[d]
Mother's unwanted pregnancy	0.454	1	2	1,400
Low supervision and involvement	0.288*	3	7	580
Large family size	0.236	1	3	411
Low warmth and relationship	0.207	7	39	2,373
High family stress	0.192*	2	21	3,083
Separated from parents	0.172	3	6	2,428
Child in foster care	0.170	1	1	1,400
Parent's antisocial behavior	0.167*	9	22	10,638
Parents use severe discipline	0.126*	8	37	3,467
Weak child-rearing skills	0.110	3	56	500
Low parent's education and expectations	0.106	1	1	246
Maltreated as a child	0.100*	12	126	5,822
High home discord, low stability	0.099*	6	16	1,007
Other family deviance	0.092	2	3	972
Low family socioeconomic status	0.073*	16	128	74,377
Urban housing	0.058	1	23	1,716
Young parent(s)	0.042	2	2	23,073
Broken home	0.025*	5	9	2,985
Parental psychopathology	0.003	2	5	5,027
High residential mobility	–0.106	1	2	411
Sum		86	509	141,916
Mean	0.133	4	25	7,096
Median	0.108	3	8	2,045

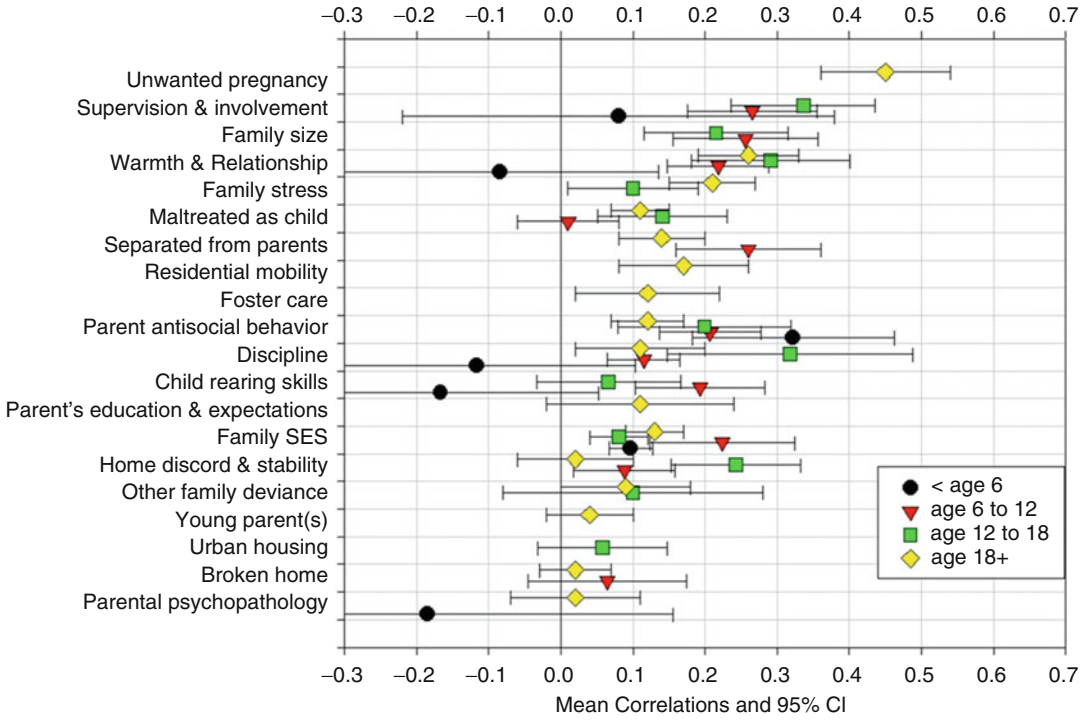
[a]Method-adjusted correlation; * indicates significant heterogeneity remained after adjustment
[b]Number of aggregated correlations
[c]Number of original estimates that went into aggregated effect sizes for each category
[d]Total sample size represented by all aggregated estimates in each category

reflectingconsiderable investigator interest are the predictor categories maltreated as a child (a combination of reported abuse and neglect), parent antisocial behavior, and discipline. The typical trial reports the same relationship six times on average.

The asterisk following the adjusted mean effect size indicates the presence of heterogeneity for distributions containing more than a single estimate. Nine of the 14 estimates (64.3 %) summarizing more than one study varies more than expected from sampling error.

Strength of Relationship of Family Features with Antisocial Behaviors

Figure 1 shows the unadjusted correlations and 95 % confidence intervals (CI) of family features with the later display of violent behavior by the age at which the family factor was measured. Symbols to the right of zero indicate the family factor has the expected (risky) relationship with the behavioral outcome, while symbols to the left of zero suggest the inverse. When the 95 % CI crosses zero, the claim of a relationship is likely not statistically supported (i.e., is likely not statistically different from zero [Schenker & Gentleman, 2001]). For example, when predicting violent behavior, unwanted pregnancy (measured retrospectively when subjects were 18 years old or older) shows a strong positive relationship, while supervision and family involvement is related to violent behavior between ages 6 and 18, but is not related to violent behavior when measured when youth are below age 6 (the CI crosses zero). All relations are in the expected direction or null. Eight of the



Family Features and Violent Behavior, Fig. 1 Relationship of family features with violent behavior

twenty family features show significant positive relations across all ages of measurement, none show significant negative relations, and the grand mean across all factors can be considered small ($r_{mean} = .120$).

To be most effective, interventions should occur where the relationship between predictors and outcome is strongest. For most family features, the strength of relationship was not significantly different by age at which the family feature was measured. Exceptions to this are low warmth and poor family relationship below age 6, which tends not to be related to violent behavior while it is modestly predictive of violent behavior above age 6; parents' antisocial behavior, which is more predictive of later violent behavior when measured in younger samples; and poor discipline, low child-rearing skills, and home discord and stability, which are most strongly associated with violent behavior when they occur in the tween and teenage years.

Discussion

It is unlikely that violence, or antisocial behaviors more generally, springs from a single source. Most likely violent behavior results from an amalgam of internal and environmental stressors, opportunity, fixation, and means. Nonetheless, identifying potential sources, based on their strength of relationship, provides a basis for evidence-based intervention. It is this covariation of risk factors with outcomes, and the presumed role of risk factors in the development of later antisocial behavior, which implicitly or explicitly informs all intervention efforts.

While not sufficient for establishing cause, risk-factor correlations provide an estimate of the maximum amount of change in an outcome that might be expected through changes in the predictor. Alternatively, it may be that most family features do not increase the likelihood of antisocial behavior but rather require the presence of other conditions to produce antisocial

behavior. In this regard, the family construct categories examined here would then be *protective factors* not *risk factors* in the development of antisocial behavior, to use Michael Rutter's (1987) framing.

According to Kazdin and his colleagues, risk factors are "a characteristic, experience, or event that, if present, is associated with an increase in the probability (risk) of a particular outcome over the base rate of the outcome in the general (unexposed) popultion" (Kazdin, Kraemer, Kessler, Kupfer, & Offord, 1997, p. 377). Protective factors are distinguished from risk factors in "that the latter lead directly to disorder (whether strongly or weakly), whereas the former operate indirectly with their effects apparent only by virtue of their interactions with the risk variable" (Rutter, 1987, p. 319).

This view of protective factors is central to the thesis proposed here. If family constructs operate by generating or providing ▶ resilience to adversity, protection from adversity, or otherwise minimize the effects of adversity, then those protective family mechanisms come into play only in the presence of adversity. For example, the lack of caregiver warmth may, on its own, modestly increase the likelihood of youth antisocial behavior. However, in the presence of other risk factors (e.g., gang membership, drug use, low impulse control), warm relationships between caregiver and child likely reduce the influence of these factors, while lack of warmth may significantly amplify the impact of those risk factors in generating antisocial behavior.

We agree with Rutter that it is not the protective factor itself that is distinctive in the protective process. Rather the protective factor's value lies in its interplay with developmental and situational exigencies. For example, insurance is protection against adversity. We pay premiums, but the value of that investment only becomes apparent in times of need. Similarly, protective factors can only show their "true value" under conditions of adversity.

If this thesis is accurate and family factors are conditioned by the presence (or absence) of other elements in the lives of youth, the role family features play in the display of violent behavior must be examined, understood, and discussed in the context of those additional features. The analyses necessary to establish the conditions of risk with which family features interact are significantly more difficult set of analyses than those presented above. Without such analyses, it is impossible to establish for which youth family-based interventions are appropriate and under which conditions family-based interventions will be most effective in preventing violent behavior.

The results of this synthesis point to the need for more critical thinking and more careful rhetoric surrounding the contribution of family features to the display of violent behavior. If family features do contribute to the display or suppression of violence, it is likely they do so only when other conditions are met. The claim that ineffectual or imperfect family features directly contribute to violent behavior is not supported by the evidence summarized here. If family features have a protective function, then research must document and rhetoric must acknowledge the conditions that have to be met before family features can be held responsible for violent behavior.

References

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology, 30*(1), 47–87.

Burgess, R., & Akers, R. L. (1966). A differential association-reinforcement theory of criminal behavior. *Social Problems, 14*, 363–383.

Derzon, J. H. (2010). The correspondence of family features with problem, aggressive, criminal, and violent behavior: A meta-analysis. *Journal of Experimental Criminology, 6*(3), 263–292. doi:10.1007/s11292-010-9098-0.

Gottfredson, M., & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.

Hansen, W. B., & McNeal, R. B., Jr. (1996). The law of maximum expected potential effect: Constraints placed on program effectiveness by mediator relationships. *Health Education Research, 11*(4), 501–507.

Hirschi, T. (1969). *Causes of delinquency*. California: University of California Press.

Hunter, J. E., & Schmidt, F. L. (1990a). *Methods of meta-analysis: Correcting error and bias in research findings*. Newbury Park, CA: Sage.

Hunter, J. E., & Schmidt, F. L. (1990b). Dichotomizing continuous variables: The implications for meta-analysis. *Journal of Applied Psychology, 75*, 334–349.
Kazdin, A. E., Kraemer, H. C., Kessler, R. C., Kupfer, D. J., & Offord, D. R. (1977). Contributions of risk-factor research to developmental psychopathology. *Clinical Psychology Review, 17*, 375–406.
Laub, J., Sampson, R., & Sweeten, G. A. (2006). Assessing Sampson and Laub's life course theory of crime. In F. Cullen, J. P. Wright, & K. Blevens (Eds.), *Taking stock: The status of criminological theory: Advances in criminological theory* (Vol. 15). New Brunswick, NJ: Transaction Press. Chapter 11.
Merton, R. K. (1938). Social structure and anomie. *American Sociological Review, 3*, 672–682.
Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry, 57*, 316–331.
Schenker, N., & Gentleman, J. F. (2001). On judging the significance of differences by examining the overlap between confidence intervals. *The American Statistician, 55*, 182–186.
White, P. A. (1990). Ideas about causation in philosophy and psychology. *Psychological Bulletin, 108*, 3–18.

Family Foster Care

► Care, Foster

Family Functioning and Well-Being

► Parental Depression and Child Well-Being

Family Happiness

► Family Quality of Life

Family Harmony

► Family Quality of Life

Family Income and Wealth

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Synonyms

Consumption or relative deprivation and Financial assets; Household income and wealth; Permanent income

Definition

Family or household income is the income shared by people living in the same household. In economics the household is the unit in which economic resources are shared and to some extent joint consumption takes place. To be able to compare the economic welfare of households of different composition (e.g., a single household versus a household with children), the household income is standardized by dividing it by a weighting factor, the so-called equivalence scale. There are a variety of equivalence scales developed in the literature. The resulting income is called equivalent income. Wealth pertains to financial and nonfinancial assets (housing, durables, shares, saving accounts) generating real income and consumption spending opportunities to the household. In order to properly measure current living standards, it is just as important to measure consumption as income and to measure these within a household context because of the sharing of resources within the family.

Description

There has been relatively little attention in the literature for the relationship between family income, ► wealth, and well-being possibly associated with the big controversy on the ► Easterlin Paradox stating that money does not buy much

happiness (which since 1994 when Easterlin first published his claims has been seriously challenged (Easterlin, 1974; see also Kahneman et al. 2006)). There is some evidence that economic growth may be like good ▶ health. It is taken for granted when one has it, but causes considerable unhappiness if it is lost like in the current severe crisis (Easterlin, 2005). In Eastern Europe in the early 1990s, when real living standards initially declined after the fall of communism, suicide and ▶ alcoholism rates increased (WHO, 2002). Self-reported life satisfaction apparently trended downwards, although results are not unambiguous (Schyns, 2002). Frijters, Haisken-DeNew, and Shields (2004) showed that in the special circumstances pertaining in the 1990s, East Germans registered large changes in happiness as their incomes rose rapidly relative to the incomes of West Germans, who formed their new reference (comparison) group following German reunification. Also Stevenson and Wolfers (2008) in a seminal paper questioned the paradox showing that using large cross-sectional (values) surveys covering three decades since the 1980s, absolute income differences matter for subjective well-being across and within countries. Their analysis and conclusions are questioned again by Easterlin in 2009 (Easterlin & Angelescu, 2009) arguing that the authors mix up the short- and long-term income-happiness relationship because ▶ hedonic adaptation is asymmetric; people because of "loss aversion" do not habituate to income losses, whereas they do to income rises but only in the long term. The controversy is therefore not solved yet and the discussion continues (see also Headey, Muffels, & Wagner, 2010).

In two papers Headey and Wooden (2005) and Headey, Muffels, and Wooden (2007) using consumption-based measures of living standards challenge the view that within-country relative gains in economic well-being have only a very small effect on happiness. The point they make has two parts. The first part concerns the common focus on current income instead of permanent income or consumption as a measure of living standards and the second the use of personal income instead of family or household income since income is generally shared among the household members. Plainly current personal income is not the only or necessarily the best indicator of material standard of living.

The point of including a measure of wealth or net worth as one indicator of personal and household standard of living hardly needs to be labored. Wealth confers economic security; it enables one to tide over bad times at least for a while. It also enables one to borrow money both to cope with bad times and for investment purposes. Most important, both financial and nonfinancial assets generate real income, a real flow of benefits. This is plainly just as true for the housing one lives in, or fine paintings on the wall, as for shares or savings accounts, which generate, notably in good times, direct cash income. In order to properly measure current living standards, it is just as important to measure consumption as income and to measure these within a household context because of the sharing of resources within the family. The reason is that it is clear from household expenditure surveys that a high percentage of persons and households in the bottom half of the income distribution appear to consume more than they earn (Slesnick, 1998). The standard explanation is that people seek to smooth their consumption over time, even though their incomes fluctuate. The reasoning is that they have some perception of their "permanent income" or longer-term earning capacity. It has been suggested that the finding that consumption inequality generally seems to be lower than income inequality lends indirect support to this hypothesis (Barrett, Crossley, & Worswick, 2000; Cutler & Katz, 1992; Slesnick, 1998).

To date there is little evidence possibly associated with the lack of good joint data on consumption and subjective well-being on the relationship between life satisfaction and other measures of living standards besides income. An exception is Mullis (1992) who undertook a survey of 55–69-year-old American men and showed that, for this age group, income and wealth combined additively to affect scores on a composite index of satisfaction with standard of

living, housing, neighborhood, health, leisure, and "life in general." Also d'Ambrosio and Frick (2007) using the German socioeconomic panel data (SOEP) showed that measures of relative deprivation are more strongly correlated with subjective well-being than measures of personal (equivalent) income.

Using data from five national household panels, Headey et al. (2007) estimate the combined effects of family wealth (net worth), disposable family income, and consumption on measures of overall life satisfaction and also measures of subjective economic well-being (satisfaction with standard of living). Their reassessment indicates that broader measures of living standards notably within a household context have considerably greater impact on subjective well-being outcomes than traditionally used measures of personal or family income. The most striking results in all the five countries are that the combination of family income and wealth accounts for considerably more variance in both life satisfaction and standard of living satisfaction than personal or family income alone. The standardized effect size of the measure of wealth used in the paper, that is, net worth, in the five countries under scrutiny (Britain, Germany, Netherlands, Australia, and Hungary) ranges from 0.10 (Hungary), 0.13 (Britain), 0.19 (Australia), to 0.23 (the Netherlands) where effect sizes are considered substantial and comparable to the effect sizes of equivalent income.

These results are confirmed in two later studies, one by Guillen-Royo (2008) using consumption and well-being data for Peru and another by Bellani and D'Ambrosio (2011) using the European Community Household Panel data for the years 1994–2001. The first study shows that consumption correlates more strongly with subjective well-being than income, not only because of the fulfillment of ▶ basic needs but also because of status concerns, reference group behavior (Ferrer-i-Carbonell, 2005), the hedonic aspect of consumption, and the expectation of escaping social marginalization. The second study in the European context reveals significant correlations between measures of relative deprivation measured through consumption/durables deprivation and subjective well-being measured through the satisfaction with four life domains (work, financial situation, housing, and leisure time) after controlling for various measures of family income.

The theoretical relevance of these findings on the relationship between consumption and/or wealth and subjective well-being is associated with the long-standing debate in economics about the notion of ▶ preferences being exogenous and to be inferred from people's real consumption choices ("revealed preferences") or endogenous and to be directly asked for and measured in surveys (the "stated preferences" method). The last approach is already in the 1970s developed and operationalized by a group of Dutch economists who, against the tide, have asked people about their evaluation of and/or satisfaction with their income and the income they consider a minimum for making ends meet (Kapteyn, Van Praag, & van Herwaarden, 1977, Kapteyn et al. 1988; Van Praag, Hagenaars, & van Weeren, 1982; Van Praag, 1993). It is then valuable to know that household wealth, income, and consumption make a statistically significant and substantively nontrivial contribution to life satisfaction and to satisfaction with standard of living.

Discussion

There is a need for more research into the relationship between family income, wealth, and subjective well-being because the traditional way of viewing the relationship between measures of personal income and subjective well-being neglects the interdependence of subjective welfare and utility within a household context associated with the sharing of economic resources and joint consumption. There is increasing attention and scope for research into these interdependencies in direct utility measurement. The review of the literature showed that the existing evidence is scarce which is likely caused by the lack of comparative data and particularly longitudinal data with sufficient detail on income, consumption, and wealth. The endeavor to build a large comparative data set on wealth as contained in

the Luxembourg Wealth Study (Sierminska, Brandolini, & Smeeding, 2006) is of major importance to improve the body of knowledge on this intriguing issue.

Cross-References

- ▶ Basic Needs
- ▶ Consumption
- ▶ European Union Indicators
- ▶ Hedonic Adaptation
- ▶ Objective and Subjective Deprivation
- ▶ Preferences
- ▶ Relative Deprivation Theory
- ▶ Wealth

References

Barrett, G. F., Crossley, T. F., & Worswick, C. (2000). Consumption and income inequality in Australia. *The Economic Record, 76*, 116–138.

Bellani, L., & D'Ambrosio, C. (2011). Deprivation, social exclusion and subjective well-being. *Social Indicators Research, 104*, 67–86.

Cutler, D., & Katz, L. (1992). Rising inequality? *The American Economic Review, 82*, 546–551.

D'Ambrosio, C., & Frick, J. R. (2007). Income satisfaction and relative deprivation: An empirical link. *Social Indicators Research, 81*, 497–519.

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*, 276–302.

Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P. A. David & M. W. Reder (Eds.), *Nations and households in economic growth: Essays in honor of Moses Abramowitz. Money does not buy happiness* (pp. 81–123). New York: Academic.

Easterlin, R. A. (2005). Building a better theory of well-being. In L. Bruni & P. Porta (Eds.), *Economics and happiness: Framing the analysis*. Oxford: Oxford University Press.

Easterlin, R. A., & Angelescu, L. (2009). Happiness and growth the world over: Time series evidence on the happiness-income paradox, IZA Discussion Paper No. 4060.

Ferrer-i-Carbonell, A. (2005). Income and well-being: An empirical analysis of the comparison income effect. *Journal of Public Economics, 89*, 997–1019.

Frijters, P., Haisken-DeNew, J. P., & Shields, M. A. (2004). Money does matter! Evidence from increasing real incomes and life satisfaction in east Germany following reunification. *The American Economic Review, 94*, 730–741.

Guillen-Royo, M. (2008). Consumption and subjective well-being: Exploring basic needs, social comparison, social integration and hedonism in Peru. *Social Indicators Research, 89*(3), 535–555.

Headey, B., Muffels, R., & Wagner, G. (2010). Long-running German panel survey shows that personal and economic choices, not just genes, matter for happiness. *Proceedings of the National Academy of Science of the USA (PNAS)*, pp. 1–5; Supporting Information (SOM, online), pp. 1–7.

Kahneman, D., Krueger, A. B., Schkade, D., Schwarz, N., & Stone, A. A. (2006). Would you be happier if you were richer? A focusing illusion. *Science, 312*, 1908.

Kapteyn, A., Kooreman, P., & Willemse, R. (1988). Some methodological issues in the implementation of subjective poverty definitions. *The Journal of Human Resources, 23*, 222–242.

Kapteyn, A., Van Praag, B. M. S., & van Herwaarden, F. G. (1977). Twelve thousand welfare functions of income: A comparison of six samples in Belgium and the Netherlands. *European Economic Review, 9*, 283–300.

Schyns, P. (2002). Wealth of nations, individual income and life satisfaction in 42 countries: A multilevel approach. *Social Indicators Research, 60*, 5–40.

Sierminska, E., Brandolini, A., & Smeeding, T. M. (2006). The Luxembourg wealth study – A cross-country comparable database for household wealth research. *The Journal of Economic Inequality, 4*, 375–383.

Slesnick, D. (1998). Empirical approaches to the measurement of welfare. *Journal of Economic Literature, 36*, 2108–2165.

Stevenson, B., & Wolfers, J. (2008). *Economic growth and subjective well-being: Reassessing the Easterlin paradox* (IZA Discussion Paper 3654 Institute for the Study of Labor).

Van Praag, B. M. S. (1993). The relativity of the welfare concept. In M. C. Nussbaum & A. Sen (Eds.), *The quality of life*. Oxford: Clarendon.

Van Praag, B. M. S., Hagenaars, A. J. M., & van Weeren, J. (1982). Poverty in Europe. *Review of Income and Wealth, 28*, 345–359.

World Health Organization (WHO). (2002). *Health status overview for countries of central and eastern Europe that are candidates for accession to the European union*. Copenhagen: WHO Regional Office.

Family Interference with Work (FIW)

- ▶ Family-to-Work Conflict

Family Intimacy Measures

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Synonyms

Family closeness; Family cohesion; Support measures

Definition

"Intimacy is a term that, despite its widespread use, remains relatively ambiguous" (Hirschberger, Florian, & Mikulincer, 2003, p. 676). This sentence underlines the difficulty to define and to measure family intimacy. Indeed, measuring family intimacy involves taking into account both several dimensions of the construct and different levels of analysis. In the literature, several definitions of intimacy have been provided (Erikson, 1963; Reis & Shaver, 1988). Often intimacy is defined using terms as cohesion, closeness, support, ▶ trust, self-disclosure, responsiveness, presence, ▶ interdependence, and positivity (Foley & Duck, 2006). Beside the subdimensions of the construct, intimacy could be also conceptualized referring to individual, interactional, relational, or family level. Regarding the individual level, it is conceptualized as personal willingness to be in a supportive and affective relationship (Erikson, 1963) or as motivation towards the connection with other (McAdams, 1988). The interactive level during an intimate interaction has been conceptualized as the change in the arousal (Patterson, 1976) or the expression of self disclosure behavior, beliefs, and positive involvement between intimate partners (Prager & Roberts, 2004). On the relational level, it has been defined as the shared activities, the frequency and intensity of interactions (Berscheid, Snyder, & Omoto, 1989), or the experience of several interactions characterized by reciprocal affection, trust, and cohesion (Prager, 1995). Finally, on the family level, it has been defined as the intimate intersubjectivity within the family as a unit (Foley & Duck, 2006) or the family environment quality, such as cohesion (Olson, Sprenkle, & Russell, 1979). Moreover, literature underlines that intimacy could be measured as stable characteristics of the relationship (Davis & Sloan, 1974) or as a relational process (Reis & Shaver, 1988).

Description

Intimacy measurement is mainly concerned with the quantification of the closeness within the family. Instruments could be divided in dyadic instruments that measure intimacy in the dyadic relationships within family (for instance, parent–child relationship, marital relationship) and family instruments that measure the family as a whole. When the dyadic intimacy is considered, different dimensions are measured: self-disclosure and responsiveness, support, trust, affection, and closeness (Berscheid & Kelley, 2002; Laurenceau et al., 2004; Reis & Patrick, 1996; Reis & Shaver, 1988). When family intimacy is considered, the main dimensions investigated are cohesion, closeness, and supportive climate (Gehring, Debry, & Smith, 2001; Moos & Moos, 1983; Olson, 1986).

Because family dyadic intimacy involves the individual behavior in the relationship (for instance, how much one spouse self-discloses to the other spouse) and the perception of that behavior by both members of the relationship and because often the same behavior could be interpreted as intimate or not (Foley & Duck, 2006), the instruments are often self-report instruments that measure the interpretation of one member of the family dyad of the behavior, motivation, and intention of the other member of the family dyad. Examples of those instruments are the following: The Intimacy Scale

(Walker & Thompson, 1983) measures, with 17 items, the intimacy within the mother-daughter relationship. The Miller Social Intimacy Scale (Miller & Lefcourt, 1982) measures, with 17 items, the frequency and the intensity of intimacy behavior within the marital relationship. The Psychosocial Intimacy Questionnaire (Tesch, 1985) measures three dimensions of dyadic intimacy with 60 items: romantic love, supportiveness, and communication. The Personal Assessment of Intimacy in Relationships (PAIR Inventory, Schaefer & Olson, 1981) measures, with 5 items, emotional, social, sexual, intellectual, and recreational intimacy.

On the other side, measuring family intimacy as a systemic construct means to measure the family environment, climate, and system. In this sense, self-report instruments in which family members assess their family as a whole, or negotiated family test in which family members alone or, more often, together negotiate a shared representation of their family closeness, are present in the literature.

Among self-report instruments, we can cite the Family Adaptability and Cohesion Evaluation Scales (FACES III; Olson, 1986), Personal Authority in the Family System (PAFS) (Bray, Willimason, & Malone, 1984), the Family Environment Scale (Moos & Moos, 1994), the Family Emotional Involvement and Criticism Scale (Shields, Franks, Harp, McDaniel, & Campbell, 1992), and, among the more recent scales, the Social Relational Quality Scale (Hou, Lam, Law, Fu, & Fielding, 2009) which contains a 7-item scale about family intimacy.

Among family tasks, the Family System Test (FAST, Gehring et al., 2001) allows to measure the cohesion within family, and the Family Life Space (Mostwin, 1980), a graphic-symbolic instrument, allows to investigate family relationships and gives some information on the overall family organization.

Cross-References

- ▶ Family Connectedness
- ▶ Family Environment Scale
- ▶ Family Support

References

Berscheid, E., & Kelley, H. H. (2002). Introduction to the Percheron Press edition. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, E. McClintock, L. A. Peplau, & D. R. Peterson (Eds.), *Close relationships* (pp. vii-xxvi). Clinton Corners, NY: Percheron. (Original work published 1983).

Berscheid, E., Snyder, M., & Omoto, A. M. (1989). The relationship closeness inventory: Assessing the closeness of interpersonal relationships. *Journal of Personality and Social Psychology, 57*(5), 792–807. doi:10.1037/0022-3514.57.5.792.

Bray, J. H., Willimason, D. S., & Malone, P. E. (1984). Personal authority in the family system: Development of a questionnaire to measure personal authority in intergenerational family processes. *Journal of Marital and Family Therapy, 10*(4), 167–178.

Davis, J. D., & Sloan, M. L. (1974). The basis of interviewee matching of interviewer self-disclosure. *The British Journal of Social and Clinical Psychology, 13*(4), 359–367.

Erikson, E. H. (1963). *Childhood and society*. (2nd Ed, Rev. & Enl.). New York: Norton.

Foley, M. K., & Duck, S. (2006). In L. H. Turner, & R. West (Eds.), *"That dear octopus": A family-based model of intimacy*. Thousand Oaks, CA: Sage.

Gehring, T. M., Debry, M., & Smith, P. K. (2001). *The family system test (FAST): Theory and application*. Hove, England: Routledge.

Hirschberger, G., Florian, V., & Mikulincer, M. (2003). Strivings for romantic intimacy following partner complaint or partner criticism: A terror management perspective. *Journal of Social and Personal Relationships, 20*(5), 675–687. doi:10.1177/02654075030205006.

Hou, W. K., Lam, W. W. T., Law, C. C., Fu, Y. T., & Fielding, R. (2009). Measuring social relational quality in colorectal cancer: The social relational quality scale (SRQS). *Psycho-Oncology, 18*(10), 1097–1105. doi:10.1002/pon.1500.

Laurenceau, J., Rivera, L. M., Schaffer, A. R., & Pietromonaco, P. R. (2004). In D. J. Mashek, A. P. Aron (Eds.), *Intimacy as an interpersonal process: Current status and future directions*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

McAdams, D. P. (1988). Personal needs and personal relationships. In S. Duck, D. F. Hay, S. E. Hobfoll, W. Ickes,& B. M. Montgomery (Eds.), *Personal needs and personal relationships*. Oxford, England: John Wiley & Sons.

Miller, R. S., & Lefcourt, H. M. (1982). The assessment of social intimacy. *Journal of Personality Assessment, 46*(5), 514–518. doi:10.1207/s15327752jpa4605_12.

Moos, R., & Moos, B. (1983). Clinical applications of the family environment scale. In E. Filsinger (Ed.), *A sourcebook of marriage and family assessment* (pp. 253–273). Beverly Hills, CA: Sage.

Moos, R., & Moos, B. (1994). *Family environment scale manual: Development, applications, research* (3rd Ed). Palo Alto, CA: Consulting Psychologist Press.
Mostwin, D. (1980). *Life space approach to the study and treatment of a family*. Washington, DC: The Catholic University of America Press.
Olson, D. H. (1986). Circumplex model VII: Validation studies and FACES III. *Family Process, 25*(3), 337–351.
Olson, D. H., Sprenkle, D. H., & Russell, C. S. (1979). Circumplex model of marital and family systems: I. cohesion and adaptability dimensions, family types, and clinical applications. *Family Process, 18*(1), 3–28. doi:10.1111/j.1545-5300.1979.00003.x.
Patterson, M. L. (1976). An arousal model of interpersonal intimacy. *Psychological Review, 83*(3), 235–245. doi:10.1037/0033-295X.83.3.235.
Prager, K. J. (1995). *The psychology of intimacy*. New York: Guilford Press.
Prager, K. J., & Roberts, L. J. (2004). In D. J. Mashek, A. P. Aron (Eds.), *Deep intimate connection: Self and intimacy in couple relationships*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
Reis, H. T., & Patrick, B. C. (1996). In E. T. Higgins, A. W. Kruglanski (Eds.), *Attachment and intimacy: Component processes*. New York: Guilford Press.
Reis, H. T., & Shaver, P. (1988). In S. Duck, D. F. Hay, S. E. Hobfoll, W. Ickes, & B. M. Montgomery (Eds.), *Intimacy as an interpersonal process*. Oxford, England: John Wiley & Sons.
Schaefer, M. T., & Olson, D. H. (1981). Assessing intimacy: The PAIR inventory. *Journal of Marital and Family Therapy, 7*(1), 47–60. doi:10.1111/j.1752-0606.1981.tb01351.x.
Shields, C. G., Franks, P., Harp, J. J., McDaniel, S. H., & Campbell, T. L. (1992). Development of the family emotional involvement and criticism scale (FEICS): A self-report scale to measure expressed emotion. *Journal of Marital and Family Therapy, 18*(4), 395–407. doi:10.1111/j.1752-0606.1992.tb00953.x.
Tesch, S. A. (1985). The psychosocial intimacy questionnaire: Validational studies and an investigation of sex roles. *Journal of Social and Personal Relationships, 2*(4), 471–488. doi:10.1177/0265407585024007.
Walker, A. J., & Thompson, L. (1983). Intimacy and intergenerational aid and contact among mothers and daughters. *Journal of Marriage and the Family, 45*(4), 841–849.

Family Inventory of Life Events and Changes (FILE)

► Mothers' Reports of Child Outcomes in Those with New-Onset Epilepsy

Family Inventory of Resources for Management (FIRM)

► Mothers' Reports of Child Outcomes in Those with New-Onset Epilepsy

Family Life and Parenting

► Paid Work and Parent–Child Relationship Quality

Family Life Cycle Stages

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Synonyms

Child and family well-being; Family development; Family support and the life cycle; Stages of family development; Stages of the family life cycle

Definition

Family life cycle stages is a theoretical framework to describe the formation, maintenance, change, and dissolution of marital and family relations.

Description

The family life cycle stages perspective is probably the most famous part of family development theory (Rodgers & White, 1993). Evelyn Duvall's (1962, p. 9) classification table lists eight stages of the family life cycle:

1. Beginning families (married couple without children)

2. Childbearing families (oldest child, birth to 30 months)
3. Families with preschool children (oldest child 2½–6 years)
4. Families with school children (oldest child 6–13)
5. Families with teenagers (oldest child 13–20)
6. Families as launching centers (first child gone to last child's leaving home)
7. Families in the middle years (empty nest to retirement)
8. Aging families (retirement to death of one or both spouses)

The basic assumption of these stages is that family has a mother, a father, and one or more young children (Duvall, 1977, p. 147). The age and school placement of the first child are used as criteria of family life cycle stage intervals from the birth of the first child in the family to the leaving home of the first child (Duvall, 1962, 1977).

Duvall (1977) presents four factors determining the stages: (1) plurality patterns, (2) age of the first child, (3) school placement of the first child, and (4) functions and statuses of families before and after children. Plurality refers to the complexity of interpersonal relationships within the family. The size of the family increases by arithmetical progression but the complexity of family relationships increases much more rapidly. To count the number of interpersonal relationships within the family, the following equation is used:

$$x = \left(y^2 - y \right)/2$$

In the equation, x equals the number of interpersonal relationships, and y equals the number of persons. For example, if the number of persons in the family is four, the number of the relationships is six (Duvall 1967, p. 11).

Several theorists have described the family life cycle by dividing it into few or many stages (Duvall, 1977). For example, Hill (1949) described life cycle of families under stress. Later, Hill and Rodgers (1964) formulated life cycle stages on a systematic way on the basis of a report on the work of a committee at the National Conference on family life in 1948 (Rodgers & White, 1993).

The framework has been modified and implicated in variations in the family life cycle, such as divorce and remarriage (McGoldrick & Carter, 1982). Additionally, it can be combined, e.g., with genogram to diagram various family events (Rodgers & White, 1993). It also provides a constructive approach to research with families (Rankin, 2000).

The family life cycle stages framework has been criticized for overfocusing on the maturation of children and ignoring the development within the marriage and the intergenerational family group (Russell, 1993). Additionally criticism has focused on framework's failure to offer any theoretical deductions or predictive power (Rodgers & White, 1993).

Cross-References

- ▶ Family Conflicts
- ▶ Family Connectedness
- ▶ Family Differentiation
- ▶ Family Structure
- ▶ Family Support
- ▶ Family-to-Work Conflict
- ▶ Marital and Family Satisfaction in 32 Countries
- ▶ Marital Quality and Family Configurations
- ▶ Marital Quality and Well-Being in Mid and Late Life
- ▶ Marital Satisfaction Change over Newlywed Years
- ▶ Marital Well-being Measures

References

Duvall, E. M. (1962). *Family development* (2nd ed.). Philadelphia: Lippincott.

Duvall, E. M. (1977). *Marriage and family development* (5th ed.). Philadelphia: Lippincott.

Hill, R. (1951). *Families under stress*. New York: Harper & Brothers.

Hill, R., & Rodgers, R. H. (1964). The developmental approach. In H. T. Christensen (Ed.), *Handbook of marriage and the family*. Chicago: Rand McNally.

McGoldrick, M., & Carter, E. A. (1982). The family life cycle. In F. Walsh (Ed.), *Normal family processes* (pp. 167–195). New York: The Guilford Press.

Rankin, S. H. (2000). Life-span development: Refreshing a theoretical and practice perspective. *Scholarly Inquiry for Nursing Practice, 14*(4), 379–388.

Rodgers, R. H., & White, J. M. (1993). Family development theory. In G. Pauline, P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 225–254). New York: Kluwer/Plenum Press.

Russell, C. S. (1993). Family development theory as revised by Rodgers and White. Implications for practice. In G. Pauline, P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 255–257). New York: Kluwer/Plenum Press.

Family Life Quality, Measures of

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Definition

The quality of family life is a broad construct referring to the quality of several aspects related to the living conditions, the functioning, and well-being of a family.

The measures of the quality of family life include both objective and subjective indicators, and they are typically used to describe what might be considered to be a good family or a good life in a family. Several instruments are available to assess the numerous dimensions and subdimensions of the quality of family life, both from the perspective of family members (mainly self-report questionnaires) and throughout external observations.

Description

The extant lack of an unified theory about what a family is and how it should function to be considered a "good family" has led to confusion about what is to be measured as indicators of the family life quality. A proliferation of assessment strategies and instruments and an insufficient attention to their psychometric properties characterized the past decades, impeding the necessary integration of findings across empirical studies. Nevertheless, the growing importance attributed to the family as an integral component of the society makes the measurement of its life quality a crucial area of research. High-quality and well-functioning families are a precious social resource, playing a crucial role in creating and maintaining a successful society.

Schematically, measures of the quality of family life fall into three wide domains:

- Structural and organizational living conditions (e.g., safety and cleanliness),
- Family functioning,
- Happiness and well-being of the family members.

Family functioning is the domain that has been more frequently used as synonym of family life because it partially comprises the other two, as attested by theoretical conceptualizations and several instruments developed to measure objectives (e.g., the distribution of responsibilities) and subjective (e.g., the quality of communication) indicators of the family functioning.

The assessment of family functioning revolves around the consideration of the common tasks that a family must fulfill and the best strategies that have to be applied for their execution. A vast array of contextual, cultural, and generational characteristics may influence the tasks that a family has to address. Nevertheless, it is reasonable to sustain that all families have to manage boundaries inside and outside the family, guarantee a positive emotional and communicative climate, devise strategies for the maintenance of the household, provide basic necessities, and manage structural and dynamic changes in the family over time.

Most measures of the quality of family life and family functioning are multidimensional and assess facets and subdimensions of the tasks that the family must address and the strategies they adopt.

In the Perceptual Indicators of Family Life Quality (PIFQ) developed by Rettig and colleagues (Retting, Danes, & Bauer, 1991), the

quality of family life has been operationalized as the individual perceptions of support from one's family in terms of love, status (respect and esteem), services (comfort and assistance), information (communication resulting in shared meaning), goods (ownership of personal things), and money (for personal needs).

The ▶ Family Environment Scale (FES; Moos & Moos, 1994) measures the family social and environmental characteristics. Three separate forms of the FES are available: the real form that measures people's perceptions of their actual family environment, the ideal form whose items assess individuals' perceptions of their ideal family environment, and the expectations form that asks respondents to indicate what they expect a family environment will be like under, for example, anticipated family changes. The FES assesses three main dimensions and ten subdimensions: relationship (cohesion, expressiveness, and conflict), personal growth (independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, and moral-religious emphasis), and maintenance (organization and control).

The Family Assessment Device (FAD; Epstein, Baldwin, & Bishop, 1983) evaluates the family functioning based upon a model that describes properties and transaction patterns that can distinguish healthy from unhealthy families. The FAD is made up of seven scales measuring problem solving, communication, roles, affective responsiveness, affective involvement, behavioral control, and general functioning. Similar dimensions are measured by the Family Interaction Patterns Scale (FIPS; Bhatti, Cuba, & Benedicta, 1986) that evaluates leadership, communication, role, reinforcement, cohesiveness, and social support. A more extensive questionnaire, partially derived from the previous instruments, is the Colorado Self-Report Measure of Family Functioning (Bloom, 1985) measuring cohesion, expressiveness, conflict, intellectual-cultural orientation, active-recreational orientation, religious emphasis, organization, family sociability, external locus of control, family idealization, disengagement, democratic family style, laissez-faire family style, authoritarian family style, and enmeshment.

Differently from the instruments described above, the Family Adaptability and Cohesion Evaluation Scale (FACES), developed by Olson, focuses on two dimensions of the family functioning: adaptability and cohesion. The latest version, the FACES IV (Olson, 2011), is made up of six scales, two balanced scales (balanced cohesion and balanced flexibility) and four unbalanced scales, assessing the low and high extremes of the two dimensions called disengaged and enmeshed, for the cohesion dimension, and rigid and chaotic for the flexibility dimension. Using cluster analysis of the FACES IV scales, six family types, ranging from happy to unhappy, can be identified: balanced, rigidly cohesive, midrange, flexibly unbalanced, chaotically unbalanced, and unbalanced.

An operational approach to the measurement of the family life quality involves obtaining purportedly objective reports of the behaviors characterizing the family interactions and then evaluating theoretically their effectiveness. This behavior-focused approach infers the presence of potential positive or negative consequences when certain behaviors are reported to be displayed within the family. The Differentiation Within the Family System (DIFS; Anderson & Sabatelli, 1992) utilizes this approach in assessing the family functioning; respondents are asked, for example, how often different family members intrude on them by telling them what they are thinking or feeling.

In the clinical settings, the quality of family life is frequently measured from the perspective of an external observer. The Family Health Scale (FHS; Kinston, Loader, & Miller, 1987), for instance, assesses the family's level of overall functioning based upon clinical observation of family interactions and detects six dimensions: affective status, communication, boundaries, adaptability and stability, alliances, and family competence. Several other instruments are available to help social workers to assess families' life quality in order to develop meaningful service plans, monitor progress, and assist agencies in measuring outcomes over time. To this end, the Family Assessment Form (FAF; see McCroskey, Sladen, & Meezan, 1997, for its psychometric properties) has been developed by the US

Children's Bureau to assess six factors: living conditions, financial conditions, support to caregivers, caregiver/child interaction, developmental stimulation, and caregiver interactions.

Ad hoc measures of the quality of family life are also used in wide cross-national surveys as the ▶ European Quality of Life Survey (EQLS) carried out by the European Foundation for the Improvement of Living and Working Conditions (Eurofound), in which family life is defined by three dimensions: household living arrangements, distribution of household and care responsibilities, and social contacts and support (Eurofound, 2010). Living arrangements are defined by a range of categories (e.g., living with parents and living as a couple with children and without other household members), whereas the distribution of household and care responsibilities is measured as the frequency and weekly number of hours spent carrying out three specific activities: caring for and educating children, cooking and housework, and caring for elderly or disabled relatives. Finally, social contacts are operationalized as the direct and indirect contact with people outside the household and social support as the expectations of support from others in case of need and difficulties.

Close to the quality of family life is the construct of "▶ family quality of life" (FQoL) that has been primarily investigated on families of individuals with disabilities. Main domains included in FQoL are ▶ emotional well-being, family and interpersonal relationships, material well-being, personal development, ▶ physical well-being, disability-related support, social inclusion, and rights. Two major measures have been developed to assess the FQoL: the Beach Center FQoL tool (Hoffman, Marquis, Poston, Summers, & Turnbull, 2006) and the International FQoLS-2006 (Isaacs et al., 2011).

Cross-References

▶ Emotional Well-Being
▶ European Quality of Life Survey (EQLS)
▶ Family Conflicts
▶ Family Quality of Life
▶ Happiness
▶ Health
▶ Love
▶ Personal Growth
▶ Physical Well-Being

References

Anderson, S. A., & Sabatelli, R. M. (1992). The differentiation in the family system scale (DIFS). *American Journal of Family Therapy, 20*, 77–89.

Bhatti, R. S., Cuba, K. D. K., & Benedicta, L. A. (1986). Validation of family interaction pattern scale. *Indian Journal of Psychiatry, 28*, 211–216.

Bloom, B. L. (1985). A factor analysis of self-report measures of family functioning. *Family Process, 24*, 225–239.

Epstein, N. B., Baldwin, L. M., & Bishop, D. S. (1983). The MC Master family assessment device. *Journal of Marital and Family Therapy, 9*, 171–180.

European Foundation for the Improvement of Living and Working Conditions. (2010). *Second European quality of life survey -family life and work*. Dublin, Ireland: Loughlinstown.

Hoffman, L., Marquis, J., Poston, D., Summers, J. A., & Turnbull, A. (2006). Assessing family outcomes: Psychometric evaluation of beach center family quality of life scale. *Journal of Marriage and Family, 68*, 1069–1083.

Isaacs, B., Wang, M., Samuel, P., Ajuwon, P., Baum, N., Edwards, M., & Rillotta, F. (2011). Testing the factor structure of the family quality of life survey – 2006. *Journal of Intellectual Disability Research*. Published online: 20 APR 2011.

Kinston, W., Loader, P., & Miller, L. (1987). Quantifying the clinical assessment of family health. *Journal of Marital and Family Therapy, 13*, 49–67.

McCroskey, J., Sladen, S., & Meezan, W. (1997). *Family assessment form: A practice based approach to assessing family functioning*. Washington DC: CWLA Press.

Moos, R., & Moos, B. (1994). *Family environment scale manual: Development, applications, research* (3rd ed.). Palo Alto, CA: Consulting Psychologist Press.

Olson, D. (2011). FACES IV and the circumplex model: Validation study. *Journal of Marital and Family Therapy, 37*, 64–80.

Retting, K. D., Danes, S. M., & Bauer, J. W. (1991). Family life quality: Theory and assessment in economically stressed farm families. *Social Indicators Research, 24*, 269–299.

Family Life Satisfaction

▶ Family Quality of Life

Family Planning

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Synonyms

Contraception programs; Reproductive Health Programs

Definition

Family planning is defined as the freedom and the consequent ability of individuals to decide about the number of children to have and the timing of their birth.

Description

Family planning is defined as the freedom and the consequent ability of individuals to decide about the number of children to have and the timing of their birth. This attitude varies according to children ever born and several demographic, social, economic, and cultural variables. In the industrialized countries, the transition from natural fertility to a controlled one began in the second half of the nineteenth century, while in the less developed countries, it's still in act (UN, 2007; 2009). The programs of family planning may be considered an instrument of demographic policies. The aim of these programs is to permit people to choose with responsibility their own reproductive behavior, in terms of intensity and timing, that is, to be able to reach their desired fertility. The effectiveness of the programs of family planning depends both on the knowledge and availability of contraceptive methods and on the demand of children, that is, the number of desired children. The transition from high to low desired fertility mainly depends on the impact that the factors of female empowerment exert on demand of children. These factors have acted during the demographic transition through different mechanisms, firstly in western societies in nineteenth and early twentieth centuries and then in developing countries, especially after WW II.

We can observe contraception prevalence trends in the regions of the world (Table 1). Developed countries show a very high prevalence (more than 70 % of women use any method), connected to the current (2005–2010) low level of fertility (TFR in developed societies globally considered is equal to 1.6 children per woman) (UN, 2010; USAID, WHO, & UNPFA, 2010).

In Table 2, we report another indicator that is unmet need for family planning, that is, the estimate of the not satisfied demand of contraceptive methods, that confirms the worse situation of sub-Saharan women.

Demographic transition of developed countries occurred practically in absence of family planning programs while developing countries have included in their political plans the projects of family planning, even if following different patterns of choice.

Among the factors of contraception diffusion, female education and female labor market participation are the main variables defining women empowerment, but many other aspects related to gender equality are to be taken into account. Reproductive behavior and contraceptive use are the consequences of several modifications of women status. Women status is a multidimensional concept including cultural and economic factors that impact on proximate variables of fertility, contraception being one of them, together with nuptiality pattern, breastfeeding, and abortion (Bongaarts, 1978).

Family planning's components deeply vary depending on social context. In countries where the process of the demographic transition led to decline of desired fertility but with high unmet

Family Planning, Table 1 Contraceptive prevalence, any method, by region of the world and year

Region	Contraceptive prevalence, any method			
	1980	2000	2005	2009
World	49.2	61.4	62.7	62.7
More developed regions	69	70.9	71.9	72.4
Less developed regions	43.7	59.6	61.1	61.2
Least developed countries	10.3	28.1	30.9	31.4
Other less developed countries	48.4	64.2	65.7	66
Africa	14.4	26.9	27.9	28.6
Sub-Saharan Africa	11.2	20.1	21.1	21.8
Northern Africa (excluding Sudan)	30.4	58.8	59.8	60.5
Eastern Africa	9.9	21.4	25.9	28.4
Middle Africa	17.5	24.1	20.1	18.6
Northern Africa	25.3	48.9	49.9	50.4
Southern Africa	45.6	54.7	57.9	58.4
Western Africa	6.3	14.3	13.9	14.4
Asia	48.1	64.1	65.8	66.2
Central Asia	55.7	61.6	57.8	56.8
Eastern Asia	68.3	84.2	83.1	82.8
Southern Asia	30.5	46.7	52.9	53.9
Southeastern Asia	35	57	59.3	62.2
Western Asia	39.9	51.3	54.5	55.1
Europe	70.1	71.7	72.9	72.6
Eastern Europe	66.1	71.9	76.1	74.9
Northern Europe	77.4	77.8	78.7	80.1
Southern Europe	66.6	65.4	63.8	63.8
Western Europe	77.8	73.6	71.7	71.9
Latin America and the Caribbean	53.8	71.2	72.9	72.9
Caribbean	50.2	59.9	61.8	61.6
Central America	39.1	67.8	69	68.2
South America	59.5	73.7	75.6	76
Northern America	69.3	74.2	75.5	78.1
Oceania	63.4	59	60.1	59.8
Australia and New Zealand	75	70.7	71.6	71.6
Melanesia, Micronesia, and Polynesia	29.6	32.2	35.9	36.6

Source: http://www.un.org/esa/population/publications/wcu2010/WCP_2010/Data.html

need of contraception, it is necessary to grant availability of reproductive health and family planning facilities. This is more so in rural areas of the less developing countries.

On the contrary, in countries with a still high demand of children, it may be useful to make people aware of benefits of less numerous family.

Family planning programs have encountered many troubles during their evolution, depending on political, religious, and social reasons. In a few developing countries, the number of women declaring of wanting no more children but not using contraception methods is still high. While in industrialized societies contraceptive use is quite universally high and abortion rates are declining, in developing countries, contraceptive use is lower and abortion rates differ deeply according to cultural and normative rules.

Family planning make contraceptive services available to women and men who want to choose the number of children to have and thus exercise a basic human right.

At the same time, it is a well-known case that health of women, of families, and of whole

Family Planning, Table 2 Unmet need for family planning by region of the world and year

Region	Unmet need for family planning		
	1990	2005	2009
World	13.1	10.9	11.2
More developed regions	–	–	–
Less developed regions	13.6	11.1	11.4
Least developed countries	25.2	23.1	24.2
Other less developed countries	12.0	9.3	9.3
Africa	25.0	22.3	22.7
Sub-Saharan Africa	26.0	24.4	24.9
Northern Africa (excluding Sudan)	19.4	10.4	9.6
Eastern Africa	30.9	27.5	27.6
Middle Africa	21.6	22.5	22.6
Northern Africa	21.6	14.0	13.5
Southern Africa	16.6	15.5	15.5
Western Africa	23.8	23.0	24.2
Asia	11.4	9.1	9.3
Central Asia	14.0	11.7	11.8
Eastern Asia	3.3	2.3	2.3
Southern Asia	18.0	14.7	14.6
Southeastern Asia	15.5	10.4	11.0
Western Asia	15.6	12.9	13.5
Europe	–	–	–
Eastern Europe	–	–	–
Northern Europe	–	–	–
Southern Europe	11.3	11.6	11.8
Western Europe	–	–	–
Latin America and the Caribbean	15.8	9.8	9.9
Caribbean	19.5	20.0	20.3
Central America	21.4	12.6	13.2
South America	13.1	7.7	7.5
Northern America	6.0	6.5	6.6
Oceania	–	–	–
Australia and New Zealand	–	–	–
Melanesia, Micronesia, and Polynesia	–	–	–

Source: http://www.un.org/esa/population/publications/wcu2010/WCP_2010/Data.html

communities – including ultimately a country's social and economic health and development – depends on making family planning services available to all who want them. In this framework, family planning is included in various components of Millennium Development Goals (MDGs). Referring to a recent analysis, we can outline the positive impact of family planning diffusion on the decline of undesired fertility and consequently the positive impact of a lower growth rate of population. In this approach, we can introduce the predicted benefits of family planning included in the MDG programs. Among these benefits are the increase of income and wealth that presents a positive correlation with the prevalence of modern contraceptive methods. Family planning reduces the aggregate demand for increasingly scarce food products. Moreover, birth spacing reduces the risk of infant and maternal mortality due to incidence of low birth weight and poor maternal nutrition. If we could meet all demands for contraception, 640,000 newborn deaths would be prevented because family planning increases child survival and maternal health.

Universal education appears as the main factor inducing development of human capital. Girls in fact have often to drop out of school due to unintended pregnancy or to help care for younger siblings. Fewer than half of all African girls complete primary school. Family planning prolongs education and helps girls in particular to achieve their dreams for the future. Moreover, unplanned pregnancies divert women from other life plans. In Egypt, women who use contraception are more likely to be employed than nonusers. In Brazil and Indonesia, use of long-acting or permanent contraceptive methods was associated with a greater likelihood of working for pay. Using family planning empowers women. Last, but not the least, involving men in family planning can lead to changes in gender norms. Empowering women in many ways, including their ability to achieve their desired family size, is the most important driver of modern development efforts. In low-resource settings without safe delivery services, the risks of maternal mortality are also high, as are morbidities that are often permanent. We cannot forget, then, that one of the instrument of contraception (condom) is one of the best vehicle for HIV prevention. Women with HIV who have unintended pregnancies present a higher risk of transmitting the virus to their children with respect to the women with desired pregnancies. Preventing unwanted pregnancies among HIV-positive women reduces the number of HIV-positive births and is three times more effective as a prevention strategy than providing antiretroviral treatment to mothers during pregnancy, birth, and breast-feeding. If we examine, finally, the relationship between family planning, high rate of population growth, and environmental impacts, together with those provoked by conflicts and war, we can observe that a family with fewer children needs less food, land, and water and puts less pressure on a country's forests and land.

Cross-References

- ▶ Birth Control
- ▶ Contraception
- ▶ Fertility Plans/Intentions

References

Bongaarts, J. (1978). A framework for analyzing the proximate determinants of fertility. *Population and Development Review, 4*(1), 105–132.

United Nations. (2009). *World fertility pattern*. Retrieved from http://www.un.org/esa/population/publications/worldfertility2009/worldfertility2009.htm

United Nations. (2010). *World contraceptive use*. Retrieved from http://www.un.org/esa/population/publications/wcu2010/WCP_2010/Data.html

United Nations, Department of Economic & Social Affairs. (2010). *World fertility report, 2007*. New York: United Nations.

USAID, WHO, & UNPFA. (2010). *Family planning for health and development*. Retrieved from http://www.fhi.org/NR/rdonlyres/e54ksdzjj2y5cvvptp2hvgh4cphj2lb5wydj5epy34ifu5s36owi3qknr4cew6rkjraf7hxwimo37g/KampalaReportIBP.pdf

Family Practices

▶ Family Differentiation

Family Quality in 32 Countries

▶ Marital and Family Satisfaction in 32 Countries

Family Quality of Life

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Synonyms

Family happiness; Family harmony; Family life satisfaction; Family well-being

Definition

Definitions: Family quality of life, Quality of life, and Family.

In the field of intellectual and developmental disabilities, *quality of life* improves when a person's basic needs are met and improves further when people have opportunities to pursue the important possibilities of their lives and to achieve their goals within major life settings. Yet it is very often small and non-expensive aspects that improve quality of life, and these may be unique to individuals and families. *Family quality of life* is concerned with the degree to which individuals experience their own quality of life within the family context, as well as with how the family as a whole has opportunities to pursue its important possibilities and achieve its goals in the community and the society of which it is a part.

The structure of a family may differ markedly both within a society and among societies. Family quality of life researchers define *family* as those who are in close day-to-day contact and perceive themselves to be a family unit (I. Brown & R. Brown, 2003). Thus, the number of people in a family may range from two to many, and their relationships may differ from one family to another.

Description

The Beginnings of Family Quality of Life

Writing and research on family quality of life developed in the late 1990s within the field of intellectual disabilities, and this field has continued as a rich source of conceptual and research development to the present time. This work developed from the explosion of interest in individual quality of life, an interest that has resulted in numerous conceptual and research reports as well as a number of important volumes (R. Brown, Schalock, & I. Brown, 2009; Kober, 2011; Kober & Wang, 2011, 2012). As of 2011, there is only one book in print on family quality of life, Turnbull, I. Brown, and Turnbull (2004), though there are a number of chapters in several books (e.g., I. Brown & R. Brown, 2003; Kober, 2011), as well as special issues in journals (e.g., R. Brown, 2006; R. Brown, Schalock, & I. Brown, 2009; Kober & Wang, 2011, 2012).

Family Quality of Life as a Social Construct

Family quality of life is a concept that has been the focus of conceptualization and applied research since about the year 2000. Like its "parent" concept, quality of life, family quality of life is a social construct to describe a phenomenon that we have identified in life (other examples are happiness and trustworthiness). Like all social constructs, family quality of life has the meaning that we ascribe to it because we observe aspects of family life that we need to cluster into a system that enables us to understand them, develop hypotheses, and test applied ideas. The meaning of a social construct changes somewhat over time in response to our understanding of other related concepts, changing social and cultural values and norms and environmental conditions.

At the present time, scholars have begun to ascribe meaning to the concept family quality of life. That meaning involves the family unit and the degree to which it functions so that family members can enjoy their lives together and so that individual family members are supported in pursuing their own lives. In a sense, this is a simple enough idea, but it becomes more complex when we stop and think, "Exactly what do we mean by this, and exactly how is this done?" Scholars have begun to explore this complexity by asking such questions as, "What makes family life effective, successful, enjoyable, or fulfilling?" "How do we know when this has been achieved?" and "Whose perspective within the family should we be listening to?" In this section, we describe how such questions have been addressed to date and, in doing so, we specify the meaning that has been ascribed to the concept family quality of life in the field of intellectual disability up to this time.

What Is a Family?

The family is recognized in cultures around the world and across history as a fundamental unit of

social order (I. Brown & R. Brown, 2003). Still, families vary markedly over time, from one culture to another, and even within cultures. It is recognized that, in today's world, it is not possible to define a specific family type or even a group of family types. In any case, family quality of life is not so concerned with contrasting the quality of life of people in various family types as it is concerned with examining how quality of life is experienced within the various family units where people live (e.g., one-parent or two-parent families, families with a child with autism, Down syndrome, or other condition). For these reasons, scholars assume that, for purposes of family quality of life study, a family unit consists of those people who consider themselves to be a family. By way of guidance, people are typically asked to consider as family those people who are related by blood or close relationship and who interact with one another on a day-to-day basis (Beach Center on Disability, 2011).

The question of how the voice of the family is heard is one that has been recognized, but ways to address it are still just beginning to emerge. By its very definition, families consist of more than one person, and each family member is recognized to have his or her unique perspective. To date, the perspective of the parents or main caregivers has been sought by scholars, but a recognized limitation on family quality of life study is that the perspective of children and other family members may reflect considerably different results. It has been suggested that, at best, it may be possible to combine the views of individual family members together in some way to represent a "whole-family" perspective, or it may be possible for family members to consult among themselves and express a collective viewpoint.

What Do We Study in Family Quality of Life?

In family quality of life study, we look at family life on the whole as well as the main areas of life activity that are important to the functioning of families. Holism is a view of something – in this case, family life – as a whole, although it also refers to the overall pattern of interactions among the various main areas of family life. It reflects how a family is now on the whole, how it fits in with its larger community and society, and how its major goals are being realized. Researchers are also interested in the extent to which different domains or areas interact positively or negatively with one another, such as how recreation may influence health and vice versa.

We refer to the most important areas of family life in which it functions as its domains. Taken together, family life domains represent most of what family life is, but they can never represent absolutely everything. Domains that are used by the International Family Quality of Life Project (I. Brown et al., 2006) are the health of the family, financial well-being, family relationships, support from other people, support from disability-related services, influence of values, careers and preparing for careers, leisure and recreation, and community interaction. The Beach Center at the University of Kansas, USA (Beach Center on Disability, 2011), identified five main family life domains in its research: family interaction, parenting, emotional well-being, physical/material well-being, and disability-related support. Aznar and Castanon (2005) used emotional well-being, family life, personal strength and development, cohabitation rules, interpersonal and community relations, and physical/material well-being.

To assess the degree of quality within family life domains, we may describe family quality of life qualitatively and classify family statements, or we can measure various outcomes (e.g., using rating scales, observation, and/or interviews). Satisfaction is an outcome that is always measured, usually weighted by the degree to which it is important to families and recognizing its homeostatic effect – the tendency for people to find contentment in their lives whatever the conditions may be (Cummins, Gullone, & Lau, 2002). The International Family Quality of Life Project also measures opportunities, initiative, stability, and attainment for each domain studied.

Domains can be examined separately, or in relation to one another. For example, the recreation activities of a family influence and are influenced by the family's perception and

involvement in the local community or health. Having a child with severe and multiple disability may require that a parent gives up work to attend to the child's needs. This reduces the economic status of the family and time available for life outside the home. Research evidence indicates that mothers frequently give more attention to the caring of the child with a disability than they wish, as they recognize the needs of the other members of the family and their own need for support (I. Brown, Anand, Fung, Isaacs, & Baum, 2003), and this seems to hold around the world, though it is important to take into account cultural and allied factors. Taking such factors into account and using a quality of life approach, the Adult Down Series discusses family issues and needs (see, e.g., Cuskelly, I. Brown, Shearer, & Singh, 2006). It is critical to assess such interrelationships, especially because they suggest support and intervention that can assist the family to function effectively.

When studying family quality of life (like the study of quality of life in general), we need to look beyond what is described above – family life as a whole and the domains of family life – for three reasons. First, there are a number of concepts that are important for family quality of life and, in fact, contribute to it. These include such concepts as empowerment, self-image, self-determination, and exercise of choice. Second, although little research in this area has emerged to date, scholars will need to take a community or societal perspective because family quality of life contributes to, but is also a result of, such things or attributes as community resources, prevailing social values and customs, discrimination or freedom from discrimination, overall economic well-being, human rights afforded to citizens, and laws and policies that support effective family functioning. Third, the study of family quality of life is sometimes related to other specific aspects of individual or social functioning that are of particular interest to researchers and the subject of comment in many quality of life reports from families. Some examples include intimacy, family safety, and absence of abuse, aging, single-parent families, spirituality, impact of services , as well as specific types of disabilities such as autism, deafness, brain injury, or diseases such as cancer or HIV.

How Do We Measure Family Quality of Life?

It is widely recognized in quality of life study, and also in family quality of life study, that both objective and perceptual (subjective) measures are essential for a full understanding (R. Brown et al., 2009). These two approaches to measurement can address different aspects of family quality of life, and combining the knowledge that is garnered from each creates a richness of understanding of the concept. In a section below, we mention questionnaires and surveys; these measure various aspects of family quality of life (e.g., on 5-point scales), but they also ask for explanations and additional comments that contribute description and contextual information.

Aspects of family life that can be independently observed and measured by others are called objective indicators of family life. These aspects include such things as level of security, housing, health, education, financial well-being, and employment. Objective indicators may reflect information garnered from family members themselves or from outside sources. Their key characteristic, though, is that they are not subject to the views or opinions of family members, but have a "truth" of their own inasmuch as they can be verified from other reliable sources. For example, if a mother says she is a university graduate, this fact can be verified by her university; if the family house is said to be valued at $400,000, this value could be verified by consulting a competent real estate agent. Objective indicators are useful in family quality of life for describing one sense of quality – what we consider to be better. For example, we usually think having a secondary school education is better than having only an elementary school education, and we usually think having a job is better than not being able to find employment. Objective indicators are also useful for describing another sense of quality – things we know to be associated with more successful life or higher achievement. For example, we know that having fewer health problems is indicative of longer and

more problem-free life on the whole. We also know from other research that people with adequate financial well-being have some better health outcomes. What objective indicators cannot tell us is whether or not people are happy, or if they think they are having a good life.

Aspects of family life that reflect what people themselves think and feel are called perceptual indicators (also called subjective indicators) of family life. Perceptual indicators are not observed or measured independently because their very purpose is to record people's own perspectives and to view the world through their eyes. There is an expectation that perceptual indicators may vary from one person to another and from one family to another because individuals and families have their unique characteristics and unique ways of looking at things. The key characteristic of perceptual indicators is that they reflect what the person indicates they are thinking and feeling about aspects of family life at a particular point in time. Like all measures, such statements are associated with error, and perceptual indicators are sometimes considered to be unreliable and invalid because the outsider can never be absolutely certain that what the person says reflects perceptual truth. On the other hand, they are extremely useful as they can reflect attitudes, values, feelings, and unique ways of thinking, and they can directly measure concepts that objective indicators cannot (e.g., happiness, satisfaction, joy, fear, energy, and many more). Perceptual indicators are especially useful because there is a considerable literature that provides evidence that, to a large degree, our behavior is a result of our perceptions of ourselves and the world around us (e.g., Andrews, 1974).

Therefore, some social scientists believe that objective and perceptual measures are different and important ways of examining family quality of life. For example, medical personnel who determine someone does not have health problems still leave room for people to say they do not feel well, and it is such perceptions that can drive their behavior. These two measures represent different variables, and we should not necessarily expect high correlations between them, as they represent different and important aspects of an individual's life experience.

Ways of Collecting Objective and Perceptual Information

A number of ways have been developed for collecting family quality of life data:

- Interviews
- Focus groups
- Questionnaires
- Surveys
- Observation of the family

Family quality of life information has been collected from the following:

- Parents and other main caregivers (e.g., R. Brown, MacAdam-Crisp, Wang, & Iarocci, 2006)
- Siblings (e.g., Moyson, 2011)

It is appropriate to note the important work of others who have looked at family issues where there is a child with disabilities. Many of these publications are relevant to family quality of life, though they are not necessarily discussed in terms of quality of life (e.g., Carr, 2008).

What Measurement Instruments Have Been Developed to Date?

A comprehensive list of quality of life instruments can be found at Australian Centre on Quality of Life (2011). Examples are given below.

Family Quality of Life Survey. Main Caregivers of People with Intellectual or Developmental Disabilities http://www.surreyplace.on.ca/Education-and-Research/research-and-evaluation/Pages/International-Family-Quality of Life Project.aspx

Beach Center Family Quality of Life Scale. Beach Center on Disability, University of Kansas http://www.beachcenter.org/default.aspx?JScript=1

Family Quality of Life Survey. Verdugo, Córdoba, and Gómez (2005).

What Have We Learned About Family Quality of Life So Far?

During the first dozen years since 2000, numerous studies specifically on family quality of life have been conducted worldwide in the field of intellectual and developmental disabilities by the

research groups referenced above and many more are being planned or are underway. Although there are some differences in the overall results in the reported research, the results are surprisingly similar. In countries as diverse as Australia, Belgium, Canada, Croatia, Malaysia, and the United States with widely differing levels of disability services, there is agreement that family relationships contribute strongly to perceived family quality of life. To some lesser degree, health, careers, and leisure are also universally important. On the other hand, almost every country ranks disability-related services and support from other people much lower as contributors to family quality of life.

International research is reported in the following a Kober and Wang (2011, 2012), and Summers et al. (2005), Wang and R. Brown (2009).

Several important issues are emerging from this family quality of life research. It is important to explore these further, through both research and clinical assessment, so that relevant policy can be developed and effective support provided.

Many families having a child with a disability report that they are satisfied or very satisfied with aspects of family quality of life. However, a noticeable number from several different countries report the following:

- Most families are not satisfied with aspects of disability services, even in countries that have many services. This appears to relate not simply to the individual with a disability but to the needs of the family, which at least to some degree result from the presence of a child with a disability.
- Families in almost every country that have a son or daughter with a disability often get little practical or emotional support from relatives, neighbors, and friends.
- Mothers, in particular, feel a high degree of responsibility for their child(ren) with a disability – a level which is very often more than they wish to have.
- Perceived family quality of life is lower in families that have a child with severe and multiple disability, particularly major behavior disorders such as autism.
- Conversely, family quality of life appears to be better for families that include a member with some disabilities, such as Down syndrome, compared to families where there are other disabilities such as autism and other diagnoses involving major behavioral challenges. Despite considerable variability, families where there are children with developmental disabilities generally have lower overall family quality of life than families without a child with disability.
- Other factors appear to contribute to lower family quality of life, and these need to be explored in more depth in the future. These include reduced family income, including poverty, lack of people who can listen to challenges and help solve the challenges arising, lack of adequate respite that suits the family circumstances (i.e., the respite needs to be more varied in terms of time availability and duration), restriction on family inclusion at home, restrictions on opportunities for employment and professional growth, and restrictions on opportunities to study. Family members who have a son, daughter, or sibling with disability also report insufficient sleep, restrictions on having siblings' or parents' friends over, difficulty providing equal attention to nondisabled siblings, and inability to provide a peaceful time for school studies. It is also of concern that such families very often are not able to take vacations (R. Brown, Geider, Primrose, & Jokinen, 2011) or cannot go out together as a family due to disturbing behavior by one family member.
- Disability sometimes contributes to the complete breakdown of the family (maltreatment, separation, or divorce), which often leaves the mother as the sole home supporter of all the children with resultant stress and breakdown.
- Quality of family life appears to be affected by ages of the family members and by both the stage and style of parenting. Younger families can face more challenges from children with disabilities who change rather rapidly during childhood and adolescence. Older parents appear to experience higher family quality of life, though major concerns exist about what

happens to their sons and daughters who have a disability, when the parents die. Siblings sometimes become the supports but, frequently, at least in western society, siblings are often dispersed, making support difficult. However, there are challenges that arise because young adults who leave inclusive schooling often remain at home without appropriate work.

There is some evidence that older families with adult children with intellectual disabilities show higher quality of life than younger families. The reasons for this are still unclear, but there are several possibilities. First, older families have sons or daughters who lived through a time when survival rates for children with disabilities were much lower than they are now, and methods for improving survival rates mean that more children with multiple and complex disabilities survive (e.g., very-low-weight newborns). Thus, younger families may have more children with multiple disabilities, including those with extreme behavioral challenges (e.g., increase in the prevalence of autism spectrum disorder, and possibly fetal alcohol spectrum disorder). Second, the children in older families are typically in their adult years and leading stable lifestyles. Third, the children of older parents were often institutionalized in their younger years and, as a consequence, parents coped with fewer challenges during early family life and developed different expectations of service support. Finally, some sons or daughters in older families may be more mildly disabled and may be of considerable help in the home (laundry, making beds, shopping, etc.), are good company in the home, and even act as caregivers. Sometimes, disability pensions or other incomes are very helpful to the family finances. This may especially be the case after one spouse has died.

The results to date argue for the development of policy, taking into account family quality of life issues (Wang & R. Brown, 2009). One essential issue is the prevention of family breakdown and lessening of overall family quality of life as this relates not just to family functioning but also to the economic stability of many of these families. In this context, ongoing family support can be critical, as well as flexible respite services both inside and outside the family home. Such support includes having opportunities for talking through challenges with someone who listens professionally, and the provision of readily available information about support, along with the availability of supports that enable the family to experience as normal a lifestyle as possible – for example, appropriate vacations, ability to go out as a family, and normalized relations with the local community.

Are There Other Approaches to Family Quality of Life?

There are two other main approaches to quality of life study – social indicators, and health-related quality of life – but neither has yet specifically studied family quality of life in detail. A social indicators approach examines indicators that pertain to family units (their goals, activities, achievements, etc.), and the interaction of families with other aspects of their social and physical environments. Health-related quality of life considers the effects of specific diseases and conditions on quality of life. However, the family quality of life approach described in this article considers such effects on families as a whole.

Future Conceptualization and Research

Family quality of life as a concept and as a topic of research is still in its early stages. In the future, the concept itself will need to be clarified, and its relationship to its larger environment – its social context – will have to be described in both conceptual and applied ways. Research will need to focus on: (1) clarifying similarities and difference in family quality of life among families in various cultures around the world, (2) contrasting family quality of life for families with and without children with disabilities and other special needs, (3) contrasting family quality of life for families that have members with mild and severe disabilities, (4) exploring and describing the best measurement methods to express

family quality of life, (5) developing a theory of family quality of life, and (6) developing relevant policy and practical support methods based on family quality of life evidence to help families improve their lives.

Cross-References

- ▶ Developmental Disabilities
- ▶ Family Caregiving
- ▶ Family Environment Scale
- ▶ Family Life Cycle Stages
- ▶ Family Stress
- ▶ Family Support
- ▶ Intellectual Disability

References

Andrews, F. M. (1974). Social indicators of perceived life quality. *Social Indicators Research, 1*, 279–299.

Australian Centre on Quality of Life. (2011). *Instruments*. Retrieved from http://acqol.deakin.edu.au/instruments/instrument.php

Aznar, A. S., & Castanon, D. G. (2005). Quality of life from the point of view of Latin American families: A participative research study. *Journal of Intellectual Disability Research, 49*(10), 784–788.

Beach Center on Disability. (2011). *Beach center on disability*. Retrieved from http://www.beachcenter.org/default.aspx

Brown, I., Anand, S., Fung, W. L. A., Isaacs, B., & Baum, N. (2003). Family quality of life: Canadian results from an international study. *Journal of Developmental and Physical Disabilities, 15*, 207–230.

Brown, I., & Brown, R. I. (2003). *Quality of life and disability: An approach for community practitioners*. London: Jessica Kingsley Publishing.

Brown, I., Brown, R. I., Baum, N. T., Isaacs, B. J., Myerscough, T., Neikrug, S., et al. (2006). *Family quality of life survey: Main caregivers of people with intellectual or developmental disabilities*. Toronto, Canada: Surrey Place Centre. Retrieved December, 2011, from http://www.surreyplace.on.ca/Education-and-Research/research-and

Brown, R. I. (Ed.). (2006). Special issue on family quality of life research. *Journal of Policy and Practice in Intellectual Disability, 3*(4).

Brown, R. I., Geider, S., Primrose, A., & Jokinen, N. (2011). Family life and the impact of pre and present residential and day care support for children with major cognitive and behavioural challenges: A dilemma for services and policy. *Journal of Intellectual Disability Research., 55*(9), 916–929.

Brown, R. I., MacAdam-Crisp, J., Wang, M., & Iarocci, G. (2006). Family quality of life when there is a child with a developmental disability. *Journal of Policy and Practice in Intellectual Disabilities, 3*(4), 238–245.

Brown, R. I., Schalock, R. L., & Brown, I. (2009). Special issue on quality of life application. *Journal of Policy and Practice in Intellectual Disability*, *6*(1), 2–6.

Brown, R. I., Schalock, R. L., & Brown, I. (Eds.) (2009). Special issue on quality of life application. *Journal of Policy and Practice in Intellectual Disability*, *6*(1).

Carr, J. (2008). Families of 40-year Olds with Down Syndrome. *Journal on Developmental Disabilities, 14*(2), 35–43.

Cummins, R., Gullone, E., & Lau, A. (2002). A model of subjective well-being homeostasis: The role of personality. In E. Gullone & R. Cummins (Eds.), *The universality of subjective wellbeing indicators* (pp. 7–46). Dordrecht, The Netherlands: Kluwer Academic Publishers Group.

Cuskelly, M., Brown, I., Shearer, J., & Singh, B. (2006). *Families of adults with Down syndrome: Issues and information*. Portsmouth, UK: Down Syndrome Educational Trust.

Kober, R. (Ed.). (2011). *Enhancing the quality of life of people with intellectual disability: From theory to practice*. Dordrecht, The Netherlands: Springer.

Kober, R., & Wang, M. (Eds.). (2011). Special issue: Part 1: Family quality of life. *Journal of Intellectual Disability Research, 55*(12).

Kober, R., & Wang, M. (Eds.). (2012). Special issue: Part 2: Family quality of life. *Journal of Intellectual Disability Research, 56*(1).

Moyson, T. (2011). *Quality of life of siblings of children with a disability*. Faculteit Psychologie en Pedagogische Wetenschappen, University of Ghent, Ghent, Belgium.

Summers, J. A., Poston, D. J., Turnbull, A. P., Marquis, J., Hoffman, L., Mannan, H., & Wang, M. (2005). Conceptualizing and measuring family quality of life. *Journal of Intellectual Disability Research, 49*(10), 777–783.

Turnbull, A., Brown, I., & Turnbull, R. (Eds.). (2004). *Families and persons with mental retardation and quality of life: International perspectives*. Washington, DC: American Association on Mental Retardation.

Verdugo, M. A., Córdoba, L., & Gómez, J. (2005). Spanish adaptation and validation of the Family Quality of Life Survey. *Journal of Intellectual Disability Research, 49*(10), 794–798.

Wang, M., & Brown, R. I. (2009). Family quality of life: A framework for policy and social service provisions to support families of children with disabilities. *Journal of Family Social Work, 12*(2), 144–167.

Family Regulation

▶ Family Differentiation

Family Relationships

▶ Paid Work and Parent–Child Relationship Quality

Family Roles

▶ Family Differentiation

Family Size Desires in Australia

▶ Childbearing Desires Among Australian Women

Family Stress

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Synonyms

Family change or transition

Definition

Family stress is defined as disturbance in the steady state of the family system. The disturbance can emerge from the outside context (e.g., war, unemployment), from inside the family (e.g., death; divorce), or both simultaneously. In any case, the family system's equilibrium is threatened or disturbed. Family stress is therefore also defined as change in the family's equilibrium. Such change can be expected (as with the birth of a baby) or unexpected (as with winning a lottery).

While transitions and change are inherently stressful, the impact can be positive or negative. The sources of stress, whether they are volitional or unwanted, clear or ambiguous, predictable or unforeseen, all influence the outcome. And even with unexpected disasters, some families, depending on their coping strategies and resiliency, have the capacity to bend with the pressure and become stronger for it. Family stress then is by itself a neutral construct, but its impact can, to varying degrees, have a positive or negative valance.

Using a bridge metaphor, family stress is likened to a force pressing, pushing, or pulling the structure. The force can originate from either inside or outside the family system or both, but for researchers and therapists, the indicators are found inside the system. Like a bridge, if even one support pillar is weakened, the whole structure is strained. The same is true for families. Increased conflict and violence or abuse, lowered performance in family roles and tasks, and psychosomatic symptoms all signal high stress in families.

Classification of Stressor Events and Situations

In summary, family stress can be classified by:

Source of Stress

Internal: Events that emerge inside the family, e.g., addiction, suicide

External: Events that emerge outside the family, e.g., war, earthquake, tsunami

Type of Stress

Normative vs. Catastrophic: e.g., birth of a baby vs. death of a baby

Developmental vs. Situational: e.g., puberty vs. a broken leg

Predictable vs. Unexpected: e.g., death of an elder vs. dementia

Ambiguous vs. Clear: e.g., person missing (facts unavailable) vs. death certificate

Volitional vs. Nonvolitional: e.g., a wanted pregnancy (stressor freely chosen) vs. an unwanted divorce

Duration of Stress

Chronic vs. Acute: e.g., unemployment or prejudice vs. short term, resolvable illness

Density of Stress

Cumulative vs. Isolated: e.g., multiple stressors piling up at one time vs. one stressor at a time

Description

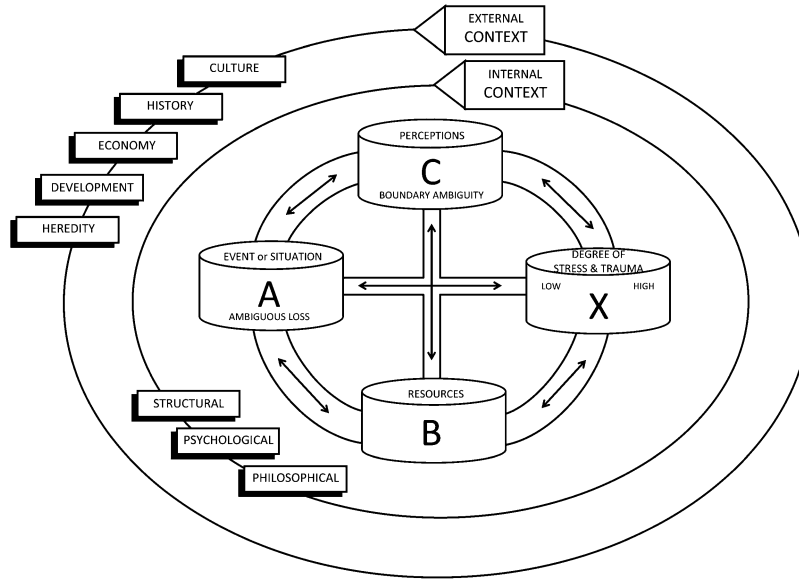
Historical Antecedents

The topic of family stress was first studied academically when American sociologists became concerned with the economic stress caused by the Great Depression of the 1930s and then the family separations due to military deployment during World War II. Reuben Hill was considered the pioneer of family stress theory and developed the first theoretical framework called the ABC-X Model of Family Crisis (1949, 1958). Hill's work influenced family stress scholars up through the 1980s when family social scientists began to expand his original work to specialize in various areas of stress: (1) family vulnerability, regenerative power, adaptability (Burr, 1973; McCubbin & Patterson, 1983), (2) trauma (Figley, 1989), and (3) meaning, perceptions, and contextual differences (Boss, 1987,1988). While the second generation of family stress scholars took different research paths, the first family stress theorist, Rueben Hill, served as a mentor to most if not all of them.

Regarding context, during the 1970s and 80s, the study of family stress again centered on the effects of war, but this time in Vietnam. Trauma entered the field of family stress along with the new term, *posttraumatic stress disorder (PTSD)* (Figley, 1989). While PTSD rather quickly became an individual variable with medical diagnosis (as it is today), family stress scholars such as Lavee, McCubbin, and Patterson (1985) further adapted and tested quantitative models based on Hill's original ABC-X model. Boss, however, took a different path to study meaning and perceptions (Boss, 1988, 2002, 2006). Unlike the other models of the time, Boss focused exclusively on the primacy of perception and context as major factors in determining why some families withstand stress and others cannot. She introduced two new variables into her family stress model, coining the terms, *ambiguous loss* and *boundary ambiguity* (Boss, 1987, 1988; Boss & Mulligan, 2003). Not surprisingly, today, wars are yet again stimulating family stress research; for example, the effects of deployment, traumatic head injury, and PTSD on couple and family relationships (e.g., Huebner, Mancini, Wilcox, Grass, & Grass, 2007, among others). Many researchers now include measurement of boundary ambiguity as they consider the stressor to be ambiguous loss.

To link ambiguous loss and boundary ambiguity more contextually, the Contextual ABC-X Model of Family Stress (Boss, 1988, 2002) is a non-linear model, which includes the external and internal contexts of the family (see Fig. 1). The *external context* includes the cultural, historical, economic, developmental, and hereditary contexts in which families define and cope with their stress or crisis. Much of this external context is fixed. The *internal context* of the family stress model includes elements the family can more easily change and control–the structure of the family's form and function regarding boundaries and roles; the psychological perception, appraisal, definition, or assessment of an event or situation they face; and their philosophical context of beliefs and values which influences the entire internal context of family coping and adaptation.

Whether or not a family and the individuals in it can manage a stressor event or situation depends on both internal and external contexts–how a family perceives the stressor, the meaning it has for them, and whether or not they feel they can manage it. Because the family's internal context is more amenable to change, interventions often focus on the internal context of family life. While the external context is taken into account, and family members' different perceptions of the external dimensions can be changed, actual change is more likely to occur at the micro level regarding family structure, psychology, and philosophy. Becoming more comfortable with a missing loved one, for example, requires



Family Stress, Fig. 1 The Contextual Model of Family Stress. Adapted from *Family Stress Management* (Boss, 2002)

a person to learn how to become more comfortable with ambiguity, not an easy task in cultures that value certainty (Boss, 1999, 2006, 2011). The more contextual model allows researchers and professionals to take into account the vast differences in internal and external influences on families and thus can create more valid and effective interventions for stress, crisis, and trauma, no matter what or where the stressor is.

In 1988, medical sociologist Aaron Antonovsky expanded work on the sense of coherence (SOC) and adaptation (Antonovsky & Sourani, 1988) for the assessment of families and not just individuals. SOC is the extent to which the world is perceived as comprehensible, manageable, and meaningful. As with Boss's Contextual ABC-X Model of Family Stress, Antonovsky 's work now added to the focus on meaning and perceptions with his use of the term, *appraisal*. With this, family stress research moved into clinical application with family therapists and family life educators using these more meaning- and perceptually-oriented models to help families manage stress and prevent crisis.

Contemporary Views

The Primacy of Perception

In 1992, Boss, a scientist-practitioner reinforced her view that, despite its subjectivity, perception was primary in assessing why some families cope and others fall into crisis. Most recently, Yoav Lavee (2013) has reviewed empirical research, yielding a systemic view of family and marital stress while emphasizing perceptions and interpersonal interactions under stress. Lavee makes significant advances in measuring couple perceptions of the situation and of each other's maneuvers of approach and avoidance, and closeness and distance seeking in managing stressful situations.

Ideally, people are strong enough to cope and adapt to change, but this is not always the case. How events or situations of stress, crisis, or trauma are perceived will determine their effects on individual family members and the family as a whole. Making both research and clinical analyses even more complex, family members often see the stressor event or situation differently. Parents and children or spouses and siblings disagree in their perceptions of the stressor and what it means to them, thus leading to family or marital conflict. Without the resilience to be flexible and grow, the stress and strain can lead to dysfunction in the form of family conflict, abuse, estrangement, alienation, addiction, and somatic illnesses.

Ambiguous Loss Theory as A Family Stress Theory Ambiguous loss is a loss that remains

unclear. It is a relational stressor that affects both couples and families. The first type is when a family member is physically absent but perceived as psychologically present because there is no verification that their absence is permanent. The second type of ambiguous loss is when a family member is physically present but psychologically absent. A family may simultaneously have both: a physically absent member who is away from home due to work demands, while also having an autistic or brain-injured child who is present in the home but emotionally absent. This kind of stress is now being studied using the more middle-range theory of ambiguous loss that allows for a more nuanced understanding of a vast diversity of stressors and families.

Today, family stress studies increasingly use ambiguous loss theory (and boundary ambiguity) in a non-linear model to test various stressor events and situations. As ambiguity is a major stressor in cultures that value certainty, interest is growing, especially in Western countries, regarding quality of life. How does one live with missing loved ones? How does one live with not knowing the whereabouts of a family member? How does one manage the stress of having no body to bury?

To strengthen resilience, individually and as a family, despite immobilizing stress of such unclear family losses, six guidelines are proposed (Boss, 2006). They emerged from research and clinical experience with families experiencing ambiguous loss, especially after 9/11. To stay strong and live well despite the horrific stress of having a loved one disappear:

1. Find meaning (label the stressor so you can cope with it).
2. Temper mastery (accept that you are not always in control).
3. Reconstruct identity (know who you are and what roles to play despite stress and change).
4. Normalize ambivalence (acknowledge mixed emotions as typical when the stressor remains ambiguous).
5. Revise attachment (make new human connections but remember the lost and dead).
6. Discover new hope (deepen your tolerance for ambiguity to strengthen your resilience).

Today, families worldwide are strained–if not traumatized–by the painful losses (clear and ambiguous), which come from war and terrorism as well as from illness and poverty. In medical as well as social and military settings (this time, the Middle East), the need for a model that is more family and community based is essential. One-to-one therapy for stress management or crisis intervention is often not feasible. Globally, the International Committee of the Red Cross field workers studied the traumatic effects of terroristic kidnappings in East Timor and Nepal (Robins, 2010). Findings suggested that the ambiguous loss model is useful for strengthening the community of women who are now neither wives nor widows. However, Robins also found that the distressed wives needed *more* empowerment rather than less by "tempering" their mastery–as they never had control over their own destinies in the first place. His findings require an adjustment in Boss's guidelines above by replacing "tempering" with "adjusting," which allows for change on mastery, either up or down. Such cross-cultural studies are essential for broadening the application of family stress theory across cultures.

A recent study supporting the ambiguous loss framework and contextual family stress perspective (Easterling & Knox, 2010) reports the elements of (a) confusing family dynamics, (b) change or threat of change in family composition, and (c) persistent stress are commonly experienced by military spouses whose mates are absent. Yet, consistent with the family stress perspective is the finding that such stressful loss is manageable. Again, researchers and practitioners learn from the extraordinary challenges faced by families during wartime, but this time there is finally more focus on perceptions and the theory of ambiguous loss.

Focus on Resilience

Resilience is defined as the capacity to withstand stress and crisis and importantly, grow stronger from that experience (Boss, 2006). Resilient people not only bounce back to their level of functioning before the crisis, but they increase their level of functioning to an even higher level than

before the stress or crisis occurred. Resilience is therefore more than being able to manage stress and more than the absence of pathology (Boss, 2006; Walsh, 1998).

With resiliency, normal functioning never stops; the family is able to maintain stability no matter what occurs. It is continuous healthy functioning with regenerative growth and positive emotions no matter what happens to the family (Bonanno, Papa, & O'Neill, 2001). For example, in disasters such as 9/11 in New York City after the attack on the Twin Towers, not everyone suffered from posttraumatic stress disorder (PTSD). The majority of victims could recover from such trauma given family and community support (Bonanno, 2004; Boss, 2006).

While many suffer from PTSD after disasters and need medical care, most people are naturally resilient and require minimum or no medical care to recover. But professionals and researchers need to recognize the multiple and unexpected pathways to resilience and well-being despite adversity. Differences in cultural values and beliefs affect the ability to stay strong and flexible in the face of everyday stress as well as unexpected trauma. While there is evidence that pathways to resiliency vary by age, genetics, environment, gender, and other risk/protective factors, and while we should work to eradicate stressors such as war and illness, more research is needed on this more optimistic side of family stress. Emphasis on health rather than pathology is essential for family and individual well-being.

Discussion

In the postmodernist era, much of family stress theory continues to focus on perceptions and meaning, but measurement remains a challenge.

Measurement

The challenges of measurement in family stress research are that both individuals and the collective are relevant. Although the whole is greater than the sum of its parts, if even one family member is in trouble, then the whole family is also. Whether manifested physically or mentally in symptoms of anxiety, depression, or somatization, the quality of life for that particular family and the individuals in it is threatened. Stress when manifested primarily in one person, can be a problem for everyone in that family (Boss, 2002). While systemic family therapists are accustomed to such complexity, this makes research measurement very difficult.

Therefore, readers should seek out the work of family scientist-practitioners. See, for example, studies by Yoav Lavee, a social science researcher and practitioner in Israel. While he has made significant progress in understanding couple interactions in time of stress, he still calls for more studies to understand the complexity of interactional and transactional processes that occur in couples experiencing adversity (Lavee, 2013). For other examples of systemic and contextual assessment of family stress, see Conger, Rueter, & Elder, 1999; Hobfoll & Spielberger, 1992; Kirmayer, Boothroyd, Tanner, Adelson, & Robinson, 2000; Mancini & Bowen, 2013; Reiss & Oliveri, 1991, among others.

Future Directions

In 2003, I made a list of what was then new in family stress theory (Boss & Mulligan, 2003.). Today, I see the need for an update*: First*, there are, fortunately, more systemic studies on couple and family resilience that include attachment and interactions (e.g., Lavee, 2013). *Second*, there is indeed growth in knowledge about PTSD, its diagnosis and treatment, but there is still a dearth of family approaches to treating PTSD. When an individual has PTSD, the entire family is affected and relationships need treatment, too. *Third*, while disaster teams are well trained, most still ignore the fact that during disasters, family members want to be together rather than being treated separately. *Fourth*,while there are now findings that support spirituality and religiosity as major influences in how people perceive and manage stress, more research is needed to identify cultural and religious differences. *Fifth*, because the world's population is aging, there are now more research-based interventions for families stressed with long-term caregiving at home for loved ones with mental and physical disabilities. The economic, physical, psychological, and

relational costs of caring for the aged and disabled family members may become the most dire threat to quality of life for couples and families in the next half-century. This in addition to the chronic stressors of poverty, war, shortages of food and water, and lack of family planning for women who want it, all indicate the need for continued study of family stress, coping, and resilience with emphasis on treatment and prevention.

Finally, as the population continues to catapult toward more and more information technology, and people become more accustomed to having quick and precise answers to their problems, I predict there will be increased family stress when information and answers are not forthcoming. Because situations where family members are either physically or psychologically missing are common, studying the stress of ambiguity and uncertainty in the context of an information glut is essential for one's quality of life.

Overall, to study the increasing incidence of stress in families of the twenty-first century, we need broader and more inclusive theories -what is called middle-range theory. Studying family stress at a more general level, including context and perceptions, requires more middle-range theory, and according to Carroll, Olson and Buckmiller (2007), the ambiguous loss theory is just one example. More such theories, inclusive and useful, could ease family suffering globally, and across cultures.

Cross-References

- Duke Social Support and Stress Scale (DUSOCS)
- Happiness
- Life Satisfaction
- Perceived Quality of Life
- Quality of Life
- Resilience
- Stressful Life Events
- Subjective Indicators
- Subjective Well-Being
- Traumatic Life Events
- Well-Being

References

Antonovsky, A., & Sourani, T. (1988). Family sense of coherence and family adaptation. *Journal of Marriage and the Family, 50*, 79–92.

Bonanno, B. A., Papa, A., & O'Neill, K. (2001). Loss and human resilience. *Applied and Preventive Psychology, 10*(3), 193–206.

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*(1), 20–28.

Boss, P. (1987). Family stress: Perception and context. In M. Sussman & S. Steinmetz (Eds.), *Handbook of marriage and family* (pp. 695–723). New York: Plenum.

Boss, P. (1988). *Family stress management*. Thousand Oaks, CA: Sage.

Boss, P. (1992). Primacy of perception in family stress theory and measurement. *Journal of Family Psychology, 6*(2), 113–119.

Boss, P. (1999). *Ambiguous loss*. Cambridge, MA: Harvard University Press.

Boss, P. (2002). *Family stress management*. Thousand Oaks, CA: Sage.

Boss, P. (2006). *Loss, trauma, and resilience*. New York: Norton.

Boss, P. (2011). *Loving someone who has dementia: How to find hope while coping with stress and grief*. San Francisco: Jossey-Bass.

Boss, P., & Mulligan, C. (2003). *Family stress: Classic and contemporary readings*. Thousand Oaks, CA: Sage.

Burr, W. (1973). *Theory construction and the sociology of the family*. New York: Wiley.

Carroll, J. S., Olson, C. D., & Buckmiller, N. (2007). Family boundary ambiguity: A 30-year review of theory, research, and measurement. *Family Relations, 56*(2), 210–230.

Conger, R. D., Rueter, M. A., & Elder, G. H., Jr. (1999). Couple resilience to economic pressure. *Journal of Personality and Social Psychology, 76*(1), 54–71.

Easterling, B., & Knox, D. (2010). Left behind: How military wives experience the deployment of their husbands. *Journal of Family Life*. Retrieved from http://www.journaloffamilylife.org/militarywives.html.

Figley, C. (1989). *Helping traumatized families*. San Francisco: Jossey-Bass.

Hill, R. (1949). *Families under stress: Adjustment to the crises of war separation and return*. Oxford, England: Harper.

Hill, R. (1958). Generic features of families under stress. *Social Casework, 49*, 139–150.

Hobfoll, S., & Spielberger, C. (1992). Family stress: Integrating theory and measurement. *Journal of Family Psychology, 6*, 99–112.

Huebner, A. J., Mancini, J. A., Wilcox, R. M., Grass, S. R., & Grass, G. A. (2007). Parental deployment and youth in military families: Exploring uncertainty and ambiguous loss. *Family Relations, 56*(2), 112–122.

Kirmayer, L. J., Boothroyd, L. J., Tanner, A., Adelson, N., & Robinson, E. (2000). Psychological distress among the Cree of James Bay. *Transcultural Psychiatry, 37*(2), 35–36.
Lavee, Y. (2013). Stress processes in families and couples. In G. W. Peterson & K. R. Bush (Eds.), *Handbook of marriage and family* (pp. 159–176) (3rd ed.), New York, NY: Springer.
Lavee, Y., McCubbin, H. I., & Patterson, J. M. (1985). The double ABCX model of family stress and adaptation: An empirical test by analysis of structural equations with latent variables. *Journal of Marriage and the Family, 47*(4), 811–826.
Mancini, J. A., & Bowen, G. L. (2013). Families and communities. In G. W. Peterson & K. R. Bush (Eds.), *Handbook of marriage and the family* (pp. 781–813) (3rd ed.), New York, NY: Springer.
McCubbin, H. I., & Patterson, J. M. (1983). The family stress process: The double ABCX model of adjustment and adaptation. In H. I. McCubbin, M. B. Sussman, & J. M. Patterson (Eds.), *Social stress and the family* (pp. 7–38). Binghamton, NY: Haworth.
Reiss, D., & Oliveri, M. E. (1991). The family's conception of accountability and competence: A new approach to the conceptualization and assessment of family stress. *Family Process, 30*, 193–214.
Robins, S. (2010). Ambiguous loss in a non-western context: Families of the disappeared in postconflict Nepal. *Family Relations, 59*, 253–268.
Walsh, F. (1998). *Strengthening family resilience*. New York: Guilford.

Family Stress and Caregiving

► Well-Being of Spouses of Persons with Mild Cognitive Impairment

Family Structure

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Synonyms

Child-headed family; Compound family; Family components; Multigenerational family; Same-sex couple family; Single-parenthood family; Skipped generational family

Definition

The family and household constitute a basic unit, which is of vital importance to many aspects of human life. The two terms are often confused and sometimes used interchangeably. A comprehensive definition of the two terms was provided by the United Nations [UN] (1987). A household is defined as an arrangement made by persons, individually or in groups, for providing themselves with food or other essentials for living. The persons in the group may pool their incomes and have a common budget to a greater or lesser extent; they may be related or unrelated persons or a combination of both. There is no uniform and universally accepted definition of the family, although it is generally accepted that it is a unit that arises from reproductive processes and which is defined by law or custom. Specifically, a family is defined as persons who are related to a specific degree, through blood, adoption, or marriage. Adoption is prevalent in many cultures, although in some societies, especially non-Western, it might not be accompanied by legal formalities. While a family may reside in one or more households, for practical purposes, many analyses of family confine themselves to the subsection of the family which shares a single household.

Description

Traditionally in the West, a **nuclear** family usually includes two adults who maintain a socially approved sexual relationship with or without minor children, who are either own or adopted. In many other cultures and increasingly in the West, the family is **extended** to aunts, uncles, grandparents, cousins, and other relatives. Obligations to wider kin are usually invoked during the time of crises or life cycle events such as funerals.

In some societies, link and descent through the male line is stronger than the female line, whereas in other societies, both descents are given equal status. A subset of extended families which have more than one married couples is known as **compound family**. And those with more than two generations are known as **multigenerational** families. With the rise in divorces and separation of spouses, teenage pregnancies, and unwed motherhood and the rising mortality rate of young adults, there is a rise of **single-parent** families. In a number of societies, there is a growing recognition of **same-sex couple** families. With the rise in societies ravaged by the AIDS pandemic which has resulted in the sharp rise in the death of young adults has resulted in rise of different **skipped generational** families that are constituted by grandparents and grandchildren and **child-headed** families, which do not have adults.

Cross-References

- ▶ Family Conflicts
- ▶ Family Connectedness

References

United Nations. (1987). *Family building by fate or design*. New York: Author.

Family Structure in the USA

- ▶ Marriage, Cohabitation, and Child Care in the USA

Family Support

- ▶ Duke Social Support and Stress Scale (DUSOCS)

Family Support and the Life Cycle

- ▶ Family Life Cycle Stages

Family Systems Theory

- ▶ Family Differentiation

Family Unit

- ▶ Household Composition

Family Violence

- ▶ Domestic Violence
- ▶ Violence Against Women

Family Well-Being

- ▶ Family Quality of Life

Family-Friendly Workplace

- ▶ Work-Family Culture, Supportive

Family-Supportive Work Environments

- ▶ Work-Family Culture, Supportive

Family-to-Work Conflict

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Synonyms

Family interference with work (FIW)

Definition

Family-to-work conflict occurs when the pressures from the family and work domains are mutually incompatible, and as a result, participation in the work role is made more difficult by virtue of participation in the family role.

Description

Family-to-Work Conflict

As a specific form of inter-role conflict, family-to-work conflict (also known as family interference with work or FIW) occurs when the pressures from the family and work domains are mutually incompatible, and as a result, participation in the work role is made more difficult by virtue of participation in the family role (Greenhaus & Beutell, 1985). The notion of role conflict is rooted in scarcity theory (Goode, 1960), which assumes that personal resources, such as time and energy, are finite and that the devotion of greater resources to one role necessitates the devotion of lesser resources to other roles. Thus, individuals who participate in multiple life roles (e.g., work and family) are likely to experience conflict between those roles (Kahn et al., 1964; Katz & Kahn, 1978).

Three types of family-to-work conflict have been identified in the literature (Greenhaus & Beutell, 1985). Time-based conflict, the most often studied form of family-to-work conflict, occurs when the time devoted to the family role makes it difficult to fulfill the requirements of the work role. Time-based conflict can take one of two forms. First, time-based conflict can result from the physical time pressures associated with involvement in both family and work roles. That is, these roles compete for a person's time because, in general, the physical time spent in activities in one role cannot be spent in activities in another role. For example, the time required to actively participate in the children's Parent-Teacher Organization is likely to limit the time available for participation at work. Second, even when individuals are able to meet the physical time requirements of both the family role and the work role, mental pressures or preoccupations with role involvement may cause conflict. For instance, a parent may not be able to fully engage, and thus be less effective, at work if he or she has a sick child at home with the sitter.

Strain-based conflict, a second type of family-to-work conflict, exists when the strain resulting from membership in the family role affects one's participation in the work role. For example, the extensive demands of taking care of an elderly parent can cause an individual to feel anxious or tired, which can negatively affect his or her performance at work. Finally, behavior-based conflict stems from incompatible behaviors demanded by competing family and work roles. For example, a parent who is highly sensitive and nurturing at home with the children may find that these same behaviors and characteristics if displayed at work may lead to poor evaluations of his or her leadership effectiveness.

Research examining its antecedents and consequences has indicated that family-related characteristics and stressors are the primary predictors of family-to-work conflict (Frone, Russell, & Cooper, 1992). For example, employees with significant child or elder care responsibilities tend to report higher levels of family-to-work conflict than do employees with fewer dependent responsibilities. Moreover, it has been suggested that women may experience greater family-to-work conflict than do men.

Family-to-work conflict has been negatively linked to a number of work-related and personal

outcomes including increased absenteeism and tardiness, poor job performance, and reduced individual well-being (Frone et al., 1992). Due to the negative consequences of family-to-work conflict for both individuals and organizations, studies have begun to explore ways by which such conflict may be mitigated. Findings suggest that having a supportive spouse or partner can reduce the pressures and stress of family-related demands and thus reduce family-to-work conflict. In addition, increased technological advances may provide more freedom and flexibility for individuals to successfully navigate multiple life roles, thereby mitigating the conflict that can result from combining family and work responsibilities.

Cross-References

- ▶ Balanced Life
- ▶ Family Conflicts
- ▶ Family Quality of Life
- ▶ Family Stress
- ▶ Family Support
- ▶ Personal Well-Being
- ▶ Quality of Life
- ▶ Role Theory
- ▶ Social Support
- ▶ Subjective Well-Being
- ▶ Work Attitudes
- ▶ Work Stress
- ▶ Work-Family Facilitation
- ▶ Work-Family Fit
- ▶ Work-Life Balance
- ▶ Work-to-Family Conflict

References

Frone, M., Russell, M., & Cooper, M. (1992). Antecedents and outcomes of work-family conflict: Testing a model of work-family interface. *Journal of Applied Psychology, 77*, 65–78.

Goode, W. (1960). A theory of role strain. *American Sociological Review, 25*, 483–496.

Greenhaus, J., & Beutell, N. (1985). Sources of conflict between work and family roles. *Academy of Management Review, 10*, 76–88.

Kahn, R., Wolfe, D., Quinn, R., Snoek, J., & Rosenthal, R. (1964). *Organizational stress*. New York: Wiley.

Katz, D., & Kahn, R. (1978). *The social psychology of organizations* (2nd ed.). New York: Wiley.

FAQ

▶ Pfeffer Functional Activities Questionnaire

FAQLQ

▶ Food Allergy Quality of Life Questionnaires (FAQLQ)

Father-Child Relationships

▶ Fatherhood

Fatherhood

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Synonyms

Father-child relationships; Fathering

Definition

Although the social emphasis today is more on a model of "involved" fatherhood, fatherhood is better viewed as being expressed in a diversity of ways, and as being multifaceted and multidetermined (Flouri, 2005, p. 14; Lamb, 2010 and previous editions). Early fatherhood research focused primarily on whether or not fathers were present in the family (Amato & Dorius, 2010) and what their level of

involvement was (Flouri, 2005). The most recent conceptualization of father-involvement is that proposed by Pleck (2010a). This has three primary components: (1) *positive engagement activities* – father-child interactions that are more intensive, such as active play and that are more likely to influence positive outcomes; (2) *warmth and responsiveness* in interacting with their children; and (3) *control* – involving monitoring and making decisions about their children. In addition, there are two auxiliary components of involvement: (1) *indirect care* – activities done for the child, but not with the child (e.g., purchasing things, fostering connections with peers); and (2) *process responsibility* – the extent to which a father monitors whether or not the child's needs for the other types of involvement are being met.

Description

What and Who Does Fathering/Fathers Influence?

The influence of fathering can only be understood within the complex family and broader social system (Lamb, 2010) involving reciprocal and direct and indirect effects. Fathers can have *direct* effects on child outcomes and *indirect* effects through their emotional support of the mother, which would result in higher quality mother-child relationships and positive outcomes for children. The nature and level of father-involvement also affects the quality of the marital or couple relationship, which in turn, results in positive outcomes for children, and to the greater well-being and quality of life for the entire family system (Cummings, Merrilees, & George, 2010). Fathering also has an impact on the psychological development and well-being of fathers themselves.

How Do Fathers Directly Influence Their Children's Development?

The process of influence for fathers is the same as for mothers: Paternal warmth, nurturance, and closeness are associated with more positive outcomes for children (Lamb, 2010). In contrast with earlier notions of fatherhood and the influences fathers have on children, and especially on sons, more recent research shows that the characteristics of individual fathers and especially the strength of their "masculinity" are far less critical in influencing child outcomes than is the quality of the father-child relationship (Pleck, 2010b).

Fathers, like mothers, have been found to be: sensitive (nurturant and attentive) to their newborns; responsive to the uniqueness of their own newborn; competent carers; and to adjust their speech patterns when interacting with infants. Fathers are also equally sensitive to mothers throughout the first year of a child's life (Lamb & Lewis, 2010).

Security of the parent-child attachment is accepted as a major determinant of positive outcomes for children. Most infants form attachments to fathers and mothers at about the same age, about two-thirds of all attachments to both fathers and mothers are rated as secure, and there are no differences in the average levels of attachment security infants have with their fathers and mothers (Lamb & Lewis, 2010).

What Impact Do Fathers Have on Child Outcomes and Their Well-Being?

Longitudinal studies of resident and nonresident fathers show that fathering characterized by positive activity engagement, warmth-responsiveness, and control are associated with positive child outcomes. For example, in one of the most widely cited studies (Flouri, 2005), father-involvement early on predicted low risk for delinquency in sons, and a father's interest in a child's education was associated with adult daughter's educational achievement. Pleck (2010a) in a major methodological review of this research urges caution in drawing conclusions from this research about the causal and "essential" links between "fathers' engagement and father-child relationships" and "positive child outcomes." Nevertheless, in another analysis aimed at examining the essential or unique contributions fathers might make, Pleck (2010b) concludes that fathers' behaviors do influence children's outcomes independently of mothers' behaviors. The processes and effects for fathers, however, appear to be equivalent to those of mothers.

The Well-Being of Fathers

Research into the impact of both being a father and the nature of fathering a man engages in (e.g., as a single parent or a highly involved father as a resident parent), with few exceptions, has been relatively sparse. The first involves generativity (Hawkins & Dollahite, 2007; Palkovitz, 2002, 2007; Snarey, 1993). Generativity is of key interest for healthy life-span development because it is positively linked to psychological well-being. Life-events and experiences therefore that have the potential to influence generativity are particularly salient. Snarey has shown that after controlling for psychosocial development prior to parenthood, fathers who supported their child's socioemotional development were also higher on generativity.

Ashbourne, Daly, and Brown (2011) examined the relationship between men's development and their active engagement in responsive, relational, and interactional activities with their children. Using a qualitative interview approach, fathers reported that their active engagement with their children resulted in: (1) a reorientation of their values and priorities; (2) a sense of increased maturity, both in terms of how the fathers viewed themselves and how they were viewed by others; and (3) increased levels of patience.

Plantin, Olukoya, and Ny (2011) conducted a comprehensive review of research into health outcomes related to father-involvement in pregnancy and childbirth. They found that involvement during pregnancy is positively related to fathers' health, particularly their psychological well-being (e.g., an increased sense of maturity and a sense of responsibility).

The Well-Being of Mothers

Plantin et al. (2011) also found that positive physical health outcomes resulted for mothers when fathers were more involved and supportive during pregnancy and the birth. Pleck and Masciadrelli (2004) while noting the dearth of research on this topic reported findings showing that father-involvement is linked with both the psychological well-being and self-esteem of mothers, and on their improved success in the labor market.

Marital/Couple Relationship Well-Being

Generally, findings indicate there is a positive relationship between marital quality and father-involvement and the quality of the father-child relationships. Further, findings indicate that increased father-involvement has positive consequences for the quality of marital and couple relationships (Pleck & Masciadrelli, 2004).

Work and Fatherhood

The assumption that workplace demands, a lack of workplace flexibility (particularly in terms of leave provisions), and men's strong identification with paid work and career success are the major barriers to active father-involvement, and especially the involvement in child care of young children, has been a dominant discourse about fatherhood (Russell & Hwang, 2004). Breadwinning has also commonly been seen both as a major component of the contributions fathers make to the well-being of their families, and as a major constraint on fathers' active involvement in family life. Despite this, there has been very little research into the relationship between paid work and father-involvement (Haas & O'Brien, 2010; Russell & Hwang, 2004). With both, increased expectations for "responsible" and more involved fatherhood, increased employment levels for women, and the increased emphasis on formal leave policies for fathers (O'Brien & Moss, 2010), fatherhood and paid work is now a much more salient topic (Russell & Hwang, 2004). Further, Aumann, Galinsky, and Matos (2011) report that US men today view the ideal man as "someone who is not only successful as a financial provider, but is also involved as father, husband/partner and son." (p. 1).

Research into the intersection between paid work and fatherhood has mainly concentrated on three aspects: (1) paternity and parental leave; (2) workplace flexibility particularly in relation to hours and place of work; and (3) workplace demands in terms of hours of work and work stress.

Two recent findings are interesting from the point of view of *leave* provisions. O'Brien and Moss (2010) argue that in Europe, for the current

generation of fathers, paternity leave (short-term leave specifically designated for fathers) is becoming "normative" and is being seen as an important time for enhancing family togetherness and personal identity. Second, Haas and Hwang (2009) report that despite the egalitarian approach to parental leave in Sweden (it is a legislative right for both mothers and fathers), mothers still take the majority of the leave. Further, while they have detected a shift for companies to be more supportive of fathers taking leave, they found that: (1) the majority of Swedish companies are still not supportive, and (2) greater company support is given to white collar rather than blue collar workers for taking the leave entitlements. There is still relatively little known about whether taking leave results in the more active engagement by fathers or higher quality father-child relationships.

A common assumption has been that higher levels of flexibility will enable greater father-involvement and higher quality father-child relationships. Findings, however, are mixed about whether having workplace flexibility (e.g., in hours and days of work, working from home) results in higher levels of father-involvement (Russell & Hwang, 2004). In a more recent US national workforce study (Aumann et al., 2011), however, it was found that men who work 50 h or more a week, have high job demands, are fathers in dual-earner couples, and who have high access to workplace flexibility are significantly less likely to report work-family conflict. What is missing in this research, though, are sophisticated studies that examine direct links between the utilization of flexible work practices and father-involvement.

Disentangling and understanding the relationship between work hours and father-involvement is quite complex. A conclusion that can be drawn, however, is that research has not been consistent in finding a direct link between hours worked and father-involvement. Three findings are particularly relevant in this context. First, fathers who work long hours during the week are less involved on week days, but not on weekends. Second, there is an interaction between hours worked and attitudes toward fathering. Younger fathers with more egalitarian attitudes toward parenting work fewer hours than fathers who have traditional attitudes (Russell & Hwang, 2004). Third, Biggart and O'Brien (2010) report that being a father, rather than career stage predicted longer working hours.

Findings are generally consistent in showing that higher levels of workplace demands or role overload are associated with a reduction of the quality of father-child interactions. Fathers with high work demands have been found to be less accepting of their children, having higher levels of anger expression and being more emotionally withdrawn, and having relationships that are characterized by a reduced capability for taking the perspective of the child (Russell & Hwang, 2004). Recent US research findings (Galinsky, Aumann, & Bond, 2008) also indicate that the level of conflict that work-life conflict fathers in dual-earner couples experience has increased over the past 30 years and is now higher than that experienced by mothers in the same family situations.

Harrington, Van Deusen, and Humberd (2011) have conducted a study of 963 working fathers in Fortune 500 companies, and have reported some interesting findings, including: (1) job security (97 % rated this as being highly important) and having flexible work options were rated as being more important than having good advancement opportunities and high income; (2) fathers who spent more time with their children reported higher levels of confidence as parents; (3) providing emotional support to their children, being involved in their children's lives, and being a teacher, guide, and coach were rated much more highly as important aspects of fathering than "doing their part in day-to-day childcare tasks"; (4) work demands created more conflict with family life than vice versa; (5) 82 % agreed that family life made them feel happy and this helped them to be a better worker; (6) nearly two-thirds agreed that involvement in their family life helped them gain knowledge that made them a better worker; (7) nearly two-thirds believed that both parents should provide equal amounts of child care, whereas only about a third reported this currently happens; (8) fathers who worked in a family supportive work environment

had higher levels of work to family enrichment; lower levels of work to family conflict; higher job and career satisfaction, and were less likely to indicate they intended to resign from their current employer.

Conclusion

Research in the last 30 years has shown that active involvement in fathering has a critical influence on family, child, mother, father, and marital relationship well-being. We also know that there is extensive diversity in the nature of fatherhood and how it is expressed in different social and cultural contexts (Lamb, 2010). In many societies, there is a continuing emphasis on a more involved model of fatherhood that encompasses both paid work and family caregiving, and a family pattern that involves both parents being in the paid workforce. This necessitates a shift in the focus of research to understand better the complex interactions between paid work and fatherhood, to explore ways in which both the workplace policies and practices restrict and enable active involvement, and in turn how work and family life both conflict with and enhance each other, both to facilitate the well-being of fathers, the broader family system, and the community.

Cross-References

- Child and Family Well-Being
- Child Health and Development
- Children Living without their Fathers
- Gendered Work
- Meaningfulness of Work
- Mother-Father Relationship
- Paid Work and Parent–Child Relationship Quality
- Work-Life Harmony

References

Amato, P., & Dorius, C. (2010). Fathers, children and divorce. In M. E. Lamb (Ed.), *The role of the father in child development* (5th ed., pp. 177–200). Hoboken: Wiley.

Ashbourne, L. M., Daly, K. J., & Brown, J. L. (2011). Responsiveness in father-child relationships: The experiences of fathers. *Fathering, 9*(1), 69–86.

Aumann, K., Galinsky, E., & Matos, K. (2011). *The new male mystique*. New York: Families and Work Institute.

Biggart, L., & O'Brien, M. (2010). UK fathers' long work hours: Career stage or fatherhood? *Fathering, 8*(3), 341–361.

Cummings, E. M., Merrilees, C. E., & George, M. W. (2010). Fathers, marriages, and families: Revisting and updating the framework for fathering in family contest. In M. E. Lamb (Ed.), *The role of the father in child development* (5th ed., pp. 154–176). Hoboken: Wiley.

Flouri, E. (2005). *Fathering and child outcomes*. Chichester: Wiley.

Galinsky, E., Aumann, K., & Bond, J. T. (2008). National study of the changing workforce: Times are changing–Gender and generation at work and at home. New York, NY: Families and Work Institute.

Haas, L., & Hwang, C. P. (2009). Is fatherhood become more visible at work? Trends in corporate support for fathers taking parental leave in Sweden. *Fathering, 7*(3), 303–321.

Haas, L., & O'Brien, M. (2010). New observations on how fathers work and care: Introduction to the special issues – Men, work and parenting – Part 1. *Fathering, 8*(3), 271–275.

Harrington, B., Van Deusen, F., & Humberd, B. (2011). *The new dad: Caring, committed and conflicted*. Boston: Center for Work & Family, Boston College.

Hawkins, A. J., & Dollahite, D. C. (Eds.). (2007). *Generative fathering: Beyond deficit perspectives*. Thousand Oaks: Sage.

Lamb, M. E. (2010). *The role of the father in child development* (5th ed.). Hoboken: Wiley.

Lamb, M. E., & Lewis, C. (2010). The development and significance of father-child relationships in two-parent families. In M. E. Lamb (Ed.), *The role of the father in child development* (5th ed., pp. 94–153). Hoboken: Wiley.

O'Brien, M., & Moss, P. (2010). Fathers, work and family policies in Europe. In M. E. Lamb (Ed.), *The role of the father in child development* (5th ed., pp. 551–577). Hoboken: Wiley.

Palkovitz, R. (2002). *Involved fathering and men's adult development: Provisional balances*. Mahwah: Lawrence Erlbaum Associates.

Palkovitz, R. (2007). Challenges to modeling dynamics in developing a developmental understanding of father-child relationships. *Applied Development Science, 11*(4), 190–195.

Plantin, L., Olukoya, A. A., & Ny, P. (2011). Positive health outcomes of fathers' involvement in pregnancy and childbirth paternal support: A scope study literature review. *Fathering, 9*(1), 87–102.

Pleck, J. H. (2010a). Paternal involvement: Revised conceptualisation and theoretical linkages with child

outcomes. In M. E. Lamb (Ed.), *The role of the father in child development* (5th ed., pp. 58–93). Hoboken: Wiley.
Pleck, J. H. (2010b). Fatherhood and masculinity. In M. E. Lamb (Ed.), *The role of the father in child development* (5th ed., pp. 27–57). Hoboken: Wiley.
Pleck, J. H., & Masciadrelli, B. P. (2004). Paternal involvement by U.S. residential fathers: Levels, sources, and consequences. In M. E. Lamb (Ed.), *The role of the father in child development* (4th ed., pp. 222–271). Hoboken: Wiley.
Russell, G., & Hwang, C. P. (2004). The impact of workplace practices on father involvement. In M. E. Lamb (Ed.), *The role of the father in child development* (4th ed., pp. 476–504). Hoboken: Wiley.
Snarey, J. (1993). How fathers care for the next generation: A four-decade study. Cambridge MA: Harvard University Press.

Fathering

▶ Fatherhood

Fathering and Immigrants

▶ Immigrants, Parenting

Fatigue

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Synonyms

Asthenia; Desire for rest; Exhaustion; Lassitude; Low vitality; Reduced energy levels; Reduced muscle strength; Sleepiness; Tiredness; Weakness

Definition

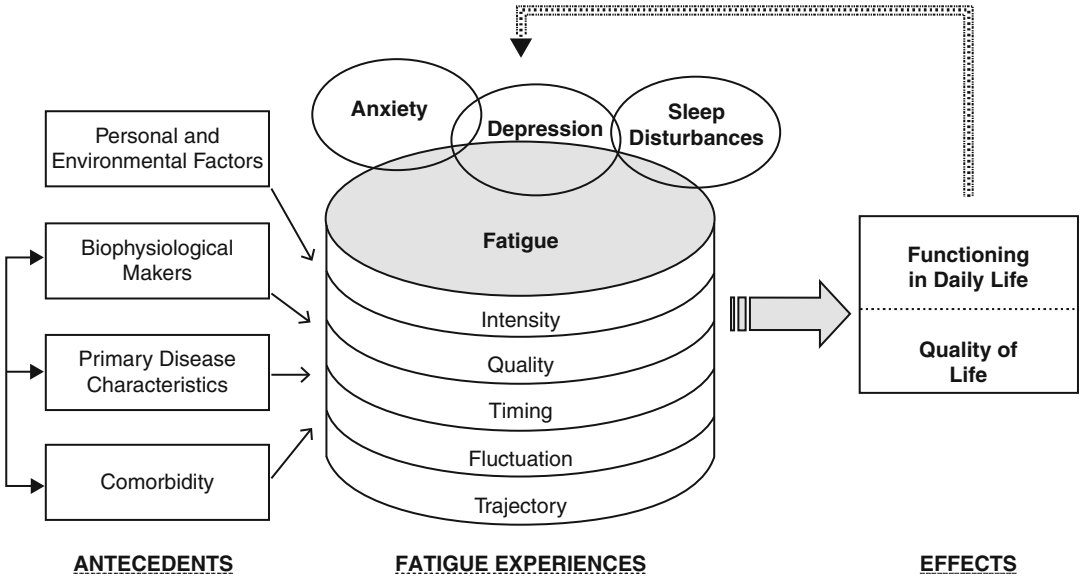
A consensus conference of researchers and clinicians working with patients with multiple sclerosis defined fatigue as "a subjective lack of physical and/or mental energy that is perceived by the individual or caregiver to interfere with usual and desired activities" (Multiple Sclerosis Council for Clinical Practice Guidelines, 1998).

Description

Fatigue is different from tiredness in that it is disproportionate to the person's effort and results in limited ability to recover energy through rest or sleep (Wessely, Sharpe, & Hotopf, 1998). Surveys of population-based samples have found prevalence rates of current severe fatigue that range from 14 % to 38 % depending on frequency or severity (Pawlikowska et al., 1994; Loge, Ekeberg, & Kaasa, 1998). Higher prevalence rates are reported among people with illnesses such as cancer, multiple sclerosis, rheumatoid arthritis, systemic lupus erythematosus, stroke, renal failure, inflammatory bowel diseases, depression, and HIV/AIDS.

This entry deals with acute and chronic fatigue in general, and fatigue in patients with various illnesses or disabilities. The entry does not deal with chronic fatigue syndrome (CRF), also known as myalgic encephalopathy. CFS is a syndrome in which extreme fatigue that has lasted more than 6 months is included as one of several symptoms (Prins, van der Meer, & Bleijenberg, 2006).

Fatigue caused or influenced by the patient's primary disease is often called primary fatigue, while fatigue caused by other factors may be called secondary fatigue. The pathophysiological mechanisms of fatigue are poorly understood (Krupp, Serafin, & Christodoulou, 2010). However, the etiology of fatigue is often believed to be multifactorial (Prins et al., 2006). Fatigue is often described as a multidimensional phenomenon. This is reflected in several of the different fatigue measurements. *Acute fatigue* may be defined as new or a clinically significant increase in fatigue during the previous 6 weeks and which implies reduced capacity to perform daily activity and quality of life. *Chronic fatigue* may be



Fatigue, Fig. 1 A biopsychosocial model of fatigue. The figure is a modification of a figure published in Lerdal et al. (2009)

defined as fatigue that has been present more than 50 % of the time during the last 6 months (Multiple Sclerosis Council for Clinical Practice Guidelines, 1998). It is critical to know about the specific characteristics of fatigue in order to begin to understand the mechanisms and to develop potential interventions for treating it. This complexity creates difficulties for both clinicians and researchers in describing and assessing the patient's condition and implementing the best treatment.

Measurements

The subjective description implies that the patient's self-report is the basis for measuring the phenomenon (Whitehead, 2009). However, two methods have been used to measure fatigue patients: self-reported measures and performance-based measures. Because of the subjective nature of the concept of fatigue, different inventories of self-reported measures are mostly used to estimate the magnitude of the phenomenon. The performance-based measures assess behavioral outcomes, such as muscle fatigue or cognitive fatigue and rely on objective indicators.

A Biopsychosocial Framework

A biopsychosocial framework for understanding fatigue has been proposed in a systematic review of poststroke fatigue (Lerdal et al., 2009). The concept of fatigue is developed from the Theory of Unpleasant Symptoms (Lenz, Pugh, Milligan, Gift, & Suppe, 1997). A revised version is presented in Fig. 1. In this framework, fatigue is impacted by personal and environmental factors, biophysiological markers, the persons' primary disease, and any comorbidity. The symptoms consist of five dimensions, that is, intensity (i.e., the experienced level of fatigue), quality (e.g., mental or physical), timing (time of occurrence), fluctuating (e.g., patterns throughout the day), and trajectory (over time and in relation to the development of the illness). The framework also includes possible concomitants of fatigue including anxiety, depression, and sleep disturbance which have been shown to be related to fatigue in several chronic illnesses. Co-occurrence of these experiences as well as differentiation of fatigue from these experiences will further clarify the nature of the fatigue experience. The framework shows that the persons' performance (Kant et al., 2003) and thereby their ability to perform

daily activities and their health-related quality of life is influenced by their fatigue which again may impact their experience of fatigue.

Cross-References

- ▶ Chronic Fatigue Syndrome
- ▶ Fatigue Severity Scale
- ▶ Health
- ▶ Quality of Life
- ▶ Subjective Well-Being

References

Kant, I. J., Bultmann, U., Schroer, K. A., Beurskens, A. J., van Amelsvoort, L. G., & Swaen, G. M. (2003). An epidemiological approach to study fatigue in the working population: The Maastricht Cohort Study. *Occupational and Environmental Medicine, 60*(Suppl. 1), i32–i39.

Krupp, L. B., Alvarez, L. A., LaRocca, N. G., & Scheinberg, L. C. (1988). Fatigue in multiple sclerosis. *Archives of Neurology, 45*, 435–437.

Krupp, L. B., Serafin, D. J., & Christodoulou, C. (2010). Multiple sclerosis-associated fatigue. *Expert Review of Neurotherapeutics, 10*, 1437–1447.

Lenz, E. R., Pugh, L. C., Milligan, R. A., Gift, A., & Suppe, F. (1997). The middle-range theory of unpleasant symptoms: an update. *ANS. Advances in Nursing Science, 19*, 14–27.

Lerdal, A., Bakken, L. N., Kouwenhoven, S. E., Pedersen, G., Kirkevold, M., Finset, A., et al. (2009). Poststroke fatigue-a review. *The Journal of Pain and Symptom Management, 38*, 928–949.

Loge, J. H., Ekeberg, O., & Kaasa, S. (1998). Fatigue in the general Norwegian population: Normative data and associations. *Journal of Psychosomatic Research, 45*, 53–65.

Multiple Sclerosis Council for Clinical Practice Guidelines. (1998). *Fatigue and multiple sclerosis: Evidence-based management strategies for fatigue in multiple sclerosis*. Washington, DC: Paralyzed Veterans of America.

Pawlikowska, T., Chalder, T., Hirsch, S. R., Wallace, P., Wright, D. J., & Wessely, S. C. (1994). Population based study of fatigue and psychological distress. *BMJ, 308*, 763–766.

Prins, J. B., van der Meer, J. W., & Bleijenberg, G. (2006). Chronic fatigue syndrome. *Lancet, 367*, 346–355.

Wessely, S., Sharpe, M., & Hotopf, M. (1998). *Chronic fatigue and its syndromes*. Oxford: Oxford University Press.

Whitehead, L. (2009). The measurement of fatigue in chronic illness: A systematic review of unidimensional and multidimensional fatigue measures. *The Journal of Pain and Symptom Management, 37*, 107–128.

Fatigue Instrument

▶ Fatigue Severity Scale

Fatigue Measure

▶ Fatigue Severity Scale

Fatigue Severity Scale

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Synonyms

Fatigue instrument; Fatigue measure

Definition

Krupp et al. (1988), who developed the FSS, defined fatigue as "*a sense of physical tiredness and lack of energy, distinct from sadness or weakness*" p. 435.

Description

The Fatigue Severity Scale (FSS) is one of the most frequently used inventories for measuring fatigue in people with chronic illnesses. The original FSS is a nine-item unidimensional questionnaire developed by Krupp, LaRocca, Muir-Nash, and Steinberg (1989) (Table 1). Each item consists of statements that are scored on a seven-point Likert type scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). The mean score of the items is used as the FSS score. Some studies have calculated an FSS score as the sum of all nine items.

Fatigue Severity Scale, Table 1 The fatigue severity scale (FSS); English (US) version

		Strongly disagree						Strongly agree
1.	My motivation is lower when I am fatigued	1	2	3	4	5	6	7
2.	Exercise brings on my fatigue	1	2	3	4	5	6	7
3.	I am easily fatigued	1	2	3	4	5	6	7
4.	Fatigue interferes with my physical functioning	1	2	3	4	5	6	7
5.	Fatigue causes frequent problems for me	1	2	3	4	5	6	7
6.	My fatigue prevents sustained physical functioning	1	2	3	4	5	6	7
7.	Fatigue interferes with carrying out certain duties and responsibilities	1	2	3	4	5	6	7
8.	Fatigue is among my three most disabling symptoms	1	2	3	4	5	6	7
9.	Fatigue interferes with my work, family, or social life	1	2	3	4	5	6	7

Cutoff Values

In order to categorize severity of fatigue in people with MS, researchers have used a variety of different criteria. Originally, the cutoff for severe fatigue was set at an FSS score ≥4 (Krupp et al., 1989). This cutoff is still used in some studies, e.g., in several studies of fatigue in people with stroke (Tang et al., 2010; van de Port, Kwakkel, Schepers, Heinemans, & Lindeman, 2007). However, more recent studies of people with multiple sclerosis mainly use a cutoff of ≥5 for categorizing severe fatigue (Johansson, Ytterberg, Hillert, Widen, & von Koch, 2008; Tellez et al., 2005). The different cutoff values have not been validated clinically. Some studies have also categorized the FSS score into three groups: low fatigue (FSS score <4), medium or borderline fatigue (FSS score ≥4 and <5), and high or severe fatigue (FSS score ≥5).

Samples

The FSS has been used in samples with, among others, people with brain injury, cancer, chronic fatigue syndrome, fibromyalgia, hepatitis C, HIV/AIDS, multiple sclerosis, neuroborreliosis, kidney diseases, Parkinson's disease, poliomyelitis, sleep disorders/insomnia, stroke, systemic lupus erythematosus, people receiving primary care, and healthy controls.

Reliability

Internal Consistency

Studies have documented high internal consistency as analyzed with Cronbach's alpha, i.e., alpha values ranging from 0.81 to 0.94 (Krupp et al., 1989; Kleinman et al., 2000; Mattsson, Moller, Lundberg, Gard, & Bostrom, 2008). However, when inter-item correlations were analyzed in a sample from the general population and among people with multiple sclerosis, stroke, and sleep-wake disorders, items #1 and #2 showed a relatively low correlation with the rest of the items (Lerdal, Wahl, Rustoen, Hanestad, & Moum, 2005; Valko, Bassetti, Bloch, Held, & Baumann, 2008).

Test-Retest

The FSS has shown high test-retest reliability (intra class correlation 0.82–0.94) (Kleinman et al., 2000; Gencay-Can & Can, 2012).

Validity

Factor analyses of the FSS have verified one factor (Lerdal et al., 2005; Kleinman et al., 2000).

Convergent Validity

The FSS correlates strongly with other fatigue scales (r = 0.41–0.94) (Krupp et al., 1989; Kleinman et al., 2000; Gencay-Can & Can, 2012) and in a clinical study has also been shown to be sensitive to change in levels of fatigue (Zifko, Rupp, Schwarz, Zipko, & Maida, 2002). Furthermore, the FSS has shown medium to strong relationships with other health-related quality of life domains (Mattsson et al., 2008).

Discriminant Validity

The FSS has demonstrated the ability to discriminate between healthy and chronically ill individuals (Lerdal et al., 2005; Valko et al., 2008).

Furthermore, the instrument has been shown to discriminate between different sleep-wake disorders (Valko et al.), indicating satisfactory discriminant validity.

Discussion

In a recently published review of measurements of fatigue in chronic illnesses (Whitehead, 2009), the FSS was rated with the highest scores on robust psychometric properties among the 18 fatigue measurements evaluated. In the FSS, one item addresses a possible consequence of fatigue (item #1), one addresses a possible cause of fatigue (item #2), and the rest address the impact of fatigue on peoples' ability to perform activities in daily life. Recently published studies that have assessed FSS using Rasch models in patients with multiple sclerosis (Mills, Young, Nicholas, Pallant, & Tennant, 2009; Lerdal, Johansson, Kottorp, & von Koch, 2010), in stroke (Lerdal & Kottorp, 2011) and in people with HIV/AIDS (Lerdal, Kottorp, Gay, Aouizerat, Portillo & Lee, 2011). All these studies reported inconsistent responses, with items #1 and #2 of the FSS having high positive residual statistics. In two of these studies (Lerdal, Johansson, Kottorp, & von Koch, 2009; Lerdal & Kottorp, 2011) no other items showed uniform differential item functioning in relation to sociodemographic and clinical variables. Thus, they recommended that items #1 and #2 should be removed when computing the FSS mean score (FSS-7). All items in the FSS-7 are concerned with the degree to which fatigue interferes with daily life and might be best used as a fatigue interference scale (Aouizerat, Gay, Lerdal, Portillo, & Lee, in press).

The FSS is a brief one-dimensional measurement with good psychometric properties, and it is one of the most frequently used self-report instruments for measuring fatigue. An abbreviated FSS-7 has better psychometric properties and is valid for measuring fatigue interference. Patients are instructed to choose a number from 1 to 7 that indicates their degree of agreement with each statement where 1 indicates "strongly disagree" and 7 "strongly agree" (Krupp et al., 1989).

Cross-References

- ▶ Activities of Daily Living (ADL)
- ▶ Burnout
- ▶ Emotional Well-Being
- ▶ Fatigue
- ▶ Health
- ▶ Health Outcomes
- ▶ Health-Related Quality of Life (HRQOL)
- ▶ Motivation
- ▶ Perceived Quality of Life
- ▶ Personal Well-Being
- ▶ Quality of Life (QOL)

References

Aouizerat, B. E., Gay, C. L., Lerdal, A., Portillo, C. J., & Lee, K. A. (in press). Lack of energy: an important and distinct component of HIV-Related fatigue and daytime function. *Journal of Pain and Symptom Management*. doi:10.1016/j.jpainsymman.2012.01.011.

Gencay-Can, A., & Can, S. S. (2012). Validation of the Turkish version of the fatigue severity scale in patients with fibromyalgia. *Rheumatology International, 32*, 27–31. PMID: 20658235.

Johansson, S., Ytterberg, C., Hillert, J., Widen, H. L., & von Koch, L. (2008). A longitudinal study of variations in and predictors of fatigue in multiple sclerosis. *Journal of Neurology Neurosurgery and Psychiatry, 79*, 454–457.

Kleinman, L., Zodet, M. W., Hakim, Z., Aledort, J., Barker, C., Chan, K., et al. (2000). Psychometric evaluation of the fatigue severity scale for use in chronic hepatitis C. *Quality of Life Research, 9*, 499–508.

Krupp, L. B., Alvarez, L. A., LaRocca, N. G., & Scheinberg, L. C. (1988). Fatigue in multiple sclerosis. *Archives of Neurology, 45*, 435–437.

Krupp, L. B., LaRocca, N. G., Muir-Nash, J., & Steinberg, A. D. (1989). The fatigue severity scale. Application to patients with multiple sclerosis and systemic lupus erythematosus. *Archives of Neurology, 46*, 1121–1123.

Lerdal, A., Johansson, S., Kottorp, A., & von Koch, L. (2010). Psychometric properties of the fatigue severity scale: Rasch analyses of responses in a Norwegian and a Swedish MS cohort. *Multiple Sclerosis, 16*, 733–741.

Lerdal, A., & Kottorp, A. (2011). Psychometric properties of the Fatigue Severity Scale - Rasch analyses of individual responses in a Norwegian stroke cohort. *International Journal of Nursing Studies, 48*, 1258–1265.

Lerdal, A., Kottorp, A., Gay, C., Aouizerat, B. E., Portillo, C., & Lee, K. A. (2011). A 7-item version of the fatigue severity scale has better psychometric

properties among HIV-infected adults: An application of a Rasch model. *Quality of Life Research, 20*, 1447–1456.
Lerdal, A., Wahl, A., Rustoen, T., Hanestad, B. R., & Moum, T. (2005). Fatigue in the general population: A translation and test of the psychometric properties of the Norwegian version of the fatigue severity scale. *Scandinavian Journal of Public Health, 33*, 123–130.
Mattsson, M., Moller, B., Lundberg, I., Gard, G., & Bostrom, C. (2008). Reliability and validity of the fatigue severity scale in Swedish for patients with systemic lupus erythematosus. *Scandinavian Journal of Rheumatology, 37*, 269–277.
Mills, R., Young, C., Nicholas, R., Pallant, J., & Tennant, A. (2009). Rasch analysis of the fatigue severity scale in multiple sclerosis. *Multiple Sclerosis, 15*, 81–87.
Tang, W. K., Chen, Y. K., Mok, V., Chu, W. C., Ungvari, G. S., Ahuja, A. T., et al. (2010). Acute basal ganglia infarcts in poststroke fatigue: an MRI study. *J Neurol, 257*, 178–182.
Tellez, N., Rio, J., Tintore, M., Nos, C., Galan, I., & Montalban, X. (2005). Does the modified fatigue impact scale offer a more comprehensive assessment of fatigue in MS? *Multiple Sclerosis, 11*, 198–202.
Valko, P. O., Bassetti, C. L., Bloch, K. E., Held, U., & Baumann, C. R. (2008). Validation of the fatigue severity scale in a Swiss cohort. *Sleep, 31*, 1601–1607.
van de Port, I., Kwakkel, G., Schepers, V. P., Heinemans, C. T., & Lindeman, E. (2007). Is fatigue an independent factor associated with activities of daily living, instrumental activities of daily living and health-related quality of life in chronic stroke? *Cerebrovascular Diseases, 23*, 40–45.
Whitehead, L. (2009). The measurement of fatigue in chronic illness: A systematic review of unidimensional and multidimensional fatigue measures. *Journal of Pain and Symptom Management, 37*, 107–128.
Zifko, U. A., Rupp, M., Schwarz, S., Zipko, H. T., & Maida, E. M. (2002). Modafinil in treatment of fatigue in multiple sclerosis – Results of an open-label study. *Journal of Neurology, 249*, 983–987.

Favorable Ecological Behavior

► Proenvironmental Behavior

Fear in Children

► Childhood Anxiety

Fear of Crime

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Definition

There is no overall accepted definition of fear of crime (FOC) (De Donder, Buffel, Verte, Dury, & De Vitte, 2009). According to Hale (1996) and Farrall, Gray, and Jackson (2007), FOC refers to the fear of being a victim of crime as opposed to the actual probability of being a victim of crime, while according to Ferraro (1995, p. 24), FOC is an emotional response expressed in the form of "dread" of becoming a victim of crime or anxiety toward crime in general or toward symbols that are associated with crime. Other authors (Pain, 2000, p. 367) argue that FOC refers to the wide range of emotional and practical responses to crime and disorder individuals and communities may make.

Description

Interest in FOC as a research topic can be traced back to crime research undertaken in 1967 and funded by the Crime Commission initiated by the American president (Gray, Jackson, & Farrall, 2011). Since the 1980s, there has been an expansion of the large-scale national and cross-national surveys which measure the level and extent of FOC (e.g., the British Crime Survey and the European Social Survey).

At the societal level, perceptions of insecurity serve for planning and legitimizing public policies and have social implications (Barker & Crawford, 2010) since studies into the FOC are nowadays an integral part of crime prevention policies (Groenemeyer, 2009). At the personal level, FOC could be associated with a diversity of negative outcomes, especially lower quality of life which is manifested through the psychological distress, constrained behavior, general

distrust, and social alienation. The FOC thus has social and psychological dimensions that require interdisciplinary analysis (Gray, Jackson, & Farrall, 2008).

Concept of FOC has usually been conceptualized in a narrow sense as an emotional state related to crime and victimization (*fear*), and the item "fear of walking alone in the dark in the neighborhood" became a standard measure of FOC since the 1970s to the present. Researchers also introduced a cognitive dimension (*risk assessment of becoming a victim of crime*) and a behavioral dimension (*avoidance or coping behavior in perceived risk situations*) of FOC into criminological research (Groenemeyer, 2009).

In explaining FOC, Elchardus, De Groof, and Smits (2008) identify a rationalist paradigm and symbolic paradigm. In both paradigms, FOC refers to feelings of threat, vulnerability, and helplessness. According to rationalists, these feelings have origins in risk perception and perceived vulnerability to victimization, while according to symbolists, they have many origins such as illness, financial insecurity, and social exclusion (Hale, 1996; Pain, 2000). Rationalists consider FOC to be a personality trait, directly related with crime and victimization. Yet there is lack of empirical support for this hypothesis, although direct victimization experience is related to worry about certain types of crime (Hale, 1996; Jackson, 2008). According to symbolic paradigm FOC is considered as a sign of broader community problems and conditions of social disorder, with special emphasis on images of stereotypical representations which can be passed on through education or mass media (De Donder et al., 2009). In people's representation of crime risk (Ferraro, 1995) and anxieties about victimization (Hale, 1996), indirect experiences of crime (e.g., hearing about events, knowing victims) play stronger roles than personal victimization experience.

The most common findings from fear of crime surveys are that women and elderly are most likely to feel insecure, and that level of fear of crime in urban areas is higher than in rural areas. These findings remain relatively stable across different countries and over the time (Barker & Crawford, 2010). Ferraro (1995) showed that perceived risk mediates the impact of other relevant sociodemographic factors. Kilias (1990) and Jackson (2006a, 2006b, 2008) consider that anticipated dimensions of vulnerability to victimization (exposure to risk, anticipation of serious consequences, and the loss of control) can explain difference in level of anxiety between certain social groups (e.g., gender, age groups).

The body of knowledge about FOC is largely a product of the way it has been measured and researched (Farrall, & Gadd, 2004; Farrall, Bannister, Ditton, & Gilchrist, 1997). Unfortunately, many criminologists believe that FOC suffers from theoretical under-specification (e.g., Girling, Loader, & Sparks, 2000) and methodological weaknesses that jeopardize its validity (e.g., Farrall, & Gadd, 2004). Standard measures exaggerate the FOC problem (Farrall 2004; Farrall & Gadd, 2004). They give only a global assessment of intensity of worry feelings or unsafety with general reference to crime (Gray, Jackson, & Farrall, 2008) and wrongly confuse and merge a cognitive (risk of victimization) with the emotional component (perception of fear) (Farrall & Ditton, 1999). Critics, among other things, pinpointed to the leading nature of the standard question wording and the fact that respondents are asked to recall emotions they are rarely experiencing at the time of the study research (e.g., Gray, Jackson, & Farrall, 2008). Since FOC can be manifested as the specific emotions (e.g., fear, worry, anger) grounded in the daily experiences of everyday life, as well as more diffuse anxiety (Farrall, Jackson, & Gray, 2006; Gray, Jackson, & Farrall, 2006; Jackson, Farrall, & Gray, 2006) or trait of being afraid (Gabriel & Greve, 2003), or even a set of attitudes and opinions (Farrall, Gray, & Jackson, 2007), studies now tend to employ a wider range of specific emotional but also cognitive and behavioral reactions to crime (Gray, Jackson, & Farrall, 2008). In recent years, FOC survey research has become more sophisticated, grounding measures of FOC into geographical, temporal, and social context variables (Barker & Crawford, 2010; LaGrange & Ferraro, 1989; Farrall, Bannister,

Ditton, & Gilchrist, 1997). New sets of measures improve the validity of past measures by trying to capture the reality of everyday fearful emotions that affect people's lives and tapping into the emotional component of the fear of crime; assessing the frequency and intensity of fearful episodes; making an explicit reference to particular crime types providing specific time periods; avoiding hypothetical questions; and by employing a filter question which avoids the word "how" (Farrall & Gadd, 2004; Gray, Jackson, & Farrall, 2008).

Although studies into the FOC are nowadays an integral part of crime prevention policies at local and national level in almost all countries (Groenemeyer, 2009), criminologists argue that FOC has been ill-defined, inadequately operationalized, and poorly measured (e.g., Farrall & Gadd, 2004). Since surveys largely used standard measure of FOC and relied almost exclusively upon quantitative data, results created the illusion that the FOC is a prevalent social problem. In recent years, new sets of measures have been developed in FOC survey research in order to improve scope of knowledge we have on FOC. However, probably some period of time will be needed in order to include those new measures into the large-scale victimization research and to test their validity.

Cross-References

- ▶ Crime
- ▶ European Social Survey and Marriage
- ▶ Fear of Walking Alone at Night
- ▶ Quality of Life (QOL)
- ▶ Urban Areas
- ▶ Victimization

References

Barker, A., & Crawford, A. (2010). Report WP4 – Fear of crime and insecurity in Europe. *CRIMPPREV, reports*, CRIMEPREV programme. Accessed March 28, 2011, http://lodel.irevues.inist.fr/crimprev/index.php?id=330

De Donder, L., Buffel, T., Verte, D., Dury, S., & De Vitte, N. (2009). Feelings of insecurity in context: Theoretical perspectives for studying fear of crime in late life. *International Journal of Economics and Finance, 1*(1), 1–20.

Elchardus, M., De Groof, S., & Smits, W. (2008). Rational fear or represented malaise: A crucial test of two paradigms explaining fear of crime. *Sociological Perspectives, 51*(3), 453–471.

Farrall, S. (2004). Can we believe our eyes?: A response to Mike Hough. *International Journal of Social Research Methodology, 7*, 177–179.

Farrall, S., Bannister, J., Ditton, J., & Gilchrist, E. (1997). Questioning the measurement of the 'fear of crime': Finding from a major methodological study. *British Journal of Criminology, 37*(4), 658–674.

Farrall, S., & Ditton, J. (1999). Improving the measurement of attitudinal responses: An example from a crime survey. *International Journal of Social Research Methodology, 2*(1), 55–68.

Farrall, S., & Gadd, D. (2004). The frequency of fear of crime. *British Journal of Criminology, 44*, 127–132.

Farrall, S., Gray, E., & Jackson, J. (2007). Theorising the fear of crime: the cultural and social significance of feelings of insecurity. *Experience and expression in the fear of crime* (Working Paper No. 5). Accessed March 28, 2011, http://ssrn.com/abstract=1012393

Farrall, S., Jackson, J., & Gray, E. (2006). Everyday emotion and the fear of crime: preliminary findings from experience and expression. *Experience and expression in the fear of crime* (Working Paper No. 1.) Accessed March 28, 2011, http://ssrn.com/abstract=1012354

Ferraro, K. F. (1995). *Fear of crime: interpreting victimization risk*. New York: SUNY Press.

Gabriel, U., & Greve, W. (2003). The psychology of fear of crime: Conceptual and methodological perspectives. *British Journal of Criminology, 43*, 600–614.

Girling, E., Loader, I., & Sparks, R. (2000). *Crime and social control in Middle England: Question of order in an English town*. London: Routledge.

Gray, E., Jackson, J., & Farrall, S. (2006). Reassessing the fear of crime: Frequencies and correlates of old and new measures. *Experience and expression in the fear of crime* (Working Paper No. 3). Accessed March 28, 2011, http://ssrn.com/abstract=996314

Gray, E., Jackson, J., & Farrall, S. (2008). Researching everyday emotions: Towards a multi-disciplinary investigation of the fear of crime. In H. Kury (Ed.), *Fear of crime – Punitivity. New developments in theory and research* (pp. 3–24). Bochum: Universitätsverlag Brockmeyer.

Gray, E., Jackson, J., & Farrall, S. (2011). In search of the fear of crime: Using interdisciplinary insights to improve the conceptualisation and measurement of everyday insecurities. In D. Gadd, S. Karstedt, & S.F. Messner (Eds.), *Sage handbook of criminological research methods*. London: Sage (in press). Accessed March 29, 2011, http://lse.academia.edu/JonathanJackson/Papers/147718/In_search_of_the_fear_of_crime_Using_interdisciplinary_insights_to_improve

_the_conceptualisation_and_measurement_of_everyday_insecurities
Groenemeyer, A. (2009). Crimprev info n°27bis – Research on insecurity – A lot of answers, but what was the question? The role of social, political and cultural transformations in constructing contemporary insecurities. *CRIMPREV programme, Crimprev Info*. Accessed March 28, 2011, http://lodel.irevues.inist.fr/crimprev/index.php?id=244
Hale, C. (1996). Fear of crime: A review of the literature. *International Review of Victimology, 4*, 79–150.
Jackson, J. (2006a). Introducing fear of crime to risk research. *Risk Analysis, 26*(1), 253–264.
Jackson, J. (2006b). Validating new measures of the fear of crime. *International Journal of Social Research Methodology, 8*(4), 297–315.
Jackson, J. (2008). Bridging the social and the psychological in the fear of crime. In L. Murray & S. Farrall (Eds.), *Fear of crime: Critical voices in an age of anxiety* (pp. 143–167). Abingdon: Glass House Press.
Jackson, J., Farrall, S., & Gray, E. (2006). The provenance of fear. *Experience and expression in the fear of crime* (Working Paper No. 2). Accessed March 28, 2011, http://ssrn.com/abstract=1012364
Killias, M. (1990). Vulnerability: Towards a better understanding of a key variable in the genesis of fear of crime. *Violence and Victims, 5*(2), 97–108.
LaGrange, R. L., & Ferraro, K. F. (1989). Assessing age and gender differences in perceived risk and fear of crime. *Criminology, 27*, 697–720.
Pain, R. (2000). Place, social relations, and the fear of crime. *Progress in Human Geography, 24*(3), 365–387.

Fear of Job Loss

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Synonyms

Employment insecurity

Definition

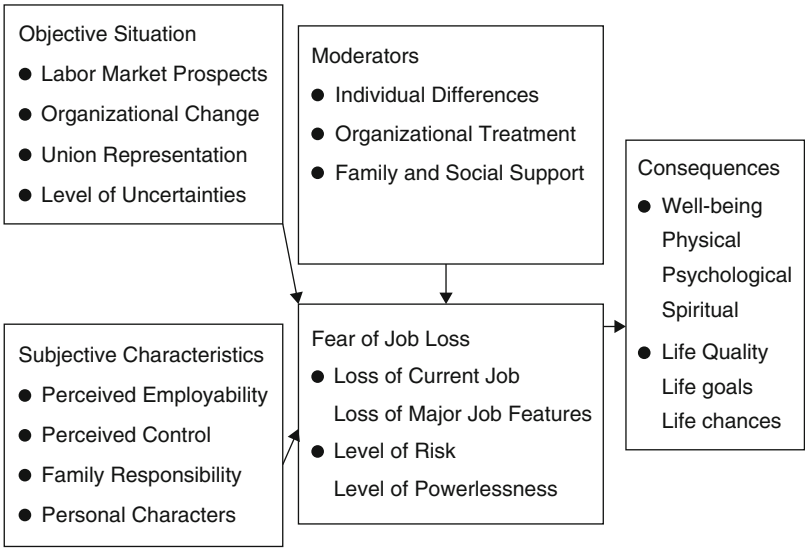
The fear of job loss refers to the felt threat, ▶ stress, and perceived powerlessness due to the possibility of leaving the current job and being not hired in the labor market. ▶ Fear as such generates ▶ anxiety and lowers the well-being of workers and even their dependents.

Description

How individuals react to the rapidly changing characteristics of job conditions depends on a number of factors, such as labor market prospects, employability, individual characters, and family responsibility. The fear of job loss majorly originates from the anticipation of involuntary job move or change concerning the continuity or ▶ security. People who constantly worry about losing their jobs reported poorer physical health and more symptoms of depression than those who actually were laid off. This suggests that ▶ fear of job loss may be worse than loss itself (Burgard, Brand, & House, 2009). Individuals may differ in their response when perceiving their jobs at risk.

Fear of job loss represents not only threats of imminent job loss but also deteriorating employment conditions and career opportunities (Greenhalgh & Rosenblatt, 1984). Borg and Elizur (1992) differentiated between cognitive ▶ job insecurity (likelihood of job loss) and affective job insecurity (▶ fear of job loss). Hellgren, Sverke, and Isaksson (1999) made a distinction between quantitative job loss (worries about losing the job itself) and qualitative job loss (worries about losing important job features). The prolonged economic downturn and organizational restructuring (e.g., downsizing, massive layoffs, outsourcing, mergers, acquisitions) in recent decades resulted in increasing rates of job loss and ignited widespread collective worries about losing current job features. The global trend of decreased union memberships further indicates that more workers are less protected and less capable of maintaining a desired continuity in careers (Sverke, 2004).

Exposure to ▶ unemployment (joblessness) affects ▶ quality of life and ▶ subjective well-being in negative ways. Jahoda (1982) specifies the relations between joblessness and



Fear of Job Loss, Fig. 1 Summary of causes, nature, effects of fear of job loss

psychosocial functions (social contacts, participation in collective purposes, status and identity, regular activity). Winkelmann and Winkelmann (1998), Darity and Goldsmith (1996), and Warr and Jackson (1988) all evidence that ▶ unemployment leads to psychological impairment, including higher levels of ▶ anxiety, loss of life control, and feelings of helplessness. Unemployed individuals were not equally unhappy: ▶ unemployment hurts less in the areas where ▶ unemployment level was high, an outcome revealing "the effect of the social norm to work" in certain regions (Clark, 2003; Stavrova, Schlösser, and Fetchenhauer 2011). There exist also gender differences. Men with children are more likely to perceive ▶ unemployment as a defeat than women with children (Forret, Sullivan, & Mainiero, 2010). Perception or fear from job loss can vary by age, level of income, occupation, and so on.

The occurrence, the scale, and the effect of fear can be moderated by the possibility of reemployment. Temporary unemployment, as a space for rest, introspection, and adjustment, might provide individuals with the chance to reflect the orientation of personal work and life. However, long-term ▶ unemployment could result in serious impacts such as avoidance of being evaluated, grave frustration, and loss of ▶ life goals and directions, in many cases leading to suicide (Chou, 2010).

According to the above discussions, an integrated model can be summarized as Fig. 1. The model describes fear of job loss as a function of the interaction between the objective situation and subjective characteristics, a situation which may have detrimental consequences for ▶ employee well-being and ▶ quality of life, where such consequences may be mitigated by a number of potential factors.

Cross-References

- ▶ Anxiety
- ▶ Job Security
- ▶ Quality of Life
- ▶ Social Consequences of Insecure Jobs
- ▶ Stressful Life Events
- ▶ Subjective Well-Being
- ▶ Temporary Employment
- ▶ Unemployment
- ▶ Well-Being at Work
- ▶ Work Stress

References

Borg, I., & Elizur, D. (1992). Job insecurity: Correlates, moderators and measurement. *International Journal of Manpower, 13*, 13–26.

Burgard, S. A., Brand, J. E., & House, J. S. (2009). Perceived job insecurity and worker health in the United States. *Social Science & Medicine, 69*, 777–785.

Chou, W. C. G. (2010). Unemployment problems in Taiwan. In C. Hei-Yuan & C. Ly-Yun (Eds.), *Society problems of Taiwan 2010* (Vol. 2). Taipei, Taiwan: Juliu. in Chinese.

Clark, A. (2003). Unemployment as a social norm: Psychological evidence from panel data. *Journal of Labor Economy, 21*, 323–351.

Darity, W., Jr., & Goldsmith, A. H. (1996). Social psychology, unemployment and macroeconomics. *Journal of Economic Perspectives, 10*(1), 121–140.

Forret, M. L., Sullivan, S. E., & Mainiero, L. A. (2010). Gender role differences in reactions to unemployment: Exploring psychological mobility and boundaryless careers. *Journal of Organizational Behavior, 31*, 647–666.

Greenhalgh, L., & Rosenblatt, Z. (1984). Job insecurity: Toward conceptual clarity. *Academy of Management Review, 9*(3), 438–448.

Hellgren, J., Sverke, M., & Isaksson, K. (1999). A two-dimensional approach to job insecurity: Consequences for employee attitudes and well-being. *European Journal of Work and Organization Psychology, 8*, 179–195.

Jahoda, M. (1982). Economic recession and mental health: Some conceptual issues. *Journal of Social Issues, 44*, 13–23.

Stavrova, O., Schlösser, T., & Fetchenhauer, D. (2011). Are the unemployed equally unhappy all around the world? The role of social norms to work and welfare state provision in 28 OECD countries. *Journal of Economic Psychology, 32*, 159–171.

Sverke, M. (Ed.). (2004). *Job insecurity and union membership: European unions in the wake of flexible production*. Brussels: P.I.E.-Peter Lang.

Warr, P., & Jackson, P. (1988). Factors influencing the psychological impact of prolonged unemployment and reemployment. *Psychological Medicine, 15*, 795–807.

Winkelmann, L., & Winkelmann, R. (1998). Why are the unemployed so unhappy? Evidence from panel data. *Economica, 65*, 1–15.

Fear of Negative Evaluation Scale (FNES)

► Need for Approval Measures

Fear of Walking Alone at Night

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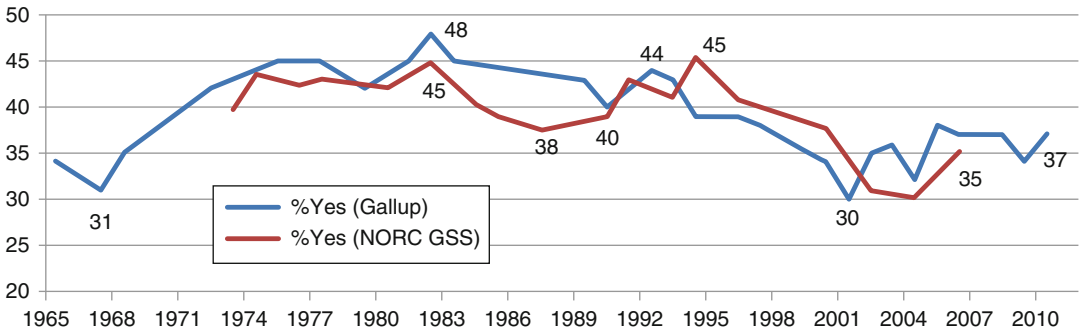
Synonyms

Fear of crime

Description

Since the 1960s, the fear of criminal victimization has become an increasingly prominent sociopolitical concern among researchers and policymakers alike, most notably in the United States, Britain, and Europe but progressively in developing countries too. Numerous studies have been conducted with the aim of understanding, monitoring, and evaluating fear of crime, with many concluding that "such fear continues to impinge upon the well-being of a proportion of the population" (Gilchrist, Bannister, Ditton, & Farrall, 1998 p. 283). From a measurement perspective, there have been a wide array of survey questions that have been employed by researchers over the last four decades in order to examine, better understand, and monitor fear of crime. One of the earliest and most common survey questions used by researchers since the 1960s to gauge fear of crime enquires about how safe an individual feels walking about in their local area at nighttime.

Perhaps the most widely fielded version of this measure that has been regularly included by both Gallup and the National Opinion Research Center (NORC) General Social Surveys (GSS) for decades is the following: "Is there any area right around here – that is, within a mile – where you would be afraid to walk alone at night?" The trend results from these two survey series using this measure are presented in Fig. 1, showing that approximately



Fear of Walking Alone at Night, Fig. 1 Trends in fear of walking alone at night in the United States, 1965–2010 (Sources: Gallup Polls 1965–2010; NORC General Social Surveys 1973–2006)

a third and half of Americans interviewed over the period have answered the question affirmatively. Another common form of the question that has been included in many national crime surveys and Round 3 (2005/2006) of the cross-national European Social Survey is "How safe do you feel or would you feel being alone in your neighbourhood after dark?" with response options being "very safe," "safe," "unsafe," and "very unsafe." These items all attempt at capturing emotional responses to a specific single dimension of fear, namely, street crime or personal attack in one's residential area (Baumer & DuBow, 1976).

Critical Evaluations of the Measure

The "fear at night" measures have been subject to substantial criticism over the last quarter century on various accounts. Ferraro and LaGrange (1987) have classified this line of questioning as measuring "formless" fears that relate to a vague threat to personal security and distinguish it from measures aimed at capturing "concrete" fears that refer to a particular crime (e.g., types of property crime or individual/personal crime). This distinction has also been dubbed as being between "global" and "crime-specific" measures. More specifically, the criticisms that have tended to be leveled at the global questions include the failure to make direct reference to crime at all; the use of a rather imprecise geographical reference (i.e., "neighborhood" or "local area"); its hypothetical nature, since many people may rarely do the activity (walking alone after dark) due to preference or physical limitation; and the inadequate capturing of either the frequency or intensity of fearful experiences (Farrall & Gadd, 2004; Ferraro & LaGrange, 1987; Ferraro, 1996; Garofalo, 1979; Hale, 1996; Warr, 1995, 2000).

Conceptual and Methodological Refinement

Reflecting on and responding to the aforementioned limitations associated with the "fear at night" survey item, the nature of the conceptual and methodological debate and associated experimentation has become increasingly more sophisticated. For instance, with regard to conceptualization, there have been attempts at moving beyond the unidimensional, global approach to fear of crime by identifying a broader range of dimensions and victimization risk perceptions (e.g., Ferraro & LaGrange, 1987; Warr, 2000), distinguishing between expressive and experiential components of fear of crime (Farrall, Jackson, & Gray, 2009; Gray, Jackson, & Farrall, 2008; Jackson, 2004), and recognizing that fear may be either functional or dysfunctional depending on the behavioral responses it provokes in an effort to protect one's ▶ quality of life (Jackson & Gray, 2010).

These conceptual advances have occurred alongside several methodological developments. One common response to academic critique of the global fear measure has been to make mere phrase changes to include words that more explicitly refer to fear (e.g., asking about how afraid or fearful rather than how unsafe).

Others include asking directly about concern over becoming a victim of different types of crime rather than crime in general (i.e., crime-specific fears, e.g., Warr & Stafford, 1983; Warr, 1995; Ferraro, 1995), referring to general feelings of unsafety when at home alone at night (Pantazis, 2000), and asking about "your everyday life" rather than relying on a hypothetical format (e.g., Ferraro, 1996). Some scepticism remains about whether such refinements have sufficiently overcome the methodological limitations of the global measures (Farrall et al., 1997). This has prompted subsequent experimentation in Europe and South Africa with measures that aim to derive more precise estimates of the everyday experience of the fear of crime by combining responses to frequency and impact of fear questions and thereby focusing more narrowly on emotional experiences that adversely affect well-being (Jackson & Kuha, 2010; Roberts, 2012).

Comparing the "walking alone at night" measure with some of these newer measures generally suggests that there remains a moderate association between them with a reasonable degree of correspondence at the margins. Yet evidence also suggests that the measures may be identifying different groups of people as fearful to some degree. Ultimately, the newer indicators appear to provide finer gradations in the daily experience of public concerns over crime relative to the "walking alone at night" indicator (Jackson & Kuha, 2010; Roberts, 2012).

Future Outlook

In spite of advances in the science of fear of crime methodology, the "walking alone at night" question continues in general to be the conventional choice for measuring this social phenomenon. This is attributable mainly to the desire to maintain the contribution to long-standing time-series data. Global, single-item indicators of fear of crime offer utility as a general gauge of public worries about criminal ▶ victimization. Yet, it is imperative that these measures are increasingly complemented with some of the newer, more conceptually grounded and validated measure sets as well as further rounds of experimentation and refinement in order to assist future generations of researchers in better explaining the dynamics of fear of crime and its complexities and inform well-crafted and adaptive policy responses.

Cross-References

▶ Fear of Crime

References

Baumer, T., & DuBow, F. (1976). *"Fear of crime" in the polls: What they do and do not tell us*. Washington, DC: U.S. Department of Justice.

Farrall, S., & Gadd, D. (2004). Evaluating crime fears: A research note on a pilot study to improve the measurement of the 'fear of crime' as a performance indicator. *Evaluation, 10*(4), 493–502.

Farrall, S., Bannister, J., Ditton, J., & Gilchrist, E. (1997). Questioning the measurement of the 'fear of crime': Findings from a major methodological study. *British Journal of Criminology, 37*(4), 658–679.

Farrall, S., Jackson, J., & Gray, E. (2009). *Social order and the fear of crime in contemporary times. Clarendon studies in criminology*. Oxford: Oxford University Press.

Ferraro, K. F. (1995). *Fear of crime: Interpreting victimization risk*. Albany, NY: State University of New York Press.

Ferraro, K. F. (1996). Women's fear of victimization: Shadow of sexual assault? *Social Forces, 75*, 667–690.

Ferraro, K. F., & LaGrange, R. L. (1987). The measurement of fear of crime. *Sociological Inquiry, 57*(1), 70–101.

Garofalo, J. (1979). Victimization and the fear of crime. *Journal of Research on Crime and Delinquency, 16*, 80–97.

Gilchrist, E., Bannister, J., Ditton, J., & Farrall, S. (1998). Women and the 'fear of crime': Challenging the accepted stereotype. *British Journal of Criminology, 38*(2), 283–298.

Gray, E., Jackson, J., & Farrall, S. (2008). Reassessing the fear of crime. *European Journal of Criminology, 5*(3), 363–380.

Hale, C. (1996). Fear of crime: A review of the literature. *International Review of Victimology, 4*(2), 79–150.

Jackson, J. (2004). Experience and expression: Social and cultural significance in the fear of crime. *British Journal of Criminology, 44*(6), 946–966.

Jackson, J., & Gray, E. (2010). Functional fear and public insecurities about crime. *British Journal of Criminology, 50*(1), 1–21.

Jackson, J., & Kuha, J. (2010). *Worry about crime among European citizens: A latent class analysis of cross-national data*. London: Methodology Institute, London School of Economics.
Pantazis, C. (2000). 'Fear of crime', vulnerability and poverty. *British Journal of Criminology, 40*(3), 414–436.
Roberts, B. J., et al. (2012). State of affliction: Fear of crime and quality of life in south Africa. In D. Webb (Ed.), *Subjective well-being and security* (Social indicators research book series, Vol. 46, pp. 149–175). Dordrecht: Springer.
Warr, M. (1995). Poll trends: Public opinion on crime and punishment. *Public Opinion Quarterly, 59*(2), 296–310.
Warr, M. (2000). Fear of crime in the United States: Avenues for research and policy. In D. Duffee (Ed.), *Criminal justice 2000: Measurement and analysis of crime and justice* (Vol. 4, pp. 451–489). Washington, DC: U.S. Department of Justice.
Warr, M., & Stafford, M. C. (1983). Fear of victimization: A look at the proximate causes. *Social Forces, 61*(4), 1033–1043.

Fears

▶ Worries (Global Measure)

Federal Debt to GDP, Ratio of

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Synonyms

Debt sustainability of federal governments

Definition

A measure that expresses the financial obligations of the national government of a country (i.e., the national government's part of total ▶ public debt) in relation to its economic strength. The ratio is calculated by dividing the total amount of the national government's ▶ debt by the country's gross domestic product and is a solvency indicator, i.e., an indicator of the debt burden of a country and of the ability of the national government to serve and/or repay its debt. This measure has to be distinguished from the ratio of personal household debt to GDP referring to debts of individuals and households.

Description

Federal debt is the accumulation of previously incurred annual budget deficits of the national government, i.e., when government expenditure exceeds government revenues (or ▶ taxes). The most important instruments of government borrowing are federal (or treasury) bonds, and, in the case of ▶ developing countries and emerging economies, bank credits, commercial credits, and loans from official creditors (from the governments of economically advanced countries) and international organizations (e.g., World Bank, International Monetary Fund). Although federal debt is often considered as a safe investment, sovereign default and debt restructuring have repeatedly occurred since the early nineteenth century (Marichal, 1989; Reinhart & Rogoff, 2009; Suter, 1992). Since the sovereign debt crises of the early 1980s, the late 1990s, and of 2010–2012, a growing amount of literature is dealing with the causes and consequences of rising debt burden and debt servicing incapacities of federal governments (▶ public debt; Engen & Hubbard, 2004; Suter, 2012).

Several countries, including the United States and the member countries of the European Union (EU), have introduced debt ceilings in order to limit federal indebtedness and to maintain financial stability. The EU countries agreed upon a (public) debt level of 60 % of the country's GDP, which is, however, surpassed by several countries (notably Greece with a public debt ratio of 165 % in 2011, but also Italy, Ireland, Belgium, France, and even Germany). The OECD recommends a debt ceiling of 50 %, surpassed not only by most Eurozone countries but also by Japan, the United Kingdom, or the

United States. The United States know an absolute debt ceiling, although this can (and has) been repeatedly raised by congressional vote. Thus, the US debt ceiling increased between the early 1980s and 2010 from $1 trillion to over $14 trillion. The US federal debt rose dramatically from the early 1980s onwards and reached the debt ceiling in 2010–2011. In the US Congress, this provoked heated political debates for weeks between Republicans and members of the Tea Party movement on the one side and the Democrats and the Obama administration on the other side about raising the debt ceiling. In the agreement which was reached end of July 2011, the debt ceiling was finally increased, but on condition that ▶ public expenditure and the government deficit would be reduced. While the agreement was able to prevent open sovereign default of the US government, US public debt reached 100 % of the country's GDP, which resulted in a downgrading of the US government's credit rating by the international credit rating agencies.

Cross-References

- ▶ Bankruptcy
- ▶ Debt
- ▶ Developing Countries
- ▶ Personal Household Debt to GDP, Ratio of
- ▶ Public Debt
- ▶ Public Expenditure

References

Engen, E. E., & Hubbard, R. G. (2004). Federal government debt and interest rates. *NBER Macroeconomics Annual, 19*, 83–138.

Marichal, C. (1989). *A century of debt crises in Latin America*. Princeton, NJ: Princeton University Press.

Reinhart, C. M., & Rogoff, K. S. (2009). *This time is different*. Princeton, NJ: Princeton University Press.

Suter, C. (1992). *Debt cycles in the world-economy: Foreign loans, financial crises, and debt settlements, 1820–1990*. Boulder: Westview.

Suter, C. (2012). Debt crises in the modern world-system. In S. Babones & C. Chase-Dunn (Eds.), *Routledge handbook of world-systems analysis* (pp. 215–223). London/New York: Routledge.

Feeling Demoralized Scale

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Definition

The word "demoralize" has wide usage in everyday language, meaning "to deprive a person of spirit or courage, to throw a person into disorder or confusion, and to dishearten or bewilder." It has been applied in a range of clinical and nonclinical settings, where its components and phenomenology have been described in detail. Any persistent and difficult life situation may cause a person to be demoralized, evidenced by feelings of being "unable to cope," and this will depend on the nature of the threat and the person's resources, both internal strengths and vulnerabilities and external supports. Any resulting demoralization will diminish confidence and drive, and further erode a person's ability to cope or master the situation. It is, in essence, a form of depression.

Description

In 1974, Jerome Frank published a paper in the American Journal of Psychiatry entitled *Psychotherapy: the restoration of morale* (Frank, 1974). In it he describes demoralization as resulting from "persistent failure to cope with internally or externally induced stresses that the person and those close to him expect him to handle." It leads inexorably to loss of confidence and personal esteem. Frank (1974) believed that, whatever their problem, it was demoralization that brought people to seek help, and it was demoralization that responded to the nonspecific components of many therapies – these being a strong therapeutic relationship, provision of information and explanation, and the giving of hope. Demoralization was therefore seen as a common phenomenon, though one of paramount importance.

Bruce Dohrenwend was an early psychiatric epidemiologist who concluded from a study of 200 people in New York that there existed, in addition to specific psychological problems such as depression or phobias, a strong component common to all distress. This included elements of sadness and poor self-esteem, which he compared similarly to Frank's demoralization (Dohrenwend, Shrout, Egri, & Mendelsohn, 1980).

De Figueiredo and Frank (1982), however, went on to elaborate that an essential feature of demoralization was "subjective incompetence," a feeling of helplessness and a loss of mastery, in general, not just in the specific situation. That is, fundamental to the experience of demoralization is the feeling that not only am I struggling but I am not up to the task. I feel incompetent. This leads to intense disheartenment. Demoralization is more than just distress. A grieving person is in distress, but a demoralized person is distressed *and* experiences subjective incompetence. Furthermore, because mastery, competence, and sense of control are so important to one's sense of self, demoralization is also characterized by an existential anxiety and loss of personal sense of value and self-esteem. Loss of morale leads to loss of meaning and purpose, both in a specific situation such as work, and in life more generally, a loss of drive to go on, a loss of courage, and the loss of the will to live in some circumstances.

Feelings of hopelessness and helplessness have been observed and described in medically ill populations over several decades. Physical illness threatens the integrity of the body and mind in a very tangible way and challenges a person's mastery and control. Greer and Watson (1987) described helplessness and hopelessness as one of five key emotional reactions of patients to the development of cancer. It was a core component of the "Giving Up-Given Up" syndrome described by George Engel (1967) occurring in patients before they became ill, elaborating the psychosomatic theory that psychological stress states could bring on physical illness; an idea that is now well demonstrated in the relationship between depression and heart disease and depression and diabetes, for instance.

More recent empirical studies of distress observed in medically ill populations have confirmed the importance of the concept of demoralization. The commonest form of depression seen in the medically ill is demoralization. Furthermore, it can be, and should be, distinguished from depression characterized by anhedonia (loss of hedonic capacity) and grief (sorrow associated with loss) (Clarke, Kissane, Trauer, & Smith, 2005). Elements of these three types of depression may in fact be present at the same time, though they need to be distinguished as their treatments are different. In these studies, the demoralization experienced by patients has included a sense of failure and a loss of meaning and purpose.

Not everyone gets demoralized, and a person's response to adversity depends on their perception of the stress and their perceived control over it, their valuation of the importance of the issue, and their assessment of their own coping resources and external supports (Greer & Watson, 1987). In particular, it has been found that if a person has a strong "sense of coherence" – a sense that life is understandable, manageable, and meaningful (Antonovsky, 1987) – they will be relatively less likely to become demoralized under stress (Boscaglia & Clarke, 2007). Demoralization has been described in people with cancer, heart disease, and motor neuron disease.

Demoralization has proven a useful construct in a range of settings outside patient populations. It has been described in people residing in institutions, where it was called the "social breakdown syndrome" (Gruenberg, 1967); it has been described in healthcare personnel where there is clash between personal values and standards and the reality of work constraints (Gabel, 2011); and it has proven useful in describing the experience and psychological responses of refugees (Briggs, 2011).

Risk Factors for Demoralization

In the context of serious acute or chronic physical illness, risk factors for demoralization include severity of illness, diminished functional ability, past depression, trait anxiety, younger age, poor family cohesion and quality of relationships,

avoidant or confrontational coping style, weak environmental mastery, weak global meaning or sense of coherence, and low self-acceptance (Boscaglia & Clarke, 2007).

Implications for Therapy: Helping a Demoralized Person

An understanding of the phenomenology and experience of demoralization provides the framework for helping. In particular, simple things may help; information and reassurance will reduce the apprehension and fear, practical helps will reduce the helplessness, and assistance with problem solving will strengthen a person's sense of mastery, self-confidence, and esteem. Severe demoralization is more difficult to relieve. If a person is truly in a predicament out of their control and the consequences are dire, how can one help? Here Frank's (1974) common factors are important. Listening and "being with" the person tells them that they are not alone and their experience can be understood and shared to some extent; hope is transferred as we walk with them; and often goals of life have to be reevaluated and a new purpose for living found (Clarke, 2012). In the clinical setting, giving hope is an important first step to recovery. Hopelessness and demoralization generally predict a poor response to both psychological and medication treatment in depressed people. On the other hand, an early hopeful response in therapy predicts a good recovery (Kuyken, 2004).

Scales to Measure Demoralization

The demoralization scale from the Psychiatric Epidemiology Research Interview (PERI-D) is derived from the work of Dohrenwend et al. (1980) described above. It comprises 27 items, coded zero five, and measures general distress, producing eight subscales; anxiety, sadness, psychophysiologic symptoms, perceived physical symptoms, poor self-esteem, hopelessness-helplessness, confused thinking, and dread.

Kissane et al. (2004) developed a specific dimensional measure of demoralization, tested and used mostly in cancer populations. It is a 24-item self-report scale with good internal reliability (Cronbach's alpha of 0.94). As well as measuring general dysphoria and disheartenment, it specifically captures feelings of helplessness, personal failure, and loss of meaning. It has been translated into a number of languages.

Fava et al. (1995) have developed a set of diagnostic categories (DCPR) relevant to psychosomatic medicine and yet captured in standard psychiatric classifications. Demoralization is one of these categories. The instrument for making DCPR diagnoses is a structured interview with good reliability. It has been used in a self-report form. The defining characteristics of the DCPR demoralization measure are that it is categorical, is not dimensional, and has only five questions correlating with the five criteria of the category, and it captures the psychosomatic principle that demoralization precedes physical illness – which is one of the criteria.

References

Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well*. San Francisco: Jossey-Bass.

Boscaglia, N., & Clarke, D. M. (2007). Sense of coherence as a protective factor for demoralization in women with a recent diagnosis of gynaecological cancer. *Psycho-Oncology, 16*, 189–195.

Briggs, L. (2011). Demoralization and psychological distress in refugees: From research to practice. *Social Work in Mental Health, 9*, 336–345.

Clarke, D. M. (2012). Depression, demoralization and psychotherapy in people who are medically ill. In R. D. Alarcon & J. B. Frank (Eds.), *The psychotherapy of hope; the legacy of Persuasion and Healing*. Baltimore: Johns Hopkins University Press.

Clarke, D. M., Kissane, D. W., Trauer, T., & Smith, G. C. (2005). Demoralization, anhedonia and grief in patients with severe physical illness. *World Psychiatry, 4*, 96–105.

De Figueiredo, J. M., & Frank, J. F. (1982). Subjective incompetence: The clinical hallmark of demoralization. *Comprehensive Psychiatry, 23*, 353–363.

Dohrenwend, B. P., Shrout, P. E., Egri, G., & Mendelsohn, F. S. (1980). Nonspecific psychological distress and other dimensions of psychopathology: Measures for use in the general population. *Archives of General Psychiatry, 37*, 1229–1236.

Engel, G. L. (1967). A psychological setting of somatic disease: The giving up-given up complex. *Proceedings of the Royal Society of Medicine, 60*, 553–555.

Fava, G. A., Freyberger, H. J., Bech, P., Christodoulou, G., Sensky, T., Theorell, T., et al. (1995). Diagnostic

criteria for use in psychosomatic research. *Psychotherapy and Psychosomatics, 63*, 1–8.
Frank, J. D. (1974). Psychotherapy: The restoration of morale. *The American Journal of Psychiatry, 131*, 271–274.
Gabel, S. (2011). Addressing demoralization in clinical staff: A true test of leadership. *The Journal of Nervous and Mental Disease, 199*, 892–895.
Greer, S., & Watson, M. (1987). Mental adjustment to cancer: Its measurement and prognostic importance. *Cancer Surveys, 6*, 439–458.
Gruenberg, E. M. (1967). The social breakdown syndrome – some origins. *The American Journal of Psychiatry, 123*, 1481–1489.
Kissane, D. W., Wein, S., Love, A., Xiu, Q., Pei, L. K., & Clarke, D. M. (2004). The demoralization scale: A report of its development and preliminary validation. *Journal of Palliative Care, 20*, 269–276.
Kuyken, W. (2004). Cognitive therapy outcome: The effects of hopelessness in a naturalistic outcome study. *Behaviour Research and Therapy, 42*, 631–646.

Feeling Safe

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Synonyms

Feelings of Security; Human Security; Satisfaction with Personal Security; Self-Control

Definition

It is the state of being free from threat and danger that calls an emotional reaction.

It is the feeling of being protected from external threats, risk, or dangers.

Perceptions of insecurity are manifested to the individual as fears of losing control of their lives, loss of property, loss of social relationships, or even loss of the life.

Perceptions of insecurity influence subjective well-being because insecurity implies a lack of control or autonomy of the individual in relation to managing his environment.

Description

Safety is a multidimensional concept. Discussions about the relationship between feeling safe and ▶ subjective well-being (SWB) include topics about the definition of safety and security, including the concept of ▶ human security, as well as an assessment of the mechanisms of ▶ adaptation that people and groups use to counteract the negative feelings that insecurity brings about. It is also important to discuss about the causes and consequences of insecurity for the individual, the group, the city, and region- and nation-state level. There is also the issue of why objective and subjective measures of security and safety differ.

Perceptions of insecurity are manifested to the person involved as fears of losing their lives, loss of property, loss of social relationships, or losing control over their lives. The presence of present dangers and lack of control affect SWB. Perceptions of insecurity influence SWB because insecurity manifests a lack of control or autonomy of the individual to manage his/her environment (Wills-Herrera, Orozco, Forero, Pardo, & Andonova, 2011).

Satisfaction with personal safety has been proposed by various analysts (Cummins, Eckersley, Pallant, van Vugt, & Misajon, 2003; Cummins, Eckersley, Lo, Davern, Hunter, & Okerstrom, 2004) as a principal dimension to subjective well-being. Maslow (1943) had originally identified security as one of the low-order needs that have to be fulfilled in order that people tend to satisfy their high-order needs for ▶ self-actualization (Maslow, 1970). Safety needs reflect order and predictability in the environment and the human desire for security and protection. Lower-level needs tend to be more salient in extreme conditions such as when natural disasters occur, wars, or extreme poverty. Feeling insecure may be expressed as a feeling of reduced safety in everyday life due to individual reasons, existence of crime at the community level, insecurities from armed groups in rural areas, and fear of terrorist attacks which have been heightened since the September 11 terrorist attacks in the USA. Feelings of insecurity may also come

from political reasons (fear of exerting voice in public discussions), health and food insecurities, insecurity from natural disasters, and community insecurity, when people do not feel safe by belonging to a particular group or community, for instance, the fear Muslims feel by their perception of anti-Muslim sentiments among some sections of their community.

When people feel unsafe, this feeling can easily overwhelm their world view so that they can feel a drastic reduction of well-being in a similar way to an unemployed or an individual who is feeling pain. This relationship has been demonstrated empirically. For instance, Moeller (2005) has found that in South Africa urban metropolitan municipalities, worries about personal security and ▶ fear of crime exert a very negative impact on satisfaction with life. Di Tella, MacCulloch, and Nopo (2009) and Di Tella, MacCulloch, and Oswald (2003) have also shown that ▶ victimization by crime has a positive relationship with anxiety and other negative feelings. In such circumstances, an adaptation process may occur. On the other hand, a number of researchers have used need hierarchy theory to explain the relationship between subjective well-being and variables like income, food supply, nutrition, and shelter (Diener & Biswas-Diener, 2002; Veenhoven, 1991; Oishi, Diener, Lucas, & Suh, 1999).

People adapt to their circumstances of living by adapting their behaviors to suit their living environments. A process of adaptation may even occur under severe environmental conditions. Many people in the world live under violent circumstances yet are able to maintain a stable level of SWB or they develop strategies to reduce its impact. For instance, Cummins (2012) and Di Tella and Schargrodsky (2009) have shown that people react strategically to insecurity by a different array of measures such as not wearing jewelry, contracting private security services, and creating associations in rural areas (Wills-Herrera et al., 2011). In insecure neighborhoods, parents exert closer monitoring of their children, restricting their children's behavior outside home (Kling et al., 2005). Other studies have explored the relationship between fear of crime and ▶ quality of life (Michalos & Zumbo, 2000; Moeller, 2005). On the other hand, the International Well-being Index (Cummins, 2012) includes items on personal security and national security.

Feelings of security can also be seen as part of a human security concept (Sen, 1999; Jolly & Ray, 2007), which has been proposed as an individual-centered process diverging from the security notion derived from the use of military forces available to protect a given territory or nation (Gasper, 2005). The Commission on Human Security proposes human security as "protecting the vital core of all humans' lives in ways that enhance human freedoms and human fulfillment" (Ogata & Sen, 2003). This concept of human security is not limited to the negative dimension of the absence of violent conflict but includes safeguarding opportunities for people to build their strengths and aspirations (Haq, 1999). It is an individual-centered and multidimensional concept.

Community connectedness and social capital may be seen as buffer variables to compensate lack of control over the environment. People with larger networks of social contacts may have ample material and affective support to individual members and provide ample knowledge and information to compensate the feelings of insecurity. Voluntary associations to social, cultural, recreational, and environmental associations is an indicator of social connectedness and social capital, and it has been shown to moderate the relationship between feelings of insecurity and SWB (Wills-Herrera et al., 2011).

Cross-References

- ▶ Adaptation
- ▶ Fear of Crime
- ▶ Food Security
- ▶ Human Security
- ▶ Quality of Life
- ▶ Self-Actualization
- ▶ Subjective Well-Being
- ▶ Victimization

References

Cummins, R. A. (2012). Safety and subjective well-being: A perspective from the Australian unity well-being index. In D. Webb & E. Wills-Herrera (Eds.), *Subjective well-being and security*. New York: Springer. Social Indicators Research Series, 46.

Cummins, R. A., Eckersley, R., Lo, S. K., Davern, M., Hunter, B., & Okerstrom, E. (2004). The Australian unity well-being index: An overview. *Social Indicators Network News, 76*, 1–4.

Cummins, R. A., Eckersley, R., Pallant, J., van Vugt, J., & Misajon, R. (2003). Developing a national index of subjective wellbeing: The Australian unity wellbeing index. *Social Indicators Research, 64*, 159–190.

Di Tella, R., MacCulloch, R., & Ñopo, H. (2009). *Happiness and beliefs in criminal environments*. Research Department Publications 4605, Inter-American Development Bank, Research Department.

Di Tella, R., MacCulloch, R., & Oswald, A. J. (2003). The macroeconomics of happiness. *The Review of Economics and Statistics, 85*(4), 809–827.

Di Tella, R., & Schargrodsky, E. (2009). *Happiness, ideology, and crime in an individual panel in six Argentine cities*. IDB Working Paper no. 112, Inter-American Development Bank, Washington, D.C.

Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? *Social Indicators Research, 57*, 119–169.

Gasper, D. (2005). Securing humanity: situating human security as concept and discourse. *Journal of Human Development, 6*(2), 221–245.

Haq, M.-U. (1999). *Reflections on human development* (2nd ed.). New York: Oxford University Press.

Jolly, R., & Ray, D. B. (2007). Human security-national perspectives and global agendas: Insights from national human development reports. *Journal of International Development, 19*(4), 457.

Kling, J. R., Wolwig, S., & Ketz, L. (2005). Neighbourhood effects on crime for female and male youth: Evidence from a randomized housing voucher experiment. *The Quarterly Journal of Economics, 120*(1), 87–130.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*(4), 370–396.

Maslow, A. H. (1970). *Motivation and personality*. New York: Harper & Row.

Michalos, A. C., & Zumbo, B. D. (2000). Criminal victimization and the quality-of-life. *Social Indicators Research, 50*(3), 245–295.

Moeller, V. (2005). Resilient or resigned? Criminal victimization and quality-of-life in South Africa. *Social Indicators Research, 72*(3), 263–317.

Ogata, S., & Sen, A. (2003). Final report of the commission on human security, http://www.humansecurity-chs.org/finalreport/index.html

Oishi, S., Diener, E., Lucas, R., & Suh, E. (1999). Cross-cultural variations in predictors of life-satisfaction: Perspectives from needs and values. *Personality and Social Psychology Bulletin, 25*(8), 980–990.

Sen, A. (1999). *Development as freedom*. New York: Oxford University Press.

Veenhoven, R. (1991). Is happiness relative? *Social Indicators Research, 24*, 1–34.

Wills-Herrera, E., Orozco, L. E., Forero, C., Pardo, O., & Andonova, V. (2011). The relationship between perception of insecurity, social capital and subjective well-being: Empirical evidence from areas of rural conflict in Colombia. *Journal of Socio-Economics, 40*(1), 88–96.

Feelings

► Emotions, Sociology of

Feelings of Autonomy

► Feelings of Justice

Feelings of Equality

► Feelings of Justice

Feelings of Justice

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Synonyms

Feelings of autonomy; Feelings of equality; Feelings of merit; Justice motive

Definition

Feelings of justice are what people feel or think about the justice/injustice of a situation they face, be they or not personally involved in that

situation. For a long time a subject of literature (e.g., Heinrich von,short story, "Michael Kohlaas"), feelings of ▶ justice became an object for social research about 50 years ago.. Among the first researchers in the field were social psychologists J.S. Adams and G. Homans.

Description

Feelings of justice are a common concern of several academic disciplines: social psychology for the feelings, sociology for the subjective aspect of social justice, and economy for exchanges embedded in the feelings. It is noticeable that, although each discipline has its own perspective on the topic, the results of the various pieces of research tend to converge, as manifested by the review of literature provided by some leading authors in each field in Germany or France (Laurent Bègue, Claudia Dalbert, François Dubet, Alain Trannoy) in Duru-Bellat & Meuret, 2009.

The Scheme of Reciprocity

Although what justice requires may vary depending on the characteristics of the individual or of the situation, there is a "justice motive," grounded on the scheme of reciprocity. This feeling is very deep: Injustice appears to be harmful not only to the victim but also to the author; economic experiences establish that justice is a more powerful incentive than benefit to an important proportion of individuals, who prefer to lose money if this is the way for the author of an injustice to be punished (Fehr & Gachter, 2002). In a famous experiment (the game of the ultimatum), a player has to share a certain amount of money between him and another person, who may refuse the money, in which case the giver loses it also. Results on the sampling population consistently show that the modal repartition is equality and that the mean amount proposed to the other player by the first one is about 40–45 % of the total amount (Henrich et al., 2005). Interestingly, the more exchanges there are in a society, the more complex it is, the more the offer to the second player appears to be generous. Also, the justice motive appears to be a universal one: Evidence was gathered from very different kind of individuals, in a great number of traditional or developed societies, and even among monkeys (Brosnan & de Waal, 2003). However, the strength of this motive has some drawbacks: People seem to develop a more or less strong "Belief in a Just World" (Lerner, 1980). This belief has been shown to have some positive aspects (it helps to invests in the future, e.g., it helps students to invest in schoolwork, see Dalbert, 2001) but also a less positive: Especially when it is not easy to restore a just situation, but not only then, people tend to fictively restore the justice by blaming the victim. It prevents the feelings of injustice to result in actions to restore the justice, and may explain why a strong justice motive may coexist with numerous situations of injustice. In order to elucidate this paradox, a dissociation of the justice motive has been proposed more recently (Lerner & Goldberg, 1999): "Blaming the victim" would belong to an "implicit justice motive" while reactions which try to restore the justice would belong to an "explicit justice motive," more conscious, more close to moral indignation.

Feelings of Justice and Well-Being

The feelings of injustice have strong consequences on the well-being of those who feel them. To believe that oneself is somebody who "takes" more than it "gives" is associated to depression (Allen & Badcock, 2003), but of course main effects are on victims: Documented effects in this case are decreasing ▶ self-esteem, stress, insomnia, anger (Mikula, Scherer, & Athenstaedt, 1998). In schools, students who feel to be treated unfairly, either by their teachers or by their classmates, make less progress (Grisay, 1997); they may develop two kinds of attitudes: withdrawal or violence (Duru-Bellat & Meuret, 2009).

Convergence of Different Criteria of Justice

Criteria of justice are not always the same but are not contradictory. For the economists, people feel as unfair to undergo consequences of situations or behavior which are out of their control,

and this criteria has been proven to be relevant, at least regarding health care, by some experiments (Schokkaert & Devooght, 2003). Social psychologists propose that three different criteria coexist (equity, i.e., the correspondence between contribution and retribution, equality, need) and are combined in proportions which vary with some characteristics of the subject or of the group he/she belongs to (Kellerhals, Coen-Hutter, & Perrenoud, 1997). The sociologist François Dubet (2006) studied the feelings of injustice among workers and among students, and he observed first that individuals were prone to explicit their criteria of justice, behaving "like philosophers," and second that these criteria were a combination of three basic principles of justice: ▶ equality, merit, and autonomy. These criteria explain most of the complaints of the workers or of the students, for instance, that their rights are not respected (equality and merit are not respected), that the bosses or the teachers abuse of their power (autonomy and merit are not respected), that they are invisible, that their individuality is not recognized (equality and autonomy are not respected).

Taken together, these pieces of research seem to tell us that the feelings of (in)justice are a decisive part of the ▶ well-being of individuals but also that their use in favor of a more just society probably requires an education aiming to develop explicit and conscious feelings.

Cross-References

- ▶ Belief in a Just World (BJW)
- ▶ Beliefs About Poverty
- ▶ Education
- ▶ Gini Coefficient
- ▶ Measures of Social Cohesion

References

Allen, N. B., & Badcock, P. B. (2003). The social risssk hypothesis of depressed mood: Evolutionary, psychosocial, and neurological perspectives. *Psychological Bulletin, 129*, 887–913.

Brosnan, S. F., & de Waal, F. B. M. (2003). Monkeys reject inequal pay. *Nature, 425*, 297–299.

Dalbert, C. (2001). *The justice motive as a personal resource: Dealing with challenge ad critical life events*. New York: Kluwer.

Dubet, F. (2006). *Injustices*. Paris: Le Seuil.

Duru-Bellat, M., & Meuret, D. (Eds.). (2009). *Les sentiments de justice à et sur l'école*. Bruxelles/Paris: de Boeck.

Fehr, E., & Gachter, S. (2002). Altruistic punishment in humans. *Nature, 415*, 137–140.

Grisay, A. (1997). *Evolution des acquis cognitifs et socio-affectifs des élèves au cours des années de collège*. Paris: Ministère de l'Education Nationale.

Henrich, J., et al. (2005). "Economic man" in cross-cultural perspective: Behavioral experiments in 15 small size societies. *The Behavioral and Brain Sciences, 28*(6), 795–855.

Kellerhals, J., Modak, M., & Perrenoud, D. (1997). *Le sentiment de justice dans les relations sociales*. Paris: PUF.

Lerner, M. J. (1980). *The belief in a just world, a fundamental delusion*. New York: Plenum Press.

Lerner, M. J., & Goldberg, J. H. (1999). When do decent people blame the victims? In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 627–640). New York: Guilford.

Mikula, G., Scherer, K. R., & Athenstaedt, U. (1998). The role of injustice in the elicitation of different emotional reactions. *Personality and Social Psychology Bulletin, 24*, 769–783.

Schokkaert, E., & Devooght, K. (2003). Responsibility-sensitive fair compensation in different cultures. *Social Choice and Welfare, 21*(2), 207–242.

Feelings of Merit

▶ Feelings of Justice

Feelings of Security

▶ Feeling Safe

Feelings of Stress

▶ Affluence, Stress, and Well-Being

Female - Male Earnings Ratio Among Skilled Workers

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Synonyms

Gender earnings gap of skilled workers

Definition

The female/male earnings ratio among skilled workers measures women's earnings as a percentage of men's earnings among workers with some level of specialized skills in the working-age population. Ideally, the skill levels of workers are measured by actual skills acquired in the course of formal education, vocational training, or on the job after starting an occupation. However, internationally comparable statistics on trends in the female/male earnings ratio are only available based on the International Standard Classification of Education. One strand of research on women's and men's earnings gap has focused on differences in economic returns to ▶ education for males and females based on annual gross earnings. Another strand has attempted to understand the causes of women's lower average earnings by looking at the gender pay gap in terms of gross hourly earnings.

Description

Trends Over Time and Cross-National Differences

With the stark rise of female employment since the 1970s in many industrialized countries, income disparities between men and women have received growing attention. Since the 1960s, the gender gap in annual median earnings or in hourly earnings of full-time employees narrowed worldwide. Relative improvements in women's ▶ education, ▶ training, and work experience have been the main drivers of this trend (Metcalf, 2009). However, across all OECD countries and educational levels, women still earn considerably less than men. The earnings gap is generally not lower among men and women with higher levels of educational attainment (OECD, 2010).

In 2008, the female/male earnings ratio for people with upper- or postsecondary education in the United States was 65 %. Among women and men with tertiary education, the ratio was even lower at 59 %. In Canada, Australia, the United Kingdom, Germany, Austria, Italy, and Switzerland, the female/male earnings ratio for workers with upper secondary education or above was similar at around 60 %. At this level of education, higher female/male earnings ratios of approximately 70 % can be found in Sweden, Finland, Denmark, and France (OECD, 2010).

When only full-time full-year earnings are considered, the gender gap in earnings was generally lower, and the ranking of countries somewhat differed (OECD, 2010). In this case, most of the countries mentioned above exhibited a female/male earnings ratio between 70 % and 75 % among the population with upper- or postsecondary educational attainment. The United States scored somewhat lower, while Australia and the United Kingdom were at the top of the distribution with 85 % and 77 %, respectively. International comparisons of gender gaps in full-time earnings, however, should be treated with caution, as female employment rates and selection effects in women's employment decisions vary considerably across countries (Olivetti & Petrongolo, 2008).

Origins of the Gender Pay Gap

Given comparable levels of ▶ education and skills, previous research has consistently identified ▶ occupational sex segregation as well as gender segregation in industries and workplaces,

▶ part-time work, and the undervaluation of women's work as contributing to the gender gap in hourly pay (for reviews, see Anderson, Forth, Metcalf, & Kirby, 2001; Metcalf, 2009; Rubery & Grimshaw, 2001). After taking all these factors into account, around 10 % of the gender pay gap in the UK and the US remains unexplained, which could result from direct ▶ gender discrimination in pay (for reviews, see Council of Economic Advisers, 1998; Metcalf, 2009).

In most countries, women, especially those working part-time, are highly concentrated in low-paying occupations and industries (Anderson et al., 2001). While most of the earnings difference is accumulated over the course of the career, men's concentration in quantitative degrees has been found to already have some impact on the gender pay gap for graduates early in their careers (Metcalf, 2009). Women's greater responsibilities for ▶ caregiving for children, sick, and elderly family members and for ▶ household work compared to men remain important underlying factors as these responsibilities increase their periods outside the labor market and in ▶ part-time work.

Consequences for Quality of Life

Existing research has documented mostly negative consequences of the gender earnings gap for ▶ economic well-being. Women, on average, have lower lifetime earnings and pension entitlements (Sigle-Rushton & Waldfogel, 2007). Women are more likely than men to be poor, defined as living on less than 50 % of the median income of the entire population (OECD, 2008). Gender differences in earnings over the life course, pensions, and ▶ poverty risks are smaller among skilled workers due to more continuous labor market participation and higher earnings of more educated women.

Evidence on the consequences of the gender earnings gap for ▶ subjective indicators or ▶ subjective well-being is more mixed. Most of this research has explored the association between subjective well-being and gender inequalities in labor market participation and ▶ work time. Several studies have found that periods out of the labor market are associated with lower life satisfaction for women compared to working part-time or full-time. The effects for ▶ part-time work are mixed and depend on the extent to which women have chosen their work hours freely or have been subject to ▶ caregiving constraints (Berger, forthcoming; Gash, Mertens, & Gordo, 2009).

Interlinked with gender gaps in earnings and labor market participation are gender differences in ▶ caregiving and ▶ leisure time. Women spend more time caring for children or another adult and report less leisure time than men in all OECD countries, albeit with wide cross-national variations (OECD, 2007, 2009). Gender differences in ▶ caregiving and ▶ household work are smaller among workers with higher levels of education and skills (Sullivan, 2000). Issues of perceived ▶ work-family fit and ▶ stress as a result of combining paid work and ▶ caregiving, however, seem to affect women and men to a similar extent in most countries (for review, see Bianchi & Milkie, 2010). Research on variations in perceived ▶ work-life balance and ▶ work-family fit has suggested that women and men with lower education and higher occupational status may be more affected, probably because their jobs and economic resources allow them less autonomy and genuine choice in how to combine paid and unpaid work.

Paths for Future Research

More theoretical and empirical research is needed on how reduced ▶ objective quality of life as a result of lower earnings of females compared to males and of unskilled compared to skilled workers translates into variations in ▶ subjective well-being. Increased collection of representative longitudinal data on both types of well-being indicators and on psychological concepts, such as expectations and aspirations, would allow a better understanding of the cognitive processes underlying correlations between ▶ objective quality of life and ▶ subjective indicators of well-being. Cross-national comparisons of the relationship between the gender earnings gap and subjective well-being indicators should

also explore how the institutional context moderates these associations by shaping people's aspirations.

Cross-References

- Caregiving
- Education
- Gross Hourly Earnings of Skilled Workers
- Household Work
- Leisure Time
- Life Satisfaction
- Objective Quality of Life
- Occupational Sex Segregation
- Part-Time Work
- Quality of Life (QOL)
- Stress
- Subjective Indicators
- Subjective Indicators of Well-Being
- Subjective Well-Being (SWB)
- Work Time
- Work-Family Fit
- Work-Life Balance

References

Anderson, T., Forth, J., Metcalf, H., & Kirby, S. (2001). *The gender pay gap: Final report to the women and equality unit*. London: The Cabinet Office.

Berger, E. M. (forthcoming). Happy Working Mothers? Investigating the Effect of Maternal Employment on Life Satisfaction. Economica.

Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family, 72*, 705–725.

Council of Economic Advisers. (1998). *Explaining trends in the gender wage gap*: CEA White Paper.

Gash, V., Mertens, A., & Gordo, L. R. (2009). *Women between part-time and full-time work: The influence of changing hours of work on happiness and life-satisfaction*. Berlin: Harriet Taylor Mill-Instituts für Ökonomie und Geschlechterforschung.

Metcalf, H. (2009). *Pay gaps across the equality strands: A review*. Manchester: Equality and Human Rights Commission.

OECD. (2007). OECD family database. Publication. Retrieved July 10, 2011. http://www.oecd.org/document/4/0,3746,en_2649_34819_37836996_1_1_1_1,00.html.

OECD. (2008). *Growing unequal? Income distribution and poverty in OECD countries*. Paris: Author.

OECD. (2009). *Society at a glance 2009*. Paris: Author.

OECD. (2010). *Education at a glance 2010*. Paris: Author.

Olivetti, C., & Petrongolo, B. (2008). Unequal pay or unequal employment? A cross-country analysis of gender gaps. *Journal of Labor Economics, 26*(4), 621–654.

Rubery, J., & Grimshaw, D. (2001). *The gender pay gap: A research review*. London: Equal Opportunities Commission.

Sigle-Rushton, W., & Waldfogel, J. (2007). Motherhood and women's earnings in Anglo-American, Continental European, and Nordic Countries. *Feminist Economics, 13*(2), 55–92.

Sullivan, O. (2000). The division of domestic labour: Twenty years of change? *Sociology, 34*(3), 437–456.

Female Genital Cutting

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Synonyms

Female genital mutilation (FGM); Female genital mutilation/cutting (FGM/C); FGC

Definition

In 1997, the World Health Organization (WHO) and United Nations (UN) agencies issued a joint statement that established the internationally recognized definition of FGC as all procedures that involve partial or total removal of the external female genitalia or other injury to the female genital organs for nonmedical reasons (WHO, 1997, p. 3).

FGC is a harmful traditional practice that adversely affects the health of millions of women and girls each year. There are no health benefits to FGC. FGC is a violation of the human rights of women and girls.

Description

Types

The WHO has identified four types of FGC. These classifications are widely recognized by international and civil society organizations:

1. Clitoridectomy: partial or total removal of the clitoris (a small, sensitive, and erectile part of the female genitals) and, in very rare cases, only the prepuce (the fold of skin surrounding the clitoris).
2. Excision: partial or total removal of the clitoris and the labia minora, with or without excision of the labia majora (the labia are "the lips" that surround the vagina).
3. Infibulation: narrowing of the vaginal opening through the creation of a covering seal. The seal is formed by cutting and repositioning the inner, or outer, labia, with or without removal of the clitoris.
4. Other: all other harmful procedures to the female genitalia for nonmedical purposes, for example, pricking, piercing, incising, scraping, and cauterizing the genital area (WHO, 2011).

Origin

The earliest evidence of FGC dates back 2,200 years (Mackie, 2000), yet there is no conclusive evidence to indicate where FGC first originated and how it was initially performed (Kouba & Muasher, 1985). Mackie theorizes that infibulation, the most severe form of FGC, began in the area that is present-day Egypt and Sudan. It is highly likely that it was associated with slavery, and the practice was a means to insure a woman's fidelity in imperial harems. As FGC became a prerequisite for marriage, which is still the case today, the practice spread (Mackie, 2000).

Terminology

The terminology used to describe FGC is fraught with debate. In the late 1990s, UN agencies moved away from the term "female circumcision," as it created confusion between FGC and male circumcision. Some UN agencies, such as the WHO, and nongovernmental organizations (NGOs) currently use the terminology "female genital mutilation" to emphasize the gravity of the act. Some survivors of cutting, especially social activists also refer to the practice as mutilation. Other UN agencies, for example, UNICEF and UNFPA, use the term "female genital mutilation/cutting" wherein the additional term "cutting" is intended to reflect the importance of using nonjudgmental terminology with practicing communities (WHO, 2008, p. 3). Additionally, other researchers and NGOs use the term "female genital cutting," as it more readily engages communities in productive open dialogues about the practice.

The term mutilation implies that communities carry out FGC with the intent to harm or disfigure. Such is not the intent of practicing communities. They see themselves as preparing their daughters for marriage and a good life; they are looking after their welfare. Scholars Mackie (2010) and Cristina Biccheri (2006) have argued that FGC is a social norm – a set of behavioral rules supported by a combination of empirical and normative expectations – that results in shared behaviors within a group. Those who perpetuate FGC do so because they believe they and their daughter will be sanctioned for not allowing this tradition. Thus, the consequences of being uncut – social approbation and isolation of their daughter – outweigh the dangers of the practice. FGC is considered a necessary step to enable girls to become respected women who are accepted by the community (WHO, 2009).

Current Practice

Each year, an estimated 3 million women and girls are subjected to FGC worldwide, and between 100 and 140 million women and girls are living with the effects of having been cut. FGC is mainly practiced in sub-Saharan Africa (from the west in Senegal to the east in Somalia), but it also exists in Asia and the Middle East. To a lesser extent, immigrant communities in industrialized countries, such as the United States, Europe, and Australia, also continue the practice it (WHO, 2008). The age at which a girl is cut, as well as the type of FGC practiced, varies from country to country. Generally, however, girls are cut anywhere from birth to 10 years old.

In countries where FGC is practiced, it is a traditional practice that is not exclusive to one ethnic group, social class, education level, and/or religious belief. While no specific religion prescribes FGC as a ritual, it is often incorrectly associated with Islam (Population Reference

Bureau, 2010). Muslims, Christians, and animists all practice FGC.

A traditional cutter, who is a central female figure in the village or community, performs FGC at the request of a girl's family (WHO, 2012). Tools used to perform FGC may include scissors, razor blades, or knives, and the conditions in which FGC is performed are often unsanitary (USDHS, 2009). An increasing trend, however, is the medicalization of FGC, transferring the practice from traditionally trained community members to formally trained healthcare providers. Parents who subject their daughter to FGC may think that there are decreased health risks if a health professional performs the procedure. This creates an implied approval of the practice. It is, however, still a violation of the human rights of women and girls and also contravenes medical ethics (WHO, 2010).

Female genital cutting is a social norm, and as such, it is a tradition that entire communities practice. This means that individuals – regardless of how they feel about the practice – cannot act alone to end it. Given that the practice has perpetuated for generations, communities do not question it. Oftentimes, a girl who is not cut is seen not only as unworthy for marriage, but she is also seen as unclean and promiscuous (Orchid Project, 2012).

Health Risks

There are no health benefits to FGC. Conversely, the procedure has short-and long-term consequences, harmful physically and psychologically. While pain and bleeding are almost universal for women and girls who have been cut, the extent of the health consequences and complications may also depend on the type of FGC practiced (WHO, 2008).

Immediate health consequences include but are not limited to severe pain, shock, hemorrhage, bacterial infections, urine retention, open sores in the genital region and injury to nearby genital tissue. Long-term consequences can include recurrent bladder and urinary tract infections, cysts, infertility, an increased risk of childbirth complications and newborn deaths, the need for later surgeries, particularly for women and girls who have been subjected to infibulation (WHO, 2008).

Human Rights

FGC is a violation of the human rights of women and girls. Most notably, FGC is a violation of the right to the highest attainable standard of health, the rights of children, the right to equal protection and nondiscrimination, the right to life if the practice results in death, and the right to family life, which includes reproductive rights (WHO, 2008).

Several international human rights instruments have been created by the United Nations and exist to protect the human rights of women and girls. These laws and treaties include the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights (ICESCR), the Convention on the Rights of the Child, and the Convention on the Elimination of All forms of Discrimination Against Women (CEDAW) (WHO, 2008).

In 1990, CEDAW issued General Recommendation No. 14, which asks governments in countries where FGC is practiced to take appropriate and effective measures with a view to ending the practice (CEDAW, 1990, recommendation a). These measures range from supporting awareness-raising efforts by civil society organizations to passing legislation that make the practice illegal. Eighteen countries in Africa and 12 industrialized countries have passed laws that criminalize FGC (Center for Reproductive Rights, 2009). While support from governments that prohibit FGC is a helpful step toward ending the practice, legal measures are only effective when combined with community education and awareness-raising initiatives in practicing communities (WHO, 2011). Laws criminalizing FGC in practicing countries have done little to diminish the practice (USDHS, 2009).

Human rights instruments have also been created on a regional level. The African Union (AU) adopted the African Charter on the Rights and Welfare of the Child in 1999, which specifically addresses harmful traditional practices in Article 21: Protection against

Harmful Social and Cultural Practices: 1. States Parties to the present Charter shall take all appropriate measures to eliminate harmful social and cultural practices affecting the welfare, dignity, normal growth and development of the child, and in particular, (a) those customs and practices prejudicial to the health or life of the child and (b) those customs and practices discriminatory to the child on the grounds of sex or other status (AU, 1990).

Abandonment

FGC has persisted for over two millennia, but Mackie claims that the practice will either continue indefinitely or end rapidly (2000, p. 254) because FGC is a requirement for marriage and exists among intra-marrying communities. He makes a compelling argument that draws parallels between FGC and foot-binding in China, a practice that lasted for over 1,000 years yet ended in a single generation through large-scale public pledges. The traits of both harmful traditional practices are remarkably similar: physical disfigurement of girls, requirement for marriage, and deeply entrenched social norms shared by intra-marrying communities (Mackie, 2000). Foot-binding in China ended relatively swiftly when large groups from intra-marrying communities joined natural-foot societies and publicly pledged to not bind their daughters' feet. This created a large enough marriage group, and thus rendered foot-binding no longer a marriage requirement.

The same phenomenon, which Mackie (2010) refers to as a social norm, began in Senegal in 1997, when the village of Diabougou hosted a large gathering attended by 13 connected communities to publicly abandon FGC and encourage other communities to follow suit (2000). Mackie writes that the commitment worked: public opinion continues to resolutely oppose FGC, and villagers say that deviators will be identified and sanctioned. This is the first unequivocal collective and contagious abandonment of FGC on record (2000, p. 257). As of 2012, 5,949 communities have publicly abandoned the practice in 77 similar declarations in Senegal, the Gambia, Guinea-Bissau, Guinea, Burkina Faso, Mauritania, Mali, Somalia, and Djibouti (Tostan, April, 2012, personal communication).

The declaring communities decided to abandon the practice after participating in the NGO Tostan's three-year Community Empowerment Program, which uses participatory approaches to facilitate dialogue among villagers on human rights, problem-solving, and health and hygiene. After learning about their human rights, such as the right to health, the villagers – most notably the women – began to raise awareness in neighboring communities about their newfound knowledge (Tostan, 2010).

The Donors Working Group (DWG) on female genital mutilation/cutting, which brings together UN agencies and governmental funders committed to the abandonment of FGC, has endorsed participatory, community-led programs that guide people to define the problems and solutions themselves. The DWG has noted that programs that have demonstrated success in promoting abandonment of FGC on a large-scale build on human rights and gender equality and are nonjudgmental and noncoercive. These programs focus on encouraging a collective choice to abandon FGC (DWG, 2008).

Despite the prevalence of FGC for the last two millennia, the issue has come into the public eye only in the last 15 years. Most notably, in 1998, Waris Dirie, a fashion model who was subjected to FGC as a child and subsequently escaped her homeland of Somalia prior to a forced marriage, wrote her best-selling autobiography, *Desert Flower*. Dirie's story received worldwide attention and brought the issue of FGC to the public's attention. Acclaimed Senegalese filmmaker, Ousmane Senbène, directed the highly acclaimed 2004 film, Moolaadé, about a mother in Burkina Faso who opposes subjecting her daughter to FGC.

Cross-References

- ▶ Human Rights
- ▶ Women's Empowerment
- ▶ Women's Health
- ▶ Women's Rights

References

Bicchieri, C. (2006). *The grammar of society: The nature and dynamics of social norms*. Cambridge, UK: Cambridge University Press.

Center for Reproductive Rights. (2009). *Female genital mutilation: Legal prohibitions worldwide fact sheet*. Retrieved from http://reproductiverights.org/sites/crr.civicactions.net/files/documents/Fact%20Sheet%20FGM%2002-2009.pdf.

Committee on the Elimination of Discrimination Against Women (CEDAW). (1990). *General recommendations made by CEDAW*. Retrieved from http://www.un.org/womenwatch/daw/cedaw/recommendations/recomm.htm.

Donors Working Group on Female Genital Mutilation/Cutting. (2008). *Platform for action towards the abandonment of? Female genital mutilation/cutting (FGM/C)*. Retrieved from http://www.fgm-cdonor.org/publications/dwg_platform_action.pdf.

Kouba, L. J., & Muasher, J. (1985). Female circumcision in Africa: An overview. *African Studies Review, 28*(1), 95–110.

Mackie, G. (1996). Ending footbinding and infibulation: A convention account. *American Sociological Review, 61*(6), 999–1017.

Mackie, G. (2000). Female genital cutting: The beginning of the end. In B. Shell-Duncan & Y. Hernlund (Eds.), *Female circumcision in Africa: Culture, controversy and change* (pp. 253–282). Boulder, CO: Lynne Rienner.

Orchid Project. (2012). Retrieved from http://orchidproject.org/category/about-fgc/why-fgc-happens/.

Organization of African Unity/African Union. (1990). *African charter on the rights and welfare of the child*. Retrieved from http://www.africa-union.org/official_documents/Treaties_%20Conventions_%20Protocols/a.%20C.%20ON%20THE%20RIGHT%20AND%20WELF%20OF%20CHILD.pdf.

Population Reference Bureau. (2010). *Female genital mutilation/cutting: Data and trends update 2010*. Retrieved from http://www.prb.org/Publications/Datasheets/2010/fgm2010.aspx.

Tostan. (2010). Retrieved from http://tostan.org/web/page/552/sectionid/547/parentid/547/pagelevel/2/interior.asp.

U.S. Department of Health and Human Services Office on Women's Health. (2009). *Female genital cutting fact sheet*. Retrieved from http://www.womenshealth.gov/publications/our-publications/fact-sheet/female-genital-cutting.pdf.

World Health Organization. (1997). *Female genital mutilation: A joint WHO/UNICEF/UNFPA statement*. Retrieved from http://www.childinfo.org/files/fgmc_WHOUNICEFJointdeclaration1997.pdf.

World Health Organization. (2008). *Eliminating female genital mutilation: An interagency statement. OHCHR, UNAIDS, UNDP, UNECA, UNESCO, UNFPA, UNHCR, UNICEF, UNIFEM, WHO*. Retrieved from http://whqlibdoc.who.int/publications/2008/9789241596442_eng.pdf.

World Health Organization. (2010). *Global strategy to stop health-care providers from performing female genital mutilation UNAIDS, UNDP, UNFPA, UNICEF, UNHCR, UNIFEM, WHO, FIGO, ICN, IOM, WCPT, WMA, MWIA*. Retrieved from http://whqlibdoc.who.int/hq/2010/WHO_RHR_10.9_eng.pdf.

World Health Organization. (2011). *An update on WHO's work on female genital mutilation (FGM): Progress report*. Retrieved from http://www.who.int/reproductivehealth/publications/fgm/rhr_11_18/en/index.html.

World Health Organization. (2012). *Fact sheet no. 241. Female genital mutilation*. Retrieved from http://www.who.int/mediacentre/factsheets/fs241/en/index.html.

Female Genital Mutilation (FGM)

▶ Female Genital Cutting

Female Genital Mutilation/Cutting (FGM/C)

▶ Female Genital Cutting

Female Poverty

▶ Gender and Poverty

Female Sexual Arousal Disorder (FSAD)

▶ Sexual Arousal Disorder

Female Sexual Function Index

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Synonyms

FSFI

Definition

The FSFI is a 19-item self-report questionnaire designed to measure ▶ sexual functioning in women. It assesses six domains of sexual function: sexual desire, sexual arousal, lubrication, orgasm, satisfaction, and pain (i.e., pain associated with vaginal penetration).

Description

The Female Sexual Function Index (FSFI) was developed to assess six domains of female sexual function (sexual desire, sexual arousal, lubrication, orgasm, satisfaction, and pain) and has become one of the most widely used measures of ▶ sexual functioning in women. The 19-item FSFI is easily understood, brief, and has been replicated in a number of languages. Items are scored on a five-point Likert scale with low scores indicating lower levels of sexual functioning. Fifteen items also include a zero score as a sixth response option indicating no sexual activity in the past 4 weeks. Rosen and colleagues (2000) described the development of the FSFI and listed the questions and response options from the original version. The FSFI was developed using a clinically diagnosed sample of women with female ▶ sexual arousal disorder and an age-matched control sample in order to provide a validated self-report instrument that would enable researchers to conduct much-needed outcome research on female sexuality. The FSFI may be used as a screening tool and a potential diagnostic aid. A cutoff total score of $\leq$ 26.55 has been proposed for diagnosis of female sexual dysfunction such that any woman who scores less than 26.55 should be considered at risk for ▶ sexual dysfunction (Wiegel, Meston, & Rosen, 2005).

Reliability

Published ▶ internal consistency of the six domains was high, with Cronbach's alpha values of 0.82 or greater, and ▶ test-retest reliability over 2–4 weeks was similarly high for all of the domains ($r = 0.79$–0.86), as well as for the total scale ($r = 0.88$) (Rosen et al., 2000). Reliability of the FSFI has been confirmed by more recent studies (Meston, 2003; Wiegel, Meston, & Rosen, 2005).

Validity

The FSFI was found to reliably discriminate between women with and without female sexual arousal disorder for all domains and the full scale score, and divergent validity was established using a test of ▶ marital adjustment (Rosen et al., 2000). Meston (2003) extended the validation of the FSFI to include women with either a primary clinical diagnosis of female orgasmic disorder or hypoactive sexual desire disorder. Wiegel et al. (2005) confirmed these findings and further broadened them to include women with ▶ dyspareunia/sexual pain disorders.

Revised Version

It has been suggested that there are some serious conceptual and statistical problems with the scoring procedures of the FSFI. Meyer-Bahlberg and Dolezol (2007) pointed out that the response option category of zero, which can be selected on 15 of the items to indicate that no sexual activity has taken place in the previous 4 weeks, is extremely problematic. Because lower scores on the FSFI indicate lower levels of sexual functioning, this zero category artificially polarizes item scores toward the sexually dysfunctional pole in women who have not recently been sexually active. There are many diverse reasons why a woman might not be sexually active in a 4-week period, such as lack of partner or illness; thus, this zero category biases a woman's responses toward the dysfunctional pole even when her answers are not necessarily due to sexual difficulties. This scoring is particularly problematic when using the FSFI with populations that have reduced levels of sexual activity, such as asexual women (i.e., women who do not experience sexual attraction), women with chronic illness, or partners of men with erectile dysfunction. Meyer-Bahlberg and Dolezol (2007) suggested that researchers use a revised version of the FSFI in order to avoid this artificial polarization of scores to the dysfunctional pole. The suggested changes have

been shown to significantly impact domain scores for samples that are less likely to be sexually active (Brotto, 2009; Meyer-Bahlberg & Dolezol, 2007), and additional revisions for improvement of the FSFI have since been proposed (Brotto, 2009).

Discussion

The FSFI is sensitive to therapeutically induced change and has become the "gold-standard" measure of female sexual function (Sand, Rosen, Meston, & Brotto, 2009). It has been translated into several languages and has been used as an outcome measure in a large number of studies. The revisions put forward by Meyer-Bahlberg and Dolezol (2007) and Brotto (2009) further increase the utility of the FSFI when investigating female sexual function in a wide range of populations. It should be noted that a diagnosis of sexual dysfunction in women should not rely solely on the FSFI. The FSFI contains a limited number of items assessing each domain and may not allow sufficient information to make a formal diagnosis without an assessment by a qualified clinician.

Cross-References

- ▶ Discriminant Validity
- ▶ Divergent Validity
- ▶ Dyspareunia
- ▶ Internal Consistency Reliability
- ▶ Marital Adjustment
- ▶ Reliability
- ▶ Sexual Arousal Disorder
- ▶ Sexual Dysfunction(s)
- ▶ Sexual Functioning
- ▶ Test-Retest Reliability

References

Brotto, L. A. (2009). The Female Sexual Function Index, Letter to the Editor. *Journal of Sex & Marital Therapy, 35*, 161–163.

Meston, C. M. (2003). Validation of the Female Sexual Function Index (FSFI) in women with female orgasmic disorder and in women with hypoactive sexual desire disorder. *Journal of Sex & Marital Therapy, 29*, 39–46.

Meyer-Bahlberg, H. F. L., & Dolezal, C. (2007). The Female Sexual Function Index: A methodological critique and suggestions for improvement. *Journal of Sex & Marital Therapy, 33*, 217–224.

Rosen, R., Brown, C., Heiman, J., Leiblum, S., Meston, C., Shabsigh, R., et al. (2000). The Female Sexual Function Index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. *Journal of Sex & Marital Therapy, 26*, 191–208.

Sand, M., Rosen, R., Meston, C., & Brotto, L. (2009). The Female Sexual Function Index (FSFI): A potential "gold-standard" measure for assessing therapeutically-induced change in female sexual function. *Fertility and Sterility, 92*, S129.

Wiegel, M., Meston, C., & Rosen, R. (2005). The Female Sexual Function Index (FSFI): Cross-validation and development of clinical cut-off scores. *Journal of Sex & Marital Therapy, 31*, 1–20.

Feminism

▶ Feminist Identity

Feminism, an Overview

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Synonyms

Feminist movement; Women's human rights; Women's liberation movement; Women's rights

Definition

Feminism is a social movement ideology that articulates gender oppression, connects it to the larger political arena, to structures and institutions, and mobilizes people for the eradication of gender-based oppression by advocating large-scale transformation of gender relations. Feminism highlights the place of gender socialization

in the systematically unequal distribution of power and resources in a society. A great number of the formal political characteristics with which this ideology is associated can be traced back to the nineteenth century in Western Europe and North America, where mass feminist social movements played a significant role in shaping the form and content of feminist politics.

Description

Feminism has several key features. First, feminism forwards a critical analysis of the relationship between *difference* and *inequality* through the theorization of gender role socialization. In other words, feminist thought deconstructs the process of gender socialization and analyzes the relationship of this process to the unequal distribution of power in world. Examples of this in feminist thought include conceptualizations of *masculinity* and *femininity* as modes of *performing* identity rather than as natural manifestations of biology – à la Simone de Beauvoir's famous suggestion that "one is not born, but rather becomes, a woman" (de Beauvoir, 1989, p. 267) and Judith Butler's deconstruction of *woman* as a biological identity through her analysis of gender performativity in queer drag performances and her proposal that (heterosexual) femininity is also a form of drag (Butler, 1999). Second, feminism places the valuation of *experience* as a useful and legitimate place from which to think and theorize about larger social, political, and economic processes. Examples here include feminist critiques of male-centered knowledge production, the debunking of the supposedly unbiased "truth" of scientific objectivity, and the questioning of the enlightenment doctrine of rationality as the preferred intellectual approach to meaningful assessment of the world. Feminism is a theory and a practice, involving the intellectual deconstruction of gender-based inequality and personal and collective politicization in resistance to the processes that sustain this inequality.

Feminism is often historicized according to three waves of politicization. The first wave corresponds to the concerted efforts of white middle-upper class women in nineteenth- and early twentieth-century Britain and North America to gain the vote for women and expand women's participation in political, educational, and professional vocations that were typically the preserve of men (Calixte, Johnson, & Motapanyane, 2010; Weedon, 1999). When Mary Wollstonecraft opined the state of womanhood in nineteenth-century England, she was forwarding a characteristically liberal feminist critique of her time. In her seminal text, *A Vindication of the Rights of Woman* first published in 1792, she argued for the equal (i.e., "same") treatment of boys and girls, particularly in education, basing the argument on the capacity of both sexes for reason. Wollstonecraft criticized the norms of femininity, which polarized the sexes by encouraging boys into the sciences and philosophy, while relegating girls to the domestic arts, thereby condemning them to a life of dependency and frivolity. The equal capacity to reason, argued Wollstonecraft, entitles all human beings to the right to develop their rational and moral capacities as a means to full personhood (Wollestonecraft, 1999 [1792]). Other first wave feminists extended arguments for equality to the vote, some using arguments of fundamental sameness (women as humans are entitled to full personhood) to argue women's suffrage on the basis of a kind of purifying difference (women as keepers of morality who would clean up politics if allowed to have a voice outside of the "private" sphere of the home).

Second-wave feminism emerged in conjunction with the mass social movements of the 1960s – particularly the antiwar and civil rights movements in the United States. Women participating in these movements began to articulate the sexism they experienced among their peers and built a body of literature that theorized gender-based discrimination and oppression. Manifestations of feminist thought and activism during the years of the second wave (late 1960s, 1970s, and 1980s) spanned a number of analytic approaches: liberal, socialist, radical, psychoanalytic, antiracist, postcolonial, and queer feminist theory, among others. Feminism also entered the sphere of intellectual production more formally

during the second wave with the introduction of Women's Studies university courses and programs. Second-wave feminism is recognizable by a set of key arguments and corresponding campaign issues:

1. Use of the concept *patriarchy* as (A) a tool to explain the dynamics of sexism and discrimination against women and (B) a method of articulating women's subordination as a universal condition – the idea that women suffer oppression as a social class (Weedon, 1999). The term patriarchy refers to a system of sociopolitical organization that privileges and empowers men to the detriment of women. Second-wave feminist campaigns that drew on the concept of patriarchy included protests condemning ▶ violence against women, collective organizing to open women's crisis and sexual assault shelters and resource centers, antipornography organizing, protests against beauty pageants, and resistance to the compulsory qualities of heterosexuality (Weedon, 1999) and the heteronormativity of marriage and family.
2. The struggle to institute ▶ women's rights of equal opportunity and access to all employment and educational sectors. Feminist activities reflecting this goal included efforts to establish formal provisions for ▶ gender equality. For instance, feminist efforts to construct employment equity and sexual harassment policies, to establish admission and representation quotas in education and politics, to pass the Equal Rights Amendment (Federal constitutional amendment in the USA that would make women equal to men under the law), to institute pay equity and other gender sensitive labor policies (parental leaves).
3. The analysis of women's inequality and exploitation in the labor market as an extension of their subordinate position in the patriarchal nuclear family. Related feminist activism called for equal pay for work of equal value, universal ▶ child care, and adequate conditions for (nonpunitive) maternity leave. It also involved women's antisexist activism through unions and the idea of wages for housework (BBC Broadcast Archive).
4. The argument that reproductive rights are crucial to women's equal citizenship, and that the right to control one's body is integral to full personhood. Political manifestations of this view took the form of pro-choice rallies, efforts to increase women's access to affordable and safe ▶ contraception, campaigns to ensure women's access to suitable ▶ health care, and to reproductive technology as a route to ▶ women's empowerment in the areas of sexuality and family.
5. The notion of gender-based oppression as an intersectional phenomenon (Crenshaw, 1989). This important theoretical contribution by African American feminists approaches the subjective experience of sexism as framed not just by womanhood but also by a host of other markers of identity, including "race"/ethnicity, age, class, ▶ sexual orientation, and ability. This conceptual framework has had a large influence on feminist theory since its official introduction in the United States through the work of legal theorist Kimberlé Crenshaw in the 1980s.

Third-wave feminism is a manifestation of the late twentieth century. It reflects the particularities of the historical period with which it is associated – economic globalization, increasingly porous borders between nations, and rapid technological advancement. Several features distinguish third-wave feminism from the types of feminist organizing we saw in the 1980s. Third-wave feminists make use of contemporary advances in technology – Internet, blogs, and do-it-yourself publishing (for instance, handwritten, photocopied magazines called zines that feature politicized opinion pieces and drawings/cartoons). Also, third-wave feminists are operating in an era of late capitalism characterized by rampant consumerism and ▶ precarious work (the shifting into part-time, insecure labor). They are the generation of feminists that has been most exposed to the successes and gains of feminism and also the generation that has had

the benefit of a Women's Studies education in university. Third-wave feminists aim to avoid the limitations of the second wave. To this end, they have attempted to integrate intersectionality and the importance of having an ethics of collaborating across difference into their political efforts.

Third-wave feminists are active in culture jamming – providing direct and creative criticisms of mass media and its representations of women. This includes fat activism and activism that challenges the ways in which corporations and related industries profit from women hating their bodies. Third-wave feminists criticize the way in which the hyper-consumerism promoted through popular culture has appropriated feminist ideas and depoliticized them. For example, the various ways in which the idea of "girl power" is used to sell products to young girls and women, while directing women towards rather than away from oppressive ▶ beauty norms. Third-wave feminists complicate the category "woman" through their work in and alliances with queer and transgender communities (Karaian & Mitchell, 2010). Transgendered identity has pushed feminists to further rethink essentialist ideas about what a woman is and about womanhood as a fixed identity tied to a particular biology. In many ways, third-wave feminists are continuing the work of second-wave feminists and using similar activist methods. In other ways, third-wave feminists are a symbol of their time – the tools they have at their disposal, the extent of exposure they have had to feminist gains and a feminist education, their familiarity with intersectionality as a framework and their openness to the messiness of identity – including an ability to be feminist without depending on the idea of "women" as a fixed category.

Third-wave feminists fit into a broader political agenda in which feminists remain attuned to the political, economic, and technological particularities of the twenty-first century in developing new ways of organizing collectively around shared political interests. Transnational feminist networks (Moghadam, 2005) and international collaborative efforts are revealing of feminist attempts to devise productive methods of mobilizing in the context of the contemporary realities of globalization.

Discussion

We should consider the central features of feminism outlined above in the context of a complicated movement history, in which the most recognized feminist agendas and spokespersons reflected the power relations of the society at large. For instance, in the United States, there was a great deal of contestation among feminists during the 1970s and 1980s over key policy demands advanced by the major women's movement organizations. Many of these debates had to do with the reality that the advocates with the most time, resources and access required to gain prominence in feminist activism, and politics were middle class white women. Mainstream feminist agendas advanced on behalf of "all women" often reflected the blind spots of women organizing on the basis of what they saw and understood from their own particular positions and experiences, to the exclusion of a vast number of other women whose experiences differed on the basis of class, "race," ethnicity, sexuality, and ability.

Feminists of color in North America can be credited for the important internal contestation, debate, and intervention they raised within feminism over more than three decades, as well as for the increasing prominence of *intersectionality* as a key feature of contemporary feminist theorizing. Intersectionality calls attention to the ways in which people's experiences are not only shaped by gender but also by "race," ethnicity, religion/spirituality, class, education, geographic location, age, ability, and sexual orientation, among other factors. Intersectionality speaks to these factors as inter-constituted, working and shaping one another simultaneously rather than as an accumulation of separate categories stacked in hierarchical order. Many feminists recognize that various forms of discrimination and injustice are connected and that feminist politics in its principles of ▶ equality, respect for ▶ human rights, and dignity must necessarily stand against all forms of oppression, not only those with an

obvious and direct gender element. For this reason, we have seen feminists involved in antiwar, antipoverty, antiracist, lesbian/gay/bisexual/transgender (LGBT)/queer advocacy, and environmental campaigns.

Speaking collectively across difference around a set of shared political interests remains a challenge in feminism. The question of who speaks for whom, of how one speaks, of marginalization, and exclusion in academic and activist feminism continues to be a point of discussion at feminist conferences, among activists and within Women's Studies programs and departments.

Cross-References

- ▶ Attitudes Toward Women
- ▶ Birth Control
- ▶ Body Image
- ▶ Child Care
- ▶ Contraception
- ▶ Dating Violence
- ▶ Egalitarianism
- ▶ Employment Discrimination
- ▶ Empowerment
- ▶ Equality
- ▶ Ethnic Minorities
- ▶ Family Planning
- ▶ Family-to-Work Conflict
- ▶ Female Genital Mutilation (FGM)
- ▶ Female - Male Earnings Ratio Among Skilled Workers
- ▶ Feminist Identity
- ▶ Gender and Education
- ▶ Gender and Health
- ▶ Gender and Poverty
- ▶ Gender and Wealth
- ▶ Gender Equity Index
- ▶ Gender Theory
- ▶ Gendered Work
- ▶ Masculinity-Femininity
- ▶ Occupational Sex Segregation
- ▶ Sex Workers
- ▶ Sexual Orientation
- ▶ Women's Employment
- ▶ Women's Empowerment
- ▶ Women's Health
- ▶ Women's Rights
- ▶ Women's Well-Being

References

BBC Broadcast Archive. *Second wave feminism, the campaign for women's rights in the 1970s: Selma James, our time is coming*. (BBC Programme, first broadcast on January 21, 1971). Retrieved July 19, 2011, from http://www.bbc.co.uk/archive/70sfeminism/10404.shtml

Butler, J. (1999). *Gender trouble: Feminism and the subversion of identity*. New York: Routledge.

Calixte, S. L., Johnson, J. L., & Motapanyane, J. M. (2010). Liberal, socialist and radical feminism: An introduction to three theories about women's oppression and social change. In N. Mandell (Ed.), *Feminist issues: Race, class, and sexuality* (5th ed., pp. 1–39). Toronto, ON: Pearson Canada.

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum*, 139–167.

De Beauvoir, S. (1989). *The second sex* (H. M. Parshley, Trans., Ed.). New York: Vintage Books.

Karaian, L., & Mitchell, A. (2010). Third-wave feminisms. In N. Mandell (Ed.), *Feminist issues: Race, class, and sexuality* (5th ed., pp. 63–86). Toronto, ON: Pearson Canada.

Moghadam, V. (2005). *Globalizing women: Transnational feminist networks*. Baltimore: The Johns Hopkins University Press.

Weedon, C. (1999). *Feminism, theory and the politics of difference*. Oxford, UK: Blackwell Publishers.

Wollestonecraft, M. (1999 [1792]). *A vindication of the rights of woman*. New York: Konemann.

Feminist

- ▶ Feminist Identity

Feminist Environmentalism

- ▶ Ecofeminism

Feminist Identity

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Synonyms

Feminism; Feminist; Feminist theory; Gender identity

Definition

Feminism is a social and collective identity that is a complex intersection of political and personal ideologies (Zucker & Bay-Cheng, 2010). People who identify as feminist share a sense of togetherness and community that accompanies a social movement, which "encompasses those who see gender as a major category of analysis, who critique female disadvantage, and who work to improve women's situation" (Rupp & Taylor, 1999, p. 364).

Description

Although not all feminists agree upon the definition of ▶ feminism nor upon feminist strategies or practices, as a collective identity, feminists share a consciousness about women's distinct and shared disadvantages within patriarchal society, the political nature of everyday life (hence the slogan, the personal is political), and link such everyday experiences to larger social injustices (Rupp & Taylor, 1999). As a social, collective, and political identity, feminists are dedicated explicitly to calling attention to the existence, injustice, and negative impacts of sexism (hooks, 2000). Collins (2001) found the way women view feminism as an identity is organized in four categories: (1) a set of values, (2) a process to make meaning, (3) a contextual identity, and (4) an underlying construct. Identifying as a feminist is not so much an exercise of agency but rather a choice within a social and political context wherein there is no choice – living in a patriarchal society (Butler, 1997). Consequently, feminist identity is "presently discussed more as an accomplishment rather than an essence, substance, or category" (Schwandt, 2007, p. 144). A ▶ feminist identity is continuously revised and renegotiated in light of ongoing shifts within social and political terrain. Zucker and Bay-Cheng (2010) articulate that "exposure to positive information about feminism - whether through formal education or personal relationships - is predictive of explicit self-identification" (p. 1905). Such a process to self-identification as a feminist is consistent with Bourdieu's (2000) work in which he argues "as people pass through various cultural fields and institutions, and come under their influence, they are disposed to regard those values, discourses, ideals and ways of doing things as natural and to some extent, universal" (cited in Brady & Schirato, 2011, p. 27). According to Zucker and Bay-Cheng (2010), there are "qualitative differences" between people who claim a feminist identity and those who do not (including those who support gender equality but do not adopt or claim a feminist identity – referred to as non-labelers). One such difference is connected to well-being.

There is a strong body of research that demonstrates experiencing sexism is stressful, impacts negatively upon well-being, and results in a number of negative health outcomes (Zucker & Bay-Cheng, 2010). As outlined by Zucker and Bay-Cheng (2010), for example, sexism has been found to increase hypertension (Krieger, 1990), premenstrual symptoms (Landrine, Klonoff, Gibbs, Manning, & Lund, 1995), functional limitations that may lead to physical disabilities (Pavalko, Mossakowski, & Hamilton, 2003), physical illness including nausea and headaches (Goldenhar, Swanson, Hurrell, Ruder, & Deddens, 1998), and both binge drinking and cigarette smoking (Zucker & Landry, 2007). Moreover, Zucker and Bay-Cheng (2010)

explain, "one of the most extensively researched aspects of sexism relates to the objectification of women and its detrimental impact on the psychological functioning of girls and women across the life course" (p. 1897), for example, unrealistic ideals of body size that lead to self-damaging behaviors (Moradi, Dirks, & Matteson, 2005). However, the critical consciousness that is inherent to a feminist identity is beneficial to women's well-being (Zucker & Bay-Cheng, 2010). Yakushko (2007) found women with moderate or strong feminist values had higher levels of well-being than those with traditional values. For example, one health domain that is positively influenced by a feminist identity is women's sexuality (Schick, Zucker, & Bay-Cheng, 2008). Overall, believing that "a woman's worth lies in many domains" positively influences health and well-being (Zucker & Bay-Cheng, 2010, p. 1898). Those who claim a feminist identity, however, are not solely focused on the well-being of individual women. They actively support and work for women's collective well-being. That is, "emphasis on the equal worth and rights of all people and its collective orientation to social justice suggest that feminists are strongly motivated by the value of univeralism and less so by the individualist, self-enhancing values of achievement and power or support for social hierarchy" (Zucker & Bay-Cheng, p. 1911). Thus, feminists are concerned with both individual and collective well-being, which is reflected in the social, cultural, and collective nature of the identity.

Cross-References

- ▶ Feminism
- ▶ Ideology

References

Bourdieu, P. (2000). *Pascalian mediations* (R. Nice, Trans.). Cambridge: Polity Press.

Brady, A., & Schirato, T. (2011). *Understanding Judith Butler*. Thousand Oaks, CA: Sage.

Butler, J. (1997). *The psychic life of power*. Stanford, CA: Stanford University Press.

Collins, D. (2001). *Feminist identity*. Unpublished doctoral dissertation. Virginia Polytechnic Institute and State University. Blacksburg, Virginia.

Goldenhar, L. M., Swanson, N. G., Hurrell, J. J., Jr., Ruder, A., & Deddens, J. (1998). Stressors and adverse outcomes for females construction workers. *Journal of Occupational Health Psychology, 3*, 19–32.

Hooks, B. (2000). *Feminist theory: From margin to center*. Boston: South End Press.

Krieger, N. (1990). Racial and gender discrimination: Risk factors for high blood pressure? *Social Science & Medicine, 30*, 1273–1281.

Landrine, H., Klonoff, E. A., Gibbs, J., Manning, V., & Lund, M. (1995). Physical and psychiatric correlates of gender discrimination. *Psychology of Women Quarterly, 19*, 473–492.

Moradi, B., Dirks, D., & Matteson, A. V. (2005). Role of sexual objectification experiences and internalization of standards of beauty in eating disorder symptomatology: A test and extension of objectification theory. *Journal of Counselling Psychology, 52*, 420–428.

Pavalko, E. K., Mossakowski, K. N., & Hamilton, V. J. (2003). Does perceived discrimination affect health? Longitudinal relationships between work discrimination and women's physical and emotional health. *Journal of Health and Social Behavior, 43*, 18–33.

Rupp, L. J., & Taylor, V. (1999). Forging feminist identity in an international movement: A collective identity approach to Twentieth-Century Feminism. *Journal of Women in Culture and Society, 24*(2), 363–386.

Schick, V. R., Zucker, A. N., & Bay-Cheng, L. Y. (2008). Safer, better sex through feminism: The role of feminist ideology in women's sexual well-being. *Psychology of Women's Quarterly, 32*, 225–232.

Schwandt, T. (2007). *The Sage dictionary of qualitative inquiry* (3rd ed.). Thousand Oaks, CA: Sage.

Yakushko, O. (2007). Do feminists feel better about their lives? Examining patterns of feminist identity development and women's subjective well-being. *Sex Roles, 57*, 223–234.

Zucker, A. N., & Bay-Cheng, L. Y. (2010). Minding the gap between feminist identity and attitudes: The behavioural and ideological divide between feminists and non-labellers. *Journal of Personality, 78*(6), 1895–1924.

Zucker, A. N., & Landry, L. J. (2007). Embodied discrimination: The relations of sexism and distress to women's drinking and smoking behaviors. *Sex Roles, 56*, 193–203.

Feminist Identity in College Women

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Definition

Feminist identity is support of equal rights for women and men. It may include private and public acceptance of the feminist label.

Description

College is where many young women are exposed to feminist viewpoints, or support for ▶ gender equality, for the first time in much depth. This may occur through experiences in women's studies or other courses as well as interactions with other students. As a consequence, some college women develop a feminist identity. Research finds that feminist identification is related to various aspects of women's well-being.

Models of Feminist Identity

Researchers have varied in how they conceptualize and measure feminist identity. At least three different approaches can be noted. One of them is the stage model, which posits that women transition through a series of stages toward a feminist identity (see Downing Hansen, 2002). Although there are different stage models, they similarly characterize feminist identity as a series of phases that begin with becoming aware of gender inequalities in society (revelation stage) and cumulating in a commitment to feminist ▶ collective action (commitment stage). A second approach considers the different components that may underlie feminist identity (e.g., Liss & Erchull, 2010). Some examples include centrality of being a woman to one's identity, gender-egalitarian attitudes, awareness of sexism in society, and publicly presenting oneself as a feminist (see Leaper & Arias, 2011, for a review). Finally, a third approach focuses on particular types of feminism (Henley, Meng, O'Brien, McCarthy, & Sockloskie, 1998). Some examples of different feminisms include radical feminism (emphasis on social-structural roots of sexism) and womanist feminism (emphasis on intersection of race and gender). The relations between feminist identity and well-being may depend on the way that feminism was measured. When relevant, this issue will be noted in the subsequent review.

Predictors of Feminist Identity in College Women

Feminists are regularly demonized in media (see Anderson, 2010, for a review). This may contribute to the paradox that there are many women who endorse gender equality but do not personally identify as feminists (Leaper & Arias, 2011; Liss, O'Connor, Morosky, & Crawford, 2001; Williams & Wittig, 1997; Zucker, 2004). Studies indicate that many women associate the feminist label with attributes such as being ugly, lesbians, or man-haters (e.g., Leaper & Arias, 2011; Liss et al., 2001; Williams & Wittig, 1997). However, these are unfounded stereotypes. Feminist and nonfeminist college women do not appear to differ in attractiveness or ▶ sexual orientation (Rudman & Phelan, 2007). Also, feminist women actually appear *less* likely than nonfeminist women to hold negative ▶ attitudes toward men (Anderson, Kanner, & Elsayegh, 2009).

What are some of the characteristics that differentiate women who identify as feminists from those who do not? Not surprisingly, feminists are more likely than nonfeminists (a) to have positive evaluations of the feminist movement (Myaskovsky & Wittig, 1997), (b) to endorse gender-egalitarian rights and roles (e.g., Leaper & Arias, 2011; Liss & Erchull, 2010), and (c) to believe that the current gender system is unfair

(Liss & Erchull, 2010). Women's reported experience with sexual harassment and other forms of ▶ gender discrimination is also correlated with feminist self-identification (Ayres, Friedman, & Leaper, 2009; Fischer, Tokar, Mergl, Good, Hill, & Blum, 2000; Nelson et al., 2008; Zucker, 2004). Learning about the women's movement may increase the likelihood that a woman will identify as a feminist. Women are more likely to identify as feminists after enrolling in a women's studies course or if they knew someone who was feminist (Leaper & Arias, 2011; Myaskovsky & Wittig, 1997; Nelson et al., 2008; Williams & Wittig, 1997).

Feminist Identity and Psychological Health in College Women

Overall, research suggests that feminist identity is positively related to psychological health (see Anderson, 2012). This research has considered various facets of well-being, such as ▶ body image, functioning in sexual-romantic relationships, and coping with sexist events.

Body Image. Research is mixed on whether feminist identification is related to body image. Some research has been able to find relations between feminist identification and body image scales (Cash, Ancis, & Strachan, 1997; Fingeret & Gleaves, 2004) whereas others have not (Dionne, Davis, Fox &, Gurevich, 1995). One possible reason for the different results is that there may be moderating variables that explain the relation between feminist identity and body image. One study found that feminist identification was related to traditional feminine norms about appearance and self-objectification, and these variables in turn predicted body shame and negative eating attitudes (Hurt et al., 2007). Research that does not take these variables into account may not find evidence of the association between feminism and body image.

Feminist identity may be able to protect women from the negative impact of experiences with sexism on body image. Sabik and Tylka (2006) found that for women in more advanced stages of feminist identity development, experiences with sexist discrimination were not related to disordered eating habits. However, they did find evidence of an association between sexist events and disordered eating for other women. Overall, the research suggests at least moderate associations between feminist identity and body image.

Sexual-Romantic Relationships. One might think at first that feminist identity would have a negative impact on young women's heterosexual romantic and sexual relationships. One of the most common stereotypes about feminists is that they are not interested in romance or sex with men. Not surprisingly, college women who view feminism as being incompatible with romance were less likely to support feminism (Rudman & Fairchild, 2007). Women who endorse traditional gender attitudes were found to report greater investment in romantic relationships, such as a drive to get married, than did women who endorsed feminist attitudes (Blakemore, Lawton, & Vartaian, 2005). However, research also suggests that feminist identity in college women is related to several positive aspects of romantic and sexual relationships. Feminist identity is related to higher expectations for equality within a romantic relationship such as balanced power between romantic partners, shared household and childcare duties, and equal career support (Yoder, Perry, & Saal, 2007). Feminism is also related to positive outcomes in terms of women's sexuality. Feminists may be more likely to initiate sex that they want and reject sexual advances that they do not want (Schick, Zucker, & Bay-Cheng, 2008; Yoder et al., 2007). Research further finds that young feminist women may be more consistent and assertive in their safe-sex practices (Bay-Cheng & Zucker, 2007; Yoder et al., 2007). Finally, feminist women reported higher ▶ sexual satisfaction and greater relationship satisfaction than did nonfeminist women (Rudman & Phelan, 2007).

Coping with Sexism. Another way that feminism can impact young women is through moderating the association between experiences with sexism and well-being. This is an important issue as experiences with sexism have significant negative associations with psychological health (Swim, Hyers, Cohen, & Ferguson, 2001). For example, Moradi and Subich (2002) found

a stronger relation between recent experiences with sexism and psychological ▶ distress among women who were in the passive acceptance stage of feminist identity development.

Identifying as feminist may influence how women cope when faced with sexist discrimination. Research has found that college-aged women who identified as feminists were more likely to report they would use ▶ social support in response to discrimination (Leaper & Arias, 2011). Social support may serve as a buffer from the negative effects on well-being that often result from experiencing sexism (Foster, 2000). Additionally, those who did not identify as feminists were less likely to report confronting a perpetrator when faced with personal discrimination (Ayres et al., 2009). Identifying as a feminist might lead women to be more likely to use approach-oriented coping strategies aimed at reducing future discrimination.

Young feminists may also be more likely to engage in feminist activism in response to perceived societal sexism or personal experiences with sexist discrimination (Yoder, Tobias, & Snell, 2011). Although participating in rallies, educating others about feminist issues, and other forms of activism are not easy, they can have significant positive impact on young women's social, emotional, and cognitive development (Klar & Kasser, 2009). Feminist activism may also lead to higher personal agency, ▶ self-efficacy, and instrumentality we see in young feminists compared to nonfeminists (Eisele & Stake, 2008; Saunders & Kashubeck-West, 2006).

Moderators. Although feminist identity is generally associated with positive well-being in college women, there are a few notable moderators of these relationships. First, when considering the relation between feminist identity and well-being, it may be important to take into account the woman's stage of feminist identity development. Research based on stage models suggests possible differences between those in the early revelation stage and those at the later active commitment stage. Well-being may temporarily decrease as women enter the revelation stage – as a result of the feelings of betrayal, ▶ anger, and guilt that accompanies becoming aware of sexism – and then increase during later stages of feminist identity development (Yoder et al., 2011).

Second, the impact of feminist identity on well-being may depend on available ▶ social support for expressing this identity. Some young women may experience disapproval from family and friends when they present themselves as feminists (Hercus, 1999). Consequently, they may feel like they have to suppress their anger about sexism and hide their feminist identity. On many college campuses, however, women can usually find other like-minded women (and men) who support feminism.

Finally, it is important to explore why feminist identity may be related to positive outcomes for college women. As discussed above, there may be outcome-specific moderators that explain these associations. For example, feminist identity may lead to a rejection of traditional standards of feminine beauty, which may then lead to healthier body image (Hurt et al., 2007). Feminist identity may also impact well-being through more general influences. Feminist identity may encourage pride in one's identity as female and thus a strong connection with other women (Carpenter & Johnson, 2001).

Conclusions

Some caveats regarding the research on feminist identity and well-being are worth noting. First, the research covered in this essay was conducted using largely college-age, white, heterosexual female samples. Thus, it remains unclear to what extent we can generalize these findings to other women. Models of feminist identity that include an awareness of racial inequalities are a better predictor of psychological well-being for women of color than are traditional models of feminist identity (Boisner, 2003). Furthermore, different factors may predict women of color's adoption of the feminist label (Myaskovsky & Wittig, 1997; Robnett, Anderson, & Hunter, 2012). ▶ Sexual orientation is also related to women's feminist identification. Sexual-minority women may be more likely to identify as feminist and to engage in feminist

activism (Friedman & Ayres, in press). Unfortunately, little research has examined how various social identities impact feminist identity among college women. Future research should include more diverse populations.

In conclusion, research suggests that feminist identity can be beneficial for young women's development. Thus, efforts should be taken to encourage women to adopt a feminist identity or feminist beliefs. College courses could educate students about feminist issues and attempt to dispel negative stereotypes. In addition, parents, professors, and university and community leaders who identify as feminist could do so publicly to encourage the development of feminist identity as well. Lastly, colleges could offer more opportunities to get involved in feminist activism in the school or community. With these steps, more college students may benefit from the positive effects of feminist identification.

Cross-References

- Anger
- Attitudes
- Body Image
- Collective Action
- Distress
- Gender Discrimination
- Gender Equality
- Self-Efficacy
- Sexual Orientation
- Sexual Satisfaction
- Social Support

References

Anderson, K. J. (2010). *Benign bigotry: The psychology of subtle prejudice*. New York: Cambridge University Press.

Anderson, K. J. (2012). Is feminism good for women? In P. K. Lundberg-Love, K. L. Nadal, & M. A. Paludi (Eds.), *Women and mental disorders* (pp. 1–15). Santa Barbara, CA: Praeger.

Anderson, K. J., Kanner, M., & Elsayegh, N. (2009). Are feminists man haters? Feminists' and nonfeminists' attitudes toward men. *Psychology of Women Quarterly, 33*, 216–224.

Ayres, M. M., Friedman, C. K., & Leaper, C. (2009). Individual and situational factors related to young women's likelihood of confronting sexism in their everyday lives. *Sex Roles, 61*(7), 449–460.

Bay-Cheng, L. Y., & Zucker, A. N. (2007). Feminism between the sheets: Sexual attitudes among feminists, nonfeminists, and egalitarians. *Psychology of Women Quarterly, 31*, 157–163.

Blakemore, J. E. O., Lawton, C. A., & Vartaian, L. R. (2005). I can't wait to get married: Gender differences in drive to marry. *Sex Roles, 53*, 327–335.

Boisner, A. D. (2003). Race and women's identity development: Distinguishing between feminism and womanism among black and white women. *Sex Roles, 49*, 211–218.

Carpenter, S., & Johnson, L. E. (2001). Women derive collective self-esteem from their feminist identity. *Psychology of Women Quarterly, 25*, 254–257.

Cash, T. F., Ancis, J. R., & Strachan, M. D. (1997). Gender attitudes, feminist identity, and body images among college women. *Sex Roles, 36*, 433–447.

Dionne, M., Davis, C., Fox, J., & Gurevich, M. (1995). Feminist ideology as a predictor of body dissatisfaction in women. *Sex Roles, 33*, 277–287.

Downing Hansen, N. (2002). Reflections on feminist identity development: Implications for theory, measurement, and research. *The Counseling Psychologist, 30*, 87–95.

Eisele, H., & Stake, J. (2008). The differential relationship of feminist attitudes and feminist identity to self-efficacy. *Psychology of Women Quarterly, 32*, 233–244.

Fingeret, M. C., & Gleaves, D. H. (2004). Sociocultural, feminist, and psychological influences on women's body satisfaction: A structural modeling analysis. *Psychology of Women Quarterly, 28*, 370–380.

Foster, M. D. (2000). Positive and negative responses to personal discrimination: Does coping make a difference? *The Journal of Social Psychology, 140*, 93–106.

Fischer, A. R., Tokar, D. M., Mergl, M. M., Good, G. E., Hill, M. S., & Blum, S. A. (2000). Assessing women's feminist identity development: Studies of convergent, discriminant, and structural validity. Psychology of Women Quarterly, 24, 15–29.

Friedman, C. K., & Ayres, M. M. (in press). Feminist activism among young sexual-minority and heterosexual women. *Journal of Homosexuality*.

Henley, N. M., Meng, K., O'Brien, D., McCarthy, W. J., & Sockloskie, R. J. (1998). Developing a scale to measure the diversity of feminist attitudes. *Psychology of Women Quarterly, 22*, 317–348.

Hercus, C. (1999). Identity, emotion, and feminist collective action. *Gender and Society, 13*, 34–55.

Hurt, M. M., Nelson, J. A., Turner, D. L., Haines, M. E., Ramsey, L. R., Erchull, M. J., et al. (2007). Feminism: What is it good for? Feminine norms and objectification as the link between feminist identity and clinically relevant outcomes. *Sex Roles, 57*, 355–363.

Klar, M., & Kasser, T. (2009). Some benefits of being an activist: Measuring activism and its role in psychological well-being. *Political Psychology, 30*, 755–777.

Leaper, C., & Arias, D. M. (2011). College women's feminist identity: A multidimensional analysis with implications for coping with sexism. *Sex Roles, 64*, 475–490.
Liss, M., & Erchull, M. J. (2010). Everyone feels empowered: Understanding feminist self-labeling. *Psychology of Women Quarterly, 34*, 85–96.
Liss, M., O'Connor, C., Morosky, E., & Crawford, M. (2001). What makes a feminist? predictors and correlates of feminist social identity in college women. *Psychology of Women Quarterly, 25*, 124–133.
Moradi, B., & Subich, L. M. (2002). Perceived sexist events and feminist identity development attitudes: Links to women's psychological distress. *The Counseling Psychologist, 30*, 44–65.
Myaskovsky, L., & Wittig, M. A. (1997). Predictors of feminist social identity among college women. *Sex Roles, 37*, 861–883.
Nelson, J. A., Liss, M., Erchull, M. J., Hurt, M. M., Ramsey, L. R., Turner, D. L., et al. (2008). Identity in action: Predictors of feminist self-identification and collective action. *Sex Roles, 58*, 721–728.
Robnett, R. D., Anderson, K. J., & Hunter, L. E. (2012). Predicting feminist identity: Associations between gender-traditional attitudes, feminist stereotyping, and ethnicity. *Sex Roles, 67*, 143–157.
Rudman, L. A., & Fairchild, K. (2007). The F word: Is feminism incompatible with beauty and romance? *Psychology of Women Quarterly, 31*, 125–136.
Rudman, L. A., & Phelan, J. E. (2007). The interpersonal power of feminism: Is feminism good for romantic relationships? *Sex Roles, 57*, 787–799.
Sabik, N. J., & Tylka, T. L. (2006). Do feminist identity styles moderate the relation between perceived sexist events and disordered eating? *Psychology of Women Quarterly, 30*, 77–84.
Saunders, K. J., & Kashubeck-West, S. (2006). The relations among feminist identity development, gender-role orientation, and psychological well-being in women. *Psychology of Women Quarterly, 30*, 199–211.
Schick, V. R., Zucker, A. N., & Bay-Cheng, L. (2008). Safer, better sex through feminism: The role of feminist ideology in women's sexual well-being. *Psychology of Women Quarterly, 32*, 225–232.
Swim, J. K., Hyers, L. L., Cohen, L. L., & Ferguson, M. J. (2001). Everyday sexism: Evidence for its incidence, nature, and psychological impact from three daily diary studies. *Journal of Social Issues, 57*, 31–55.
Williams, R., & Wittig, M. A. (1997). I'm not a feminist, but ... : Factors contributing to the discrepancy between pro-feminist orientation and feminist social identity. *Sex Roles, 37*, 885–904.
Yoder, J. D., Perry, R. L., & Saal, E. I. (2007). What good is a feminist identity? Women's feminist identification and role expectation for intimate and sexual relationships. *Sex Roles, 57*, 365–372.
Yoder, J. D., Tobias, A., & Snell, A. F. (2011). When declaring "I am a Feminist" matters: Labeling is linked to activism. *Sex Roles, 64*, 9–18.
Zucker, A. N. (2004). Disavowing social identities: What it means when women say, "I'm not a feminist, but...". *Psychology of Women Quarterly, 28*, 423–435.

Feminist Movement

▶ Feminism, an Overview

Feminist Stereotypes

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Definition

Stereotypes generalize and attribute a fixed and limited set of oversimplified characteristics to a person or group of people. Stereotypes mask the nuance and complexity of socialization, identity, and human behavior. Stereotypes tend to have a negative connotation, often making the stereotyped subject to derogatory humor and insults, but stereotypes can also be positive, raising the stereotyped onto pedestals that can have detrimental effects on the subjects of such adulation. Stereotypes often, but not always, rely on the mistaken idea that individuals can be neatly placed into certain group categories on the basis of biology or phenotypical features and that the outward appearance of the body, by which people are thus classified, is a sufficient indicator of a person's capacities, interests, and character.

Examples of negative stereotypes include the idea that blondes are dumb, that black men are dangerous and are inclined towards criminal behavior, that the British have bad teeth, and that white people cannot dance. The notion that people of Asian heritage have an innate proclivity to and are superior in the sciences and

mathematics, that blacks are innately superior in sports, and that Asian women or all women have nimble hands exemplify positive stereotypes.

Feminist stereotypes are distorted generalizations commonly applied to a perceived or self-identified individual feminist or group of feminists. Feminist stereotypes can be circulated by individuals who view themselves as different from feminists or by feminists within their own social and political circles.

Description

It is worthwhile to note that feminist stereotypes can refer to widely held stereotypes about feminists that circulate in popular discourse and mass media but also to stereotypes that feminists hold of one another. Negative stereotypes of feminists have historically outweighed positive stereotypes and have often had the effect of discouraging women from claiming the label despite their support and commitment to feminist principles. The controversy and confusion in North American popular discourse surrounding ▶ feminism, feminists, and what they stand for has meant that certain generalized characteristics applied to feminists can simultaneously function as negative and positive stereotypes. For instance, the assumption that feminists are assertive may carry a negative or positive connotation depending on the context in which one frames this statement.

Feminists have drawn a link between gender-based stereotyping and sexism, viewing the former as a symptom of the latter. Such an analysis situates gender-based stereotyping (both negative and positive) in the context of a society saturated with sexist patriarchal values, in which the dignity, equality, and liberty of women are systematically undermined. Associations between the dissemination of stereotypes and stereotyped behavior have also been made in feminist literature and psychology (Guerrilla Girls, 2003) – another likely reason that women who do not see themselves in the prominent feminist stereotypes around them may be dissuaded from embracing the political term that these stereotypes obfuscate. Examples of negative stereotypes of feminists include the idea that feminists are all lesbians, man-hating, antifamily, selfish, radical, angry, assertive, ugly, bra-burning, and humorless FemiNazis (Guerrilla Girls, 2003). Positive stereotypes of feminists characterize them as independent, intelligent, open-minded, assertive, of strong character, fearless, ambitious, career-oriented, and sexually liberated (Roy, Weibust, & Miller, 2007). Feminist stereotypes among feminists hark back to debates during the 1970s and 1980s regarding the characteristics that constitute a "real" feminist. Can a woman who chooses the heterosexual nuclear family model be a real feminist? Do real feminists wear short skirts, high heels, and makeup, and for whom? Are real feminists antiporn? The categorical and polarizing premise of such debates sometimes gave way to separatist feminist positions that could easily be mischaracterized as antimale. For instance, it was not unusual for Ti-Grace Atkinson, a well-known second-wave feminist, and a few of her feminist contemporaries to refer to men as "the enemy" in their writings, though men may well have been standing in for the broader idea of patriarchy in their analysis (Atkinson, 1974). Some feminist stereotypes, such as the stone butch, can appear to be substantiated in feminist and queer communities, but it is important to note that their reenactment here holds an intelligent complexity and subcultural nuance that the derogatory conventional stereotype fails to carry.

Discussion

Feminist stereotypes can also be considered in the context of feminist reclamations of derogatory terms that have been used to negatively stereotype feminists. Bitch, dyke, hag, witch, spinster (Weedon, 1999), and slut are all examples of labels that have a history of negatively stereotyping feminists and which have undergone contemporary reinvention and reclamation in feminist culture. Take Bitch Magazine for example, an American publication featuring feminist cultural criticism whose subtitle proclaims it "better beach reading" (Bitch Media,

publishers of Bitch magazine) or Inga Muscio's *Cunt: A Declaration of Independence* (2002). Both exemplify proud and empowered reclamations of designations that have historically been used to denigrate and induce shame in women.

Cross-References

- ▶ Attitudes Toward Women
- ▶ Body Image
- ▶ Feminist Identity
- ▶ Gender Inequalities
- ▶ Gender Role Attitudes
- ▶ Gender-Role Beliefs
- ▶ Masculinity-Femininity

References

Atkinson, T. G. (1974). *Amazon odyssey*. New York: Links Books.
Bitch Media (publishers of Bitch magazine). Retrieved on June 20, 2011, from http://bitchmagazine.org/
Girls, G. (2003). *Bitches, bimbos and ballbreakers: The Guerrilla Girls' illustrated guide to female stereotypes*. New York: Penguin Books.
Muscio, I. (2002). *Cunt: A declaration of independence* (2nd ed.). New York: Seal Press.
Roy, R. E., Weibust, K. S., & Miller, C. T. (2007). Effects of stereotypes about feminists on feminist self-identification. *Psychology of Women Quarterly, 31*, 146–156.
Weedon, C. (1999). *Feminism, theory and the politics of difference*. Oxford, UK: Blackwell Publishers.

Feminist Theory

- ▶ Feminist Identity
- ▶ Gender Theory

Fen

- ▶ Wetland(s)

Ferrans and Powers Quality of Life Index

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Synonyms

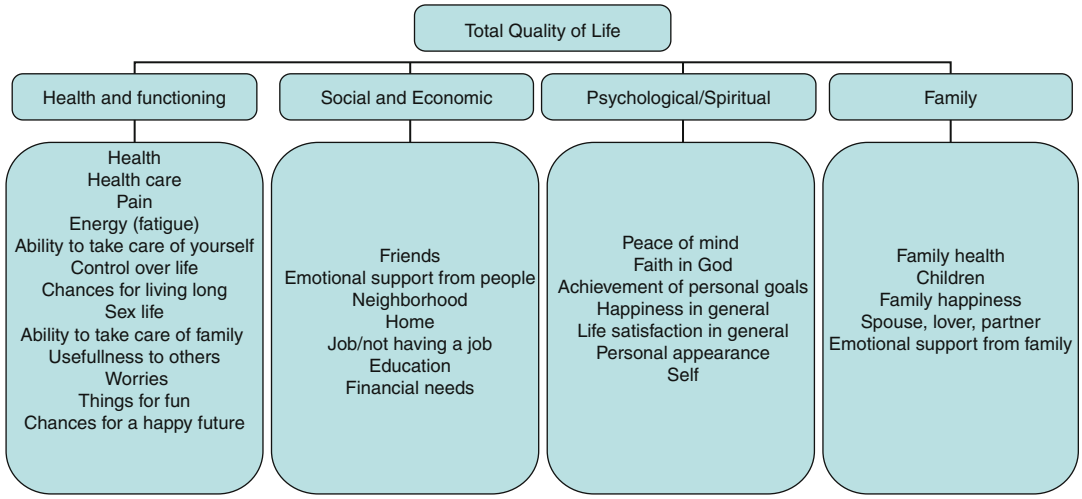
QLI

Definition

Ferrans and Powers Quality of Life Index (QLI) is based on the definition of quality of life (QOL) developed by Carol Estwing Ferrans (1990, p.15), "a person's sense of well-being that stems from satisfaction or dissatisfaction with the areas of life that are important to him/her." This definition addresses the fact that people's values cause various aspects of life to have varying impact on their QOL. In addition, satisfaction is used to define the construct because it suggests an evaluation based upon comparison of desired and actual conditions of life. This definition is subjective in nature, focusing on experience rather than the conditions of life. The QLI was derived from an extensive literature review, measurement based on patient interviews, and a factor analysis (Ferrans & Powers, 1985, 1992).

Description

The QLI consists of two parts: the first measures satisfaction with various aspects of life, and the second measures importance of those same aspects. Importance ratings are used to weight the satisfaction responses so that scores reflect the respondents' satisfaction with the aspects of



Ferrans and Powers Quality of Life Index, Fig. 1 Ferrans and powers quality of life index (QLI)

life they value. Items that are rated as more important have a greater impact on scores than those of lesser importance. The method used for weighing items of life satisfaction by importance was a novel approach in QOL assessment by the time QLI was developed. Scores are calculated for overall QOL and QOL in four domains: health and functioning, social and economic, psychological/spiritual, and family (Ferrans & Powers, 1985, 1992; Ferrans, 1996).

A number of versions of the QLI have been developed for use with various disorders and the general population: arthritis, cancer, cardiac, chronic fatigue syndrome, diabetes, dialysis, epilepsy, generic, kidney transplant, liver transplant, multiple sclerosis, nursing home, pulmonary, spinal cord injury, and stroke versions. A common set of items forms the basis for all versions, and items pertinent to each disorder have been added to create the illness-specific versions. Scores for all versions have the same range, which facilitates comparisons of findings across different versions. General population data are available for interpretive purposes. The QLI website contains everything necessary to use the questionnaire (www.uic.edu/orgs/qli).

The QLI is a copyrighted instrument, but there is no charge for nonprofit use of the QLI (see website). Dr. Carol Ferrans can be contacted directly at the University of Illinois at Chicago regarding licensing agreements.

Administration and Scoring

The QLI is appropriate for use as a self-administered questionnaire or an interview format. The instrument takes approximately 10 min for self-administration. No special training is required.

Five scores are produced that measure QOL overall and QOL in four domains: health and functioning, social and economic, psychological/spiritual, and family (Fig. 1). The items are scored on a six-point Likert scale from "very satisfied" to "very dissatisfied" on the satisfaction part and from "very important" to "very unimportant" on the importance part. The total score ranges from 0 to 30, with the high scores denoting better QOL. The scores are calculated by adjusting the satisfaction responses according to the importance of the response of the same item. The highest scores are produced by combinations of high-satisfaction and high-importance responses, whereas the lowest are produced by high-dissatisfaction and high-importance responses. As the scores are products of both the satisfaction and importance

responses, they should offset the influence of individual values.

Languages

The QLI was originally developed in English but is translated into many other languages: Arabic, Chinese (simplified), Chinese (Taiwan), Danish, French, Hebrew, Italian, Lithuanian, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Thai, and Turkish.

Reliability, Validity, and Sensitivity

The QLI is a well-established instrument and shows satisfactory psychometric properties regarding reliability, validity, and sensitivity.

Reliability

Internal Consistency Reliability Internal consistency reliability for the QLI (total scale) was supported by Cronbach's alphas ranging from.73 to.99 across 48 studies. Cronbach's alphas for the four subscales have been published in 24 studies, which have provided support for internal consistency of the subscales. Alphas ranged from.70 to.94 for the health and functioning subscale and from.78 to.96 for the psychological/spiritual subscale. For the social and economic subscale, alphas were acceptably high in 23 studies, ranging from.71 to.92. For the family subscale, alphas were acceptably high in 19 studies, ranging from.63 to.92. (See website for references).

Temporal (Stability) Reliability For the total scale, support for temporal reliability was provided by test-retest correlations of .87 with a 2-week interval and .81 with a 1-month interval (Ferrans & Powers, 1985) and by correlations of .78 with a 3- to 4-week interval (Rustoen, Moum, Wiklund, & Hanestad, 1999). Temporal reliability was also supported by test-retest correlations with a 2-week interval for all five scores: overall QOL (r = .79), health and functioning (r = .72), social and economic (r = .68), psychological/spiritual (r = .76), and family (r = .69) (Dougherty, Dewhurst, Nichol, & Spertus, 1998).

Validity

Content Validity Content validity of the QLI is supported by the fact that items were based both on an extensive literature review of issues related to QOL and on the reports of patients regarding the quality of their lives (Ferrans & Powers, 1985). Support for content validity also was provided by an acceptably high rating using the content validity index (Oleson, 1990).

Construct Validity Convergent validity of the QLI was supported by strong correlations between the overall (total) QLI score and Campbell, Converse, and Rodgers' (1976) measure of life satisfaction. The correlations (Pearson's r) varied between 0.61 and 0.93 across studies (Ferrans & Powers, 1985, 1992; Ferrans, 1990; Bliley & Ferrans, 1993; Anderson & Ferrans, 1997).

Further evidence for construct validity was provided by factor analysis. Factor analysis revealed four dimensions underlying the QLI: health and functioning, social and economic, psychological/spiritual, and family. The factor analytic solution explained 91% of the total variance. Factor analysis of the four primary factors revealed one higher order factor, which represented QOL (Ferrans & Powers, 1992). Rannestad, Eikeland, Helland, and Qvarnström (2001) subsequently performed factor analysis with a group of 111 Norwegian women with gynecological disorders and 173 women from the general population, which supported the original four factors.

Construct validity was also supported using the contrasted groups approach. Subjects were divided into groups on the basis of self-reported levels of pain, depression, and success in coping with stress. Subjects who had less pain and less depression or who were coping better with stress had significantly higher overall (total) QLI scores (Ferrans, 1990). The contrasted groups approach also was used to assess the construct validity of the social and economic subscale. It was found that those who had higher incomes had significantly higher QOL scores on the social and economic subscale (Ferrans & Powers, 1992). Women suffering from urinary incontinence have been found to score significantly lower on

overall QLI and all four domains compared to continent women, and the scores decrease in accordance to the degree incontinence is perceived as a problem (Rannestad & Skjeldestad, 2011).

Sensitivity to Change/Responsiveness

Responsiveness to change (sensitivity) of the QLI has been demonstrated in 27 published intervention studies. In these studies, QLI scores changed significantly over time, when compared before and after an experimental intervention or therapeutic treatment (see website). However, in another study, the QLI was very stable over time in spite of an intervention (Rustoen, Wiklund, Hanestad, & Moum, 1998).

Discussion

One of the strengths with the QLI is that it measures both satisfaction and importance regarding various aspects of life and comprises as such the individual's values. When facing an inevitable health problem, a person's internal standards, values, and priorities may change in such a way that her QOL is maintained (Schwartz & Rapkin, 2004; Schwartz, Andresen, Nosek, & Krahn, 2007). A certain condition can be perceived as a huge problem by some, but as a minor issue by others. Since a health problem may affect a wide range of daily life situations, it cannot be fully understood without taking into consideration all aspects of life, as well as what is regarded as important for the individual. On the other hand, the relationship between satisfaction and importance is not clear. In a Norwegian study describing what domains in QOL were considered most or least important by patients with newly diagnosed cancer (Rustoen, Wahl, & Burchardt, 2000), the patients fluctuated somewhat during a 9-month period in terms of what was most important to them. Overall, the most unstable items tended to be less important over time. In addition, results showed significant differences in the importance of QOL domains according to gender, age, educational level, and cohabitation (Rustoen et al.). Further testing is recommended regarding the relationship between importance and satisfaction and using the QLI.

References

Anderson, J. S., & Ferrans, C. E. (1997). The quality of life of persons with chronic fatigue syndrome. *Journal of Nervous and Mental Disease, 185*(6), 359–367.

Bliley, A. V., & Ferrans, C. E. (1993). Quality of life after coronary angioplasty. *Heart and Lung, 22*(3), 193–199.

Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life: Perceptions, evaluations, and satisfactions*. New York: Russell Sage.

Dougherty, C. M., Dewhurst, T., Nichol, W. P., & Spertus, J. (1998). Comparison of three quality of life instruments in stable angina pectoris: Seattle Angina Questionnaire, Short Form Health Survey (SF-36), and Quality of Life Index-Cardiac Version III. *Journal of Clinical Epidemiology, 51*(7), 569–575.

Ferrans, C. E. (1990). Development of a quality of life index for patients with cancer. *Oncology Nursing Forum, 17*(3 Suppl), 15–19. discussion 20–21.

Ferrans, C. E. (1996). Development of a conceptual model of quality of life. *Scholarly Inquiry for Nursing Practice, 10*(3), 293–304.

Ferrans, C. E., & Powers, M. J. (1985). Quality of life index: Development and psychometric properties. *ANS Advanced in Nursing Science, 8*(1), 15–24.

Ferrans, C. E., & Powers, M. J. (1992). Psychometric assessment of the quality of life index. *Research in Nursing & Health, 15*(1), 29–38.

Oleson, M. (1990). Content validity of the quality of life index. *Applied Nursing Research, 3*(3), 126–127.

Rannestad, T., Eikeland, O. J., Helland, H., & Qvarnström, U. (2001). The quality of life in women suffering from gynecological disorders is improved by means of hysterectomy. Absolute and relative differences between pre- and postoperative measures. *Acta Obstetricia et Gynecologica Scandinavica, 80*(1), 46–51.

Rannestad, T., & Skjeldestad, F. E. (2011). Ferrans and powers' quality of life index applied in urinary incontinence research–a pilot study. *Scandinavia Journal of Caring Sciences, 25*(2), 410–416.

Rustoen, T., Moum, T., Wiklund, I., & Hanestad, B. R. (1999). Quality of life in newly diagnosed cancer patients. *Journal of Advanced Nursing, 29*(2), 490–498.

Rustoen, T., Wahl, A., & Burchardt, C. (2000). Changes in the importance of quality of life domains after cancer diagnosis. *Scandinavian Journal of Caring Sciences, 14*(4), 224–231.

Rustoen, T., Wiklund, I., Hanestad, B. R., & Moum, T. (1998). Nursing intervention to increase hope and quality of life in newly diagnosed cancer patients. *Cancer Nursing, 21*(4), 235–245.

Schwartz, C. E., Andresen, E. M., Nosek, M. A., & Krahn, G. L. (2007). Response shift theory: Important implications for measuring quality of life in people with

disability. *Archives of Physical Medicine & Rehabilitation, 88*(4), 529–536.
Schwartz, C. E., & Rapkin, B. D. (2004). Reconsidering the psychometrics of quality of life assessment in light of response shift and appraisal. *Health and Quality of Life Outcomes, 2*, 16.

Fertility and Religion Among US Hispanics

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Synonyms

Birthrate and US Hispanics; Latino/Latina religion and fertility; Religiosity and fertility among US Hispanics; Religiousness

Definition

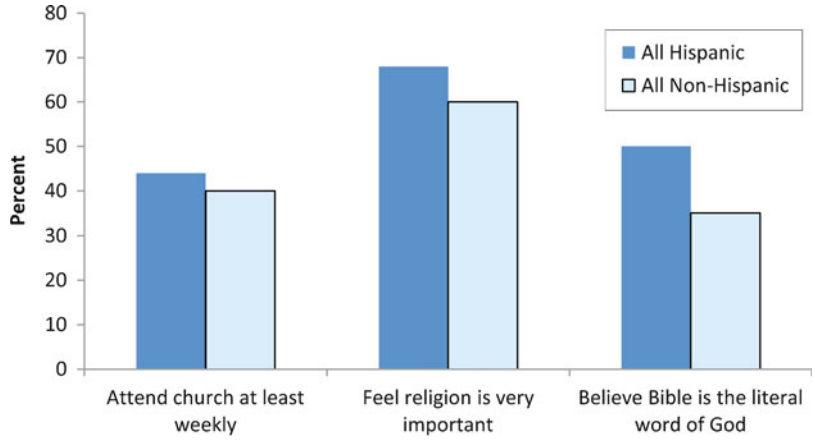
Fertility is a term used in population studies to describe the number of births to women in a population. In this context fertility does *not* refer to the biological ability to have children, as the term is used in everyday life. Religion includes both religious denomination (which religious community people belong to) and religiousness. *Religiousness* is defined by two criteria. The first is the intensity of participation in religious practices, either individually (e.g., praying alone) or in groups (e.g., attending religious services). The second is the strength of religious beliefs and their importance, usually measured by asking people directly how strong their religious beliefs are and how important they are to them.

The population of interest here is Hispanic Americans. *Hispanic* describes people descending from Spanish-speaking peoples in Latin America or Europe and is often used interchangeably with the term *Latino* or *Latina*. Being Hispanic is considered an ethnic, not a racial, identity, and thus Hispanic people may also be described as black, white, or another race.

Description

Differences in fertility between the Hispanic (or Latino) population and the non-Hispanic population of the United States have received a great deal of attention. Nearly one quarter of births in the USA in 2010 were to Hispanic mothers (Martin et al., 2012). Much of the difference in fertility is due to the composition of the Hispanic population. For example, the Hispanic population is younger on average than the non-Hispanic population and thus more likely to be of childbearing age and therefore have more children. Measuring fertility with the total fertility rate (TFR), a measure of fertility that accounts for the ages of women in the population, does not eliminate differences, however. In 2011, the TFR for the USA as a whole was about 1.89 children per woman, while the TFR for Hispanic women was about 2.23 children per woman (Hamilton, Martin, & Ventura, 2012). Much, but not all, of this difference in fertility rates is explained by factors such as education and income (Bean & Tienda, 1987). Many have suggested that the remaining differences in fertility may be influenced by ▶ cultural values.

Religion is a key cultural institution that may affect fertility. Differences in religious denomination are very strong for the Hispanic and non-Hispanic populations in the USA. In 2006, 68 % of US Hispanics were Catholic, compared to 20 % of non-Hispanics (Pew Hispanic Center & Pew Forum on Religion and Public Life, 2007). Studies of religion and fertility propose several ways that religion may affect fertility. Specific religious rules about practices such as contraception and abortion may affect fertility rates, as well as more general religious teachings about values and norms related to gender roles, the importance of family, etc. (Goldscheider & Uhlenberg, 1969). Religious rules and ▶ norms of this type could cause differences in fertility by religious denomination.



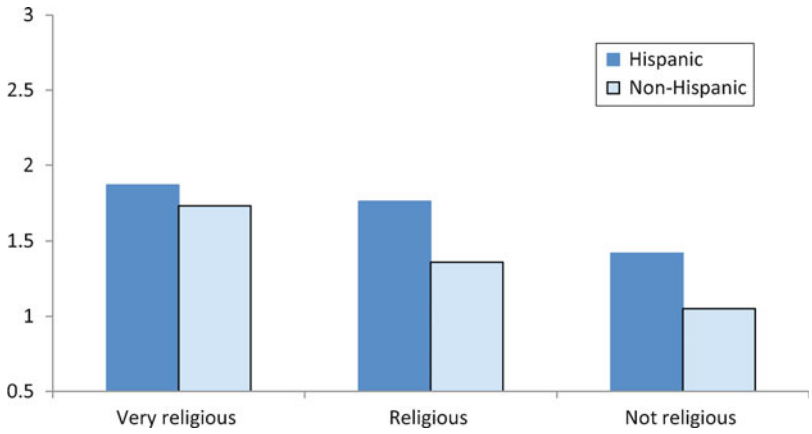
Fertility and Religion Among US Hispanics, Fig. 1 Measures of religiousness (Source: Pew Hispanic Center & Pew Forum on Religion and Public Life, 2007)

Religiousness (or religiosity) has also been found to be related to fertility, although the exact reasons for this are not clear. Some have even argued that religiousness is more relevant to fertility in the USA today than specific norms or institutional enforcement (Hayford & Morgan, 2008). Studies have found that higher religious activity (such as attending religious services more often) is associated with higher fertility (Marcum, 1981) and that considering religious beliefs more important is associated with higher fertility (Zhang, 2008; Hayford & Morgan, 2008). The relationship between religiousness and fertility may change as social context changes, however. One study found that in Spain, when there were more practicing Catholics than nonpracticing Catholics, there was no significant difference in family size for the two groups. But as nonpracticing Catholics began to outnumber practicing Catholics, the practicing Catholics began to have significantly larger families (Adsera, 2006).

There are some notable differences in religiousness between Hispanics and non-Hispanics in the USA, as shown in Fig. 1 (Pew, 2007). A slightly larger proportion of Hispanics go to church at least weekly (44 % vs. 40 %), a somewhat larger proportion of Hispanics report that religion is very important to them (68 % vs. 60 %), and a much larger proportion believe that the Bible is the literal word of God (50 % vs. 35 %). It is interesting that this last difference is not simply a result of denominational differences. Just among Catholics, 49 % of Hispanic Catholics believe the Bible is the literal word of God, while only 19 % of non-Hispanic white Catholics believe this (Pew).

The relationship between religion and fertility, or religiousness and fertility, may be different for different ethnic groups. For white, married women in the USA, fertility of Catholics and non-Catholics converged in the post-baby boom era (Westoff & Jones, 1979). But the total population, including Spanish-speaking women, showed larger differences between Catholics and non-Catholics, although there was still a trend toward convergence (Mosher & Hendershot, 1984). Comparing Catholics and non-Catholics within ethnic groups in the 1980s, for non-Hispanics there was no difference in fertility between Catholics and non-Catholics, but for Hispanics there was a large difference between Catholics and non-Catholics (Mosher, Johnson, & Horn, 1986).

Teen pregnancy is an issue of particular concern, since births at young ages can negatively affect both mothers' and children's well-being. Births to teenage girls are more likely among the Hispanic population than the population as a whole. The birthrate for Hispanic teens (ages 15–19) was 49 births per 1,000 girls in 2011, compared to a teen birthrate for the total population of 31 births per 1,000 girls (Hamilton et al., 2012). Little is known, however, about the relationship between religion and fertility among Hispanic teens. Of teens who are *not* sexually



Fertility and Religion Among US Hispanics, Fig. 2 Children ever born, by religiousness (Source: Westoff & Marshall, 2010)

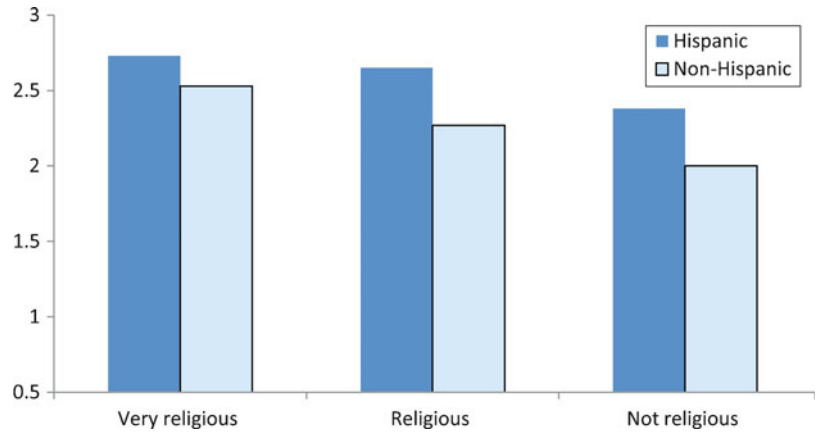
active, Hispanic teens are less likely than the general population to cite religious or moral considerations as the main reason they abstain from sexual activity: 25 % of Hispanic teens versus 35 % of all teens give this reason for abstinence (Ryan, Franzetta, & Manlove, 2005). Hispanic teens who *are* sexually active are somewhat less likely to use contraception than the teen population as a whole (Ryan et al., 2005). This behavior has not been linked to religion, however.

A recent examination of Hispanic fertility and religion (Westoff & Marshall, 2010) shows that Hispanic women have higher realized and expected fertility in each of the major religious denominations, compared to non-Hispanic women, but that the pattern across denominations is similar for Hispanics and non-Hispanics. Protestant women have and expect to have slightly more children than Catholic women, and women belonging to other denominations have and expect to have fewer children than either Protestants or Catholics. There is an important difference between the fertility of Hispanic and non-Hispanic women reporting no religious denomination, however. Hispanic women with no religion have the most children ever born, while non-Hispanic women with no religion have the fewest.

Comparing Hispanic and non-Hispanic fertility for Catholics only, there is still a difference in fertility between the two groups: Hispanic Catholic women have had more children and expect to have more children. But the overall pattern of the relationship between fertility and religiousness is similar for both groups, whether religiousness is measured by frequency of church attendance or importance of religion. Women who attend church more have more children ever born and expect to have more children. The same is true for women who say religion is more important. This relationship holds for both Hispanic and non-Hispanic Catholics, as shown in Figs. 2 and 3. Still, for each given level of religiousness, Hispanic women have had more children and expect to have more children.

Do other factors account for the relationship between religion, religiousness, and fertility among Hispanics? Is this relationship different for Hispanics and non-Hispanics? As noted earlier, factors such as education and income have been found to be related to both ethnic and religious groups. They may therefore affect the relationship between ethnicity and religion. In fact, when women's education, poverty status, marital status, race, foreign-born status, and age are taken into account in addition to their ethnicity, religion, and religiousness, religious denomination and religiousness are still associated with fertility only for non-Hispanic women, *not for Hispanic women* (Westoff & Marshall, 2010).

In summary, religious denomination and fertility are associated to some extent among Hispanic women in the United States, and religiousness and fertility are more strongly



Fertility and Religion Among US Hispanics, Fig. 3 Children expected, by religiousness (Source: Westoff & Marshall, 2010)

associated among Hispanic women. However, when socioeconomic characteristics of Hispanic women are taken into account, this association is much weaker. Currently, factors such as education and income matter more for Hispanic fertility than do religious factors. This is true even though for non-Hispanic women, associations between religious denomination and fertility, as well as religiousness and fertility, are still important, even when socioeconomic characteristics are taken into account.

Cross-References

► Fertility Plans/Intentions

References

Adsera, A. (2006). Marital fertility and religion in Spain, 1985 and 1999. *Population Studies*, *60*, 205–221. Retrieved from http://www.princeton.edu/~adsera/rpst168451.pdf

Bean, F. D., & Tienda, M. (1987). *The Hispanic population of the United States*. New York: Russell Sage.

Goldscheider, C., & Uhlenberg, P. R. (1969). Minority group status and fertility. *American Journal of Sociology*, *74*, 361–372. Retrieved from http://www.jstor.org/stable/2776057

Hamilton, B. E., Martin, J. A., Ventura, S. J. (2012). *Births: Preliminary data for 2011* (National Vital Statistics Reports Vol. 61, No. 5). Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_05.pdf

Hayford, S. R., & Morgan, S. P. (2008). Religiosity and fertility in the United States: The role of fertility intentions. *Social Forces, 86*, 1163–1188. doi:10.1353/sof.0.0000.

Marcum, J. P. (1981). Explaining fertility differences among U.S. Protestants. *Social Forces*, *60*, 532–543. Retrieved from http://www.jstor.org/stable/2578449

Martin, J. A., Hamilton, B. E., Ventura, S. J., Osterman, M. J. K., Wilson, E. C., Mathews, M. S. (2012). *Births: Final data for 2010* (National Vital Statistics Reports Vol. 61, No. 1). Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_01.pdf

Mosher, W. D., & Hendershot, G. E. (1984). Religion and fertility: A replication. *Demography*, *21*, 185–191. Retrieved from http://www.jstor.org/stable/2061038

Mosher, W. D., Johnson, D., & Horn, M. (1986). Religion and fertility in the United States: The importance of marriage patterns and Hispanic origin. *Demography*, *23*, 367–379. Retrieved from http://www.jstor.org/stable/2061436

Pew Hispanic Center & Pew Forum on Religion and Public Life. (2007). *Changing faiths: Latinos and the transformation of American religion* (Publication No. 461). Washington, DC: Pew Research Center. Retrieved from http://www.pewforum.org/uploadedfiles/Topics/Demographics/hispanics-religion-07-final-mar08.pdf

Ryan, S., Franzetta, K., & Manlove, J. (2005). *Hispanic teen pregnancy and birth rates: Looking behind the numbers*. (Child Trends Research Brief No. 2005–01). Retrieved from http://www.childtrends.org/Files/HispanicRB.pdf

Westoff, C. F., & Jones, E. F. (1979). The end of "Catholic" fertility. *Demography*, *16*, 209–217. Retrieved from http://www.jstor.org/stable/2061139

Westoff, C. F., & Marshall, E. A. (2010). Hispanic fertility, religion, and religiousness in the U.S. *Population Research and Policy Review, 29*, 441–452. doi:10.1007/s11113-009-9156-3.

Zhang, L. (2008). Religious affiliation, religiosity, and male and female fertility. *Demographic Research, 18*, 233–261. doi:10.4054/DemRes.2008.18.8.

Fertility Plans/Intentions

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Definition

Fertility intentions indicate the plan to have a child, a plan that is confronted with individuals' current situation.

Description

In modern societies, effective contraception is now widely available, enabling couples to decide how many children they wish to have and when to have them. Fertility choices and preferences are thus a key factor in the study of reproductive behaviors. Transposed to the field of fertility, Ajzen's "theory of planned behaviors" (1991) posits that intentions are an important antecedent of subsequent behavior. Intentions themselves depend on the individual's situation (living arrangement, economic condition, etc.), and on the more general context (e.g., political climate), both of which evolve over time. It is worth noting that the concept of intended family size differs from that of desired family size: the latter measures what people "want, desire, would like to do," while the former is what people "plan to do," given the current situation (Miller & Pasta, 1995). For instance, one may like to have a child, but given the lack of a suitable partner or due to health problems, he/she might not intend to have it.

The role of fertility intentions in the study of reproductive behavior has been generally recognized. A classic distinction is made between "positive" intentions (the intention to have a/another child in the future) and "negative" intentions (the intention to have no (further) children). Converging results have been obtained, showing that in contemporary societies negative intentions are a very good indicator of future behaviors, while positive intentions tend to overestimate observed fertility (Westoff & Ryder, 1977). Bongaarts (2001) pinpoints certain factors that may cause couples to revise their fertility plans upward, such as an unplanned birth, the death of a child, or the desire to have a child of a particular sex. Conversely, reasons such as delay in leaving parental home, delayed entry into childbearing, fecundity problems, or activities that compete with fertility plans may have the opposite effect. These last factors are most frequent in developed countries, explaining why expected family size is generally overestimated in these regions of the world. Hence, numerous studies have sought to identify the role of expected fertility (in terms of both number of children and birth timing) in predicting subsequent reproductive behavior and the individual characteristics that influence the formation and/or fulfillment of childbearing intentions.

Collecting information on fertility intentions through surveys is not a straightforward task. Often the intention to have a child within the next 3 years is collected. It is possible to overcome some of the problems associated with the surveying of intentions by limiting the question about childbearing intention to a foreseeable time period. As a matter of fact, answers to general questions about fertility intention, such as "how many children do you intend to (ever) have," are more likely to capture a social norm (i.e., the number of children individuals think they should have), rather than what individuals realistically plan to have. Such general questions therefore lead to answers where intentions and social norms may be confounded. On the other hand, questions on intentions that cover an overseeable time period and that therefore are "in close temporal proximity to the prospective behaviour" (Ajzen & Fishbein, 1973, p. 49) are generally considered to be the more suitable predictors of actual behavior. They offer the possibility to draw inferences from a person's current status about conditions that are crucial in her/his decision process to have a (nother) child. Particular attention should be also given to the possible answers provided by such questions. Fertility intentions are often surveyed

using a yes/no question or, alternatively, by considering the degree of certainty attached to them. In the latter case, the respondent is asked to rate his/her fertility plans on a point scale ranging from "definitely yes" to "definitely no." The use of a point scale is generally preferred in order to acknowledge the variety of intentions people may have regarding reproductive plans. Finally, another widely debated aspect relates to the importance of measuring and considering both partners' fertility intentions within a couple. However, various scholars have shown that there is a considerable concordance between partners' plans, especially for births subsequent to the first.

Cross-References

▶ Contraception
▶ Fertility Rate

References

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes, 50*, 179–211.
Ajzen, I., & Fishbein, M. (1973). Attitudinal and normative variables as predictors of specific behaviors. *Journal of Personality and Social Psychology, 27*(1), 41–57.
Bongaarts, J. (2001). Fertility and reproductive preferences in post-transitional societies. *Population and Development Review, 27*, 260–281.
Miller, W. M., & Pasta, D. J. (1995). Behavioural intentions: Which ones predict fertility behaviour in married couples? *Journal of Applied Social Psychology, 25*(6), 530–555.
Westoff, C. F., & Ryder, N. B. (1977). The predictive validity of reproductive intentions. *Demography, 14*(4), 431–453.

Fertility Rate

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Synonyms

Birth rate; Natality; Reproductivity of births

Definition

Fertility is the actual reproductive performance of a population as measured by the number of live births. Stillbirths, fetal deaths, and abortions are not included in the measurement of fertility.

Description

Fertility of a population is measured by various indexes known as fertility rates, which are conventionally calculated for the female population, although they can be calculated for the male population as well. For the sake of simplicity, fertility rates described in this section refer to women only.

Fertility rates can be classified into two groups: (1) those based on vital statistics registration and (2) those based on the census or surveys (Shryock et al., 1973). The two groups of rates are described in turn.

Fertility Rates Based on Vital Statistics Registration

The simplest and most popular measure of fertility that is based on vital statistics is the *crude birth rate* (*CBR*). It is defined as the total number of live births per 1,000 population. More specifically, it refers to the total number of live births in a given geographic area over a given period – usually 1 year – divided by the midyear population of the same geographic area during the same period. Usually, the number of births (numerator) is obtained from vital statistics, while the population (denominator) is obtained from a census or a survey. However, as the name implies, it is a crude measure because it refers to the total population rather than the population that is "exposed to the risk" of reproduction (i.e., women of childbearing ages). Also, it does not take into account the age structure of the population, which can have a large effect on the number of births.

The *general fertility rate* (*GFR*) takes some of the crude birth rate limitations into account by including only the number of women of childbearing ages (i.e., 15–44 or 15–49) in the denominator. The GFR is defined as the total

number of live births in a given geographic area over a given period per 1,000 women of childbearing ages at midyear. However, the GFR, while more refined than the crude birth rate, is still crude in the sense that it is affected by the age structure of the female population. In populations where most births occur within marriage, the use of a *general marital fertility rate* may be calculated, by restricting the denominator to married or ever married women.

Fertility performance of a population varies by the age of women. "Natural fertility" – the reproductive performance that depends solely on physiological factors in the absence of contraception or other means of fertility planning – is highest among women in their early 20s, the most fecund age bracket. It slides down with the progression of age until the age of 50, after which the physiological capacity of reproduction is negligible. Fertility is also lower among women below the age of 20, when fecundity is lower. Fertility is almost negligible below age 15 and over the age of 50. Conventionally, demographers have chosen to show fertility rates for women between the ages of 15 and 49. Fertility rates calculated by the age of women are referred to as *age-specific fertility rates* (*ASFR*) *or age-specific birth rates* (*ASBR*). This measure is calculated by dividing the number of births to women of a given age by the total population of women of the same age. Thus, there are a set of rates depending on the number of age categories used (e.g., 35 age-specific fertility rates for ages 15, 16, 17. . .49). However, as the number of births may be too small to result in reasonable fertility rates for many ages, particularly toward the beginning and the end of the reproductive years, demographers prefer to present ASFRs by 5-year intervals (i.e., 15–19, 20–24, . . .45–49). Thus, the fertility rate for a given age group (e.g., 20–24) can be calculated by dividing the number of births to women of that age group (e.g., 20–24) by the midyear population of women of the same age group. Sometimes, analysts may prefer to use the *age-specific marital fertility rates* (*ASMFRs*), which are calculated by restricting the base population to married or ever married women.

Age-specific fertility rates are most commonly used to study the age patterns of reproductive behavior of a population (U.N., 1965). When the age-specific fertility rates are plotted against the age of the mother, a "bell-shaped" curve skewed to the right emerges as fertility rates are higher among women in their 20s and tend to get lower at ages beyond the late 30s. In most populations, the fertility rate peaks in the 20–24 or 25–29 age group, although in certain populations where fertility is postponed until a much later age, the rate could show its peak in the 30–34 age group. Mean and median ages of childbearing are often used to depict summary measures of age patterns of fertility. In order to eliminate the effects of population age composition, these measures are calculated using age-specific fertility rates rather than the number of births.

Demographers have found birth order to be a highly sensitive dimension for fertility analysis. Birth order refers to whether a birth is the first, second, third, or higher-order of a mother. By obtaining the number of births for a population by the order (first, second, third, and so on) and mother's age, the following measures of fertility can be calculated. The most basic measure is known as the *general order-specific fertility rate*, which refers to the number of births of a given order (first, second, third, and so on) per 1,000 women of childbearing age. This rate is calculated for each order of birth without reference to the age of the mother. The sum of general order-specific fertility rates over all orders equals the general fertility rate, as the denominators (i.e., number of women of childbearing ages) are the same.

A more refined measure to analyze birth-order statistics is through *age-order-specific fertility rates*. These rates can be calculated by dividing the number of births of a particular order among women of a given age group, by the number of women of the same age group. The sum of all age-order-specific fertility rate for all birth orders of a particular age group equals the age-specific fertility rate for that age group.

Mean or median ages of childbearing for a given order can be calculated from the

age-order-specific fertility rates. The resulting figures illustrate the average age at which mothers in a given population have their first, second, third, or higher-order births. The median age at first birth, for example, indicates the average age at the initiation of childbearing or motherhood in a population. The difference between the successive medians provides a rough indication of birth intervals or pace of childbearing. For example, the difference between the median age at first birth and the median age at marriage is a measure of first birth interval; the difference between the median ages at first and second birth is a measure of the second birth interval; and so on.

The crude birth rate and general fertility are influenced by the age and sex composition of a population. For example, populations with a larger proportion of women in the most fecund age brackets would result in higher birth rates. Therefore, a comparison of the rates for two periods or for two geographic regions would be misleading unless the effects of age and sex composition were not eliminated. The most often used measure is the *age-standardized or age-adjusted birth rate*, which controls for differences in the age composition of two or more populations (Barclay, 1958).

Total fertility rate (*TFR*) is the most widely used summary measure of fertility. It is not affected by the age and sex composition of a population. The TFR indicates the number of children that would be born to a woman if she survives to the end of her childbearing years and if she were subject to the current age-specific fertility rates. The TFR is calculated by summing the age-specific fertility rates for all ages. In the case of the age-specific rates presented by 5-year age group, the sum is multiplied by five. The rate is usually expressed either as per woman or per 1,000 women. In 2000–2005, TFR was as low as 1.12 for Ukraine, 1.23 for the Republic of Korea, and 1.25 for Greece and as high as 7.10 for Uganda and 7.91 for Niger (U.N., 2005).

A total fertility rate of approximately 2.1 children per woman is known as replacement level fertility. This level is required for a population to replace itself, although it could vary depending on the level of mortality. The replacement level is generally higher than 2.1 in populations with high infant and child mortality.

Gross reproduction rate (*GRR*) is a refined measure of fertility as it includes female births only. Considering that only female children will eventually bear children, the GRR is known to be a more sensitive measure of fertility. A GRR indicates the average number of female children a woman expects to have during her lifetime. The measure is called "gross" because it assumes that every female child will survive through her reproductive life to bear children; it ignores mortality through her reproductive life. The GRR can be calculated by summing the age-specific female birth rates which is usually estimated by multiplying the TFR by the proportion of female births. In view of the fact that on average the sex ratio at birth is 105 males per 100 females, the proportion of female births in a population is typically 0.4878, although this varies from population to population.

Net reproduction rate (*NRR*). The NRR is a refinement of the GRR as it takes into account that some women will die before the end of their reproductive life. It refers to the number of daughters that would be born to a woman at the end of her lifetime if she is subject to the current age-specific fertility rates and mortality rates. Thus, the NRR is known as a measure of generational replacement. An NRR of less than one indicates that the population is not replacing itself, and if this continues, the population will decline; while an NRR greater than one means that the population has the potential to grow. An NRR of one indicates that the population will replace itself but does not have the potential to grow.

All the fertility measures presented thus far are based on births occurring in a particular period, usually one year. Therefore, they are known as period or current measures. The fertility rate for any given year refers to the reproductive performance of a cross-section of women. It is mixture of fertility experiences of women at different stages of their life cycle, who were born or married during different periods in time. Only a small proportion of women would have

completed their childbearing, while most would be in the midst of their reproductive lives and many would have just begun their childbearing.

In order to circumvent the interpretative problems associated with the cross-sectional nature of fertility rates, demographers have resorted to cohort measures. A *cohort fertility rate* can be interpreted as the average number of children born to a woman (or a group of women) in her lifetime (or by the end of her reproductive life). Usually, fertility analysis involves two types of cohorts: birth cohort (members – typically, a group of women – born in a particular period) and marriage cohort (members married in a particular period including cohabitation/sexual union). The sum of age-specific fertility rates of women born in a particular period as they pass through their reproductive life is known as the "cohort fertility rate." The sum is multiplied by five in the case of age-specific fertility rates presented by five-year age group. This measure is also known as the *completed family size*, *lifetime fertility*, *completed fertility rate*, *or cumulative fertility rate*.

The calculation of cohort fertility rate and total fertility rate is similar. However, cohort fertility rate is based on the reproductive performance of a real cohort, while total fertility rate is based on the experiences of a "synthetic" cohort, which involve the experiences of many different cohorts. The TFR can be obtained from age-specific fertility rates at any given period, while the cohort fertility rate cannot be obtained until all women in the birth or marriage cohort have completed their reproductive lives.

Fertility Rates Based on Census or Surveys

The simplest rate based on a census is the *child-woman ratio* (*CWR*). The CWR is calculated by dividing the number of young children (i.e., population age 0–4) in the census by the number of women of childbearing ages (15–49). It is conceptually similar to the general fertility rate, but both the numerator and denominator are obtained from a census. A basic assumption of the CWR is that children in the numerator are born to women in the denominator. This measure provides an indication of the fertility performance of a population 0–4 years prior to the census. It is a rough measure of fertility, in that, some of the children born who may have died in the preceding 5 years are not included in the numerator, while others may not have been born to the women in the denominator, particularly those belonging to the younger age groups. Therefore, some analysts prefer to adjust both the numerator and denominator with mortality.

The child-woman ratio can also be calculated by using the number of children aged 5–9 in the numerator and the number of women aged 20–54 in the denominator. This measure provides an indication of fertility 5–9 years prior to the census.

A refinement of the child-woman ratio is known as the *own-children ratio* (Bogue, 1971; U.N., 1983). The own-children ratio converts the census (or survey) information on the age of women and children in the household and their relationship to each other into reasonable estimates of fertility during the specific period preceding the census. By relating the number of children under age 5 with the women in the reproductive age group (i.e., between 15 and 49 years) in households, one would be able to estimate the level of fertility observed during the 5 years preceding the census. Similarly, by relating the number of children under age one to the women, one can estimate the level of fertility during the year preceding the census. This can also be done for different population groups for which pertinent information does not exist on vital registration. The most common measures of fertility derived from this information are crude birth rate, general fertility rate, age-specific fertility rate, and total fertility rate.

Number of children ever born. Many censuses and surveys include a question on the number of children ever born to women. This question is asked of ever married women or of all women regardless of marital status. Basically, several kinds of fertility information can be obtained by tabulating the number of children born by the age (or age group) of women. The tabulation provides the distribution of women by "parity" (e.g., 0, 1, 2, 3, and so on). Parity refers to the number of children ever born to a woman. The number

(or proportion) of women who have never borne a child are referred to as the "zero-parity" women; the number of women who have reported one child ever born are referred to as the "first-parity" women; and so on. From this information, one will be able to estimate the proportion of women of a certain age, who have never had a child or who had only one child by that age. The proportion of women who report having zero children in the 40–44 or 45–49 age groups provides a reasonable estimate of *childlessness* in a population. The *average number of children ever born or average parity* for a particular age provides an estimate of cumulative fertility or the level of fertility achieved by women of a certain cohort by that age. The average number of children ever born for women at or beyond 45 or 50 is a measure of *completed fertility rate*.

From the information on the distribution of women by age and parity, *age-parity-specific fertility rates* can be obtained. This measure can be calculated by dividing the number of births of a given order for women of a given age, by the number of women of the parity at risk and of the same age, for example, the number of second-order births to first-parity women. A related measure of fertility is the *parity-progression ratio*, which indicates the probability that women of a given parity will move to the next parity or will have an additional birth. This can be calculated by taking the ratio of the number of women of parity i+1 or more to the number of women at parity i or more.

Some surveys include one or more questions on the fertility history of women. These questions often ask mothers to provide the date of birth of each child. Using this information, various measures of *birth intervals or child spacing* can be calculated. Median birth interval can be calculated from the data on months since previous birth. There are two types of birth interval: *closed birth interval and open birth interval*. The closed birth interval can be defined as the length of time between two successive live births, although the first birth interval is length of time between marriage and first birth. An open birth interval is the length of time between the last birth and the survey date.

Cross-References

▶ Birth Rate

References

Barclay, G. W. (1958). *Techniques of demographic analysis*. New York: Wiley.

Bogue, D. (1971). *Demographic techniques of fertility analysis*. Chicago: Community and Family Study Center, University of Chicago.

Shryock, H. S., Siegel, J. S., et al. (1973). *The methods and materials of demography* (Vol. 2). Washington, DC: U. S. Government Printing Office.

U.N. (1965). Population Bulletin of the United Nations No. 7–1963. New York: United Nations.

U.N. (1983). *Manual X: Indirect techniques of demographic estimation*. New York: United Nations.

U.N. (2005). *World population prospects: The 2004 revision* (Vol. I). New York: United Nations.

FFI

▶ Foot Function Index

FFI-5pts

▶ Foot Function Index

FFI-D

▶ Foot Function Index

FFI-R

▶ Foot Function Index

FFI-RI

▶ Foot Function Index

FFI-Rs

▶ Foot Function Index

FFMP

▶ Five Factor Model of Personality

FGC

▶ Female Genital Cutting

Fieldwork

▶ Survey Research

Fiesta

▶ Community Festivals

Figurations

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Definition

Figurations are dynamic networks of people bonded through mutual dependencies over space and time or, in Norbert Elias's own words, "a structure of mutually orientated and dependent people… the network of interdependencies formed by individuals" (Elias, 2000, p. 482).

Description

The concept of figurations was developed by the sociologist Norbert Elias to convey the shifting links between people as the nature and extent of their interdependencies change over time. He attempted to overcome the unnecessary dualisms between structure and agency, individual and society, and subjectivity and objectivity, as well as the more prevalent concepts in sociology such as social systems, which he considered too static and normative to represent the unplanned order of much of social life. The sociological perspective that Elias pioneered became known as figurational or process sociology (due to the emphasis on social forms, structures, attitudes, ▶ values, beliefs, and ▶ norms, undergoing more or less continuous change once viewed from a long-term perspective).

Elias did not explicitly examine "quality of life" (QOL) nor has the concept of figurations been applied to any significant extent by other social scientists to explain QOL for individuals or societies. Perhaps the studies that come closest to a figurational approach are the ecological perspective (Bubolz, Eicher, Evers, & Sontag, 1980) and Gerson's (1976) compelling, early critique of the objective–subjective dualism dominant in QOL research. However, the ecological perspective stresses interaction over interdependency and literally places the individual actor in the center of the ecological system, reasserting the conventional understanding of the individual prior to social relationships, with other people constituting concentric circles surrounding this central ego as if they only existed to provide functions for the central figure. Gerson also stresses interactions as an ongoing activity and thus does not adequately see links of dependencies over long, multiple networks of people that are not necessarily limited to face-to-face negotiations and definitions of the situation. Figurations develop over many generations, encompassing changes in social structure as well as culture, and therefore require a long-term perspective to understand phenomena such as QOL.

Elias (2000, pp. 428–432) has however addressed similar concepts to QOL such as "the

standard of living" (see also Dolan, 2009). The latter is understood in the material sense as a certain, unspecified, minimum level of bodily nutrition and comfort that constitutes a condition for the development of civilizing processes within any given human society. Civilizing processes comprise many dimensions, but the most significant for our purposes here are the growing social constraints towards self-control and self-steering in the context of lengthening chains of social interdependencies. In other words, as people become more and more dependent on a wider and more extensive network of people for the fulfilment of social and physical needs, then they must learn to attune their conduct to the demands and compulsions of the whole social pattern. This is also a long-term individualization process in that each person increasingly occupies more specialized functions and with large-scale social changes must rely on their own knowledge and ▶ competence in making life choices. People must increasingly manage their emotional experiences in social contexts, and this further creates the perception by individuals that they are separate and detached from other people.

Elias coined the phrase *homo clausus* (closed person) to convey this modern form of selfhood. Though he accepted the experience was real enough for each individual socialized into societies characterized by dense and extensive social networks, from a sociological perspective it was quite misleading. People do actually form bonds together so there is no "internal" and "external," no initial subjective experience or existential being that subsequently interacts with others in the environment. Elias used the expression *homines aperti* to describe this scientific need to see people in the plural and open to each other in terms of forming mutual dependencies. These links or bonds of interdependencies are not harmonious. People depend on one another in competition and cooperation, in love and hate, and in the fulfilment of needs as well as the fear of reprisal or harm of one kind or another. People in various groups, such as ethnic and national groups, depend on the very existence of other groups to mark them out as distinctive identifications. This reorientation of the classic person and society dualism has important implications for the depiction of these concepts in research on QOL.

As Ferriss (2004; in Sirgy et al., 2006, pp. 363–377) notes, QOL as an explicit concept has not made much impact in the discipline of sociology, and figuration is a concept most at home there, though the figurational perspective attracts researchers from diverse fields. In fact, Elias always maintained that there were false boundaries between the social science disciplines, particularly psychology, sociology, and history. As QOL is an interdisciplinary concept, figurational perspectives should be well placed to examine it. However, QOL has attracted most attention by psychologists and economists. In many ways, these disciplinary boundaries have led to the conceptual tensions surrounding the concept according to Nevarez (2011). QOL has tended to be conceived as either an objective condition or as a subjective disposition. This dualism is an example of *homo clausus* thinking in the social sciences more broadly. Nevarez also notes that due to the lack of consensus over the definition of QOL, particular researchers tend to impose their own definitions, particularly when it comes to using measures of QOL. This focus on measurement tends to obscure the validity of such measures given the vague nature of the concept. Of course concept formation undergoes ongoing development in the social sciences. Indeed the ambiguity of the concept has led to its appeal in many respects as it can be applied to a variety of contexts and domains depending on the concerns of the observer (Nevarez, 2011). Nevarez himself sees QOL as assuming significance within particular social contexts, rather than as a universal phenomenon applicable to all situations.

In this respect, such contexts can be conceived as a type of figuration, though Nevarez does not explore QOL fully in this way. This is due to the emphasis on discursive conditions, rather than the mobile social networks that figurational perspectives deploy to explain changing values and beliefs. One such broad context is the changing power relations between rich and poor, various social classes, and even within the entire globe in terms of relations between North and South.

The rising concern for those experiencing less well-being, or greater ▶ poverty, advances as social classes and nation-states become more integrated into a complex web of interdependent functions (see de Swaan, 1988). The more different social groups do for each other, the more the fate of one is entwined in the fate of others. However, this is not a linear process and figurational sociologists have noted the shift towards greater dependencies of the middle and upper classes in Western societies on corporate elites and global actors as material chances seem more precarious (see Wilterdink, 1995; Wouters, 2007).

As a sociologist, Nevarez (2011, p. 48) argues that due to "its emphasis 'on the data,' the field of social indicators research has so far struggled to call critical attention to the institutional context that frustrates its underlying concerns." A figurational approach would use this context to explain changing standards of QOL, changing emotional concerns for those lacking QOL, and shifting expectations of those lacking QOL for greater parity of esteem and status. Indeed Nevarez does highlight the role of status competition in the development of QOL. Groups use goods for positional reasons, as symbolic resources to mark out their distinction. In this analysis, one's ▶ satisfaction with life is dependent on others' access to goods and services; it is a quality contingent on the relative position in the social status hierarchy. If accurate, of course this implies that ▶ equality of QOL across society is, ironically, incompatible with individual satisfaction. But this conclusion also depends itself on a broad culture of material competitiveness within any given society and assumes a limited extent of emotional identification with people belonging to other social classes or status groups. These are social processes in their own right. And social ▶ solidarity across the class spectrum varies considerably over time, as classes become more interdependent for different functions.

Once QOL is connected with more prevalent concepts in sociology and history like "▶ consumer society," then the analysis tends to take a turn towards blaming a particular social group for this rise in materialist attitudes and values. The usual culprits are advertisers – large corporations using persuasive techniques aimed at encouraging people to buy goods they may not need at all. While Nevarez acknowledges advertising power, he also notes that consumerism fits easily within a society characterized by widespread status competition. The need to find the source of "the problem" in terms of powerful actors is a long-standing one in the social sciences (see Ewen, 1976; Schor, 2007). This understandable impulse is largely resisted by Elias (1987), on the grounds that too much emotional involvement (in either a positive or negative sense) with the people who are the object of investigation can obscure the social processes that are actually occurring. Further, Elias throughout his work argues that the direction of social processes is largely unplanned, though a discernible order of social change becomes apparent following analysis and synthesis of group dynamics over several generations. The reason for such unplanned social change is simply that the more people are involved in social life, and the more each is dependent on others for the fulfilment of needs or desires, the less any one individual or group can control the pattern of mutually dependent people known as society (Elias, 1978). Of course power relations can be extremely unequal even in highly complex societies, and blame can be attributed to particular individuals insofar as prevailing moral standards and levels of knowledge are present in such societies. Nevarez argues against the dominant view of QOL as a subjective, individual property precisely on the grounds that it reifies the social relations underlying values and also "*obscures the unequal distribution of QOL opportunities and pursuits.... 'QOL' promotes a moral relativism that ushers in an acute historical amnesia*" (p. 218, original emphasis).

The charge of historical amnesia is probably well made in that the genesis of QOL as an individualized, moral imperative is rarely problematized in QOL research, but there are studies that attempt to contextualize the experience of QOL in long-term historical dynamics. For example, Inkeles (1993) examines changing QOL due to industrialization and modernization. This long-term perspective implicitly considers

figurational change in that industrialization and modernization connote social change involving the bonds between people. This long-term perspective is central to figurational theory because social life is considered to be processual; it is in constant flow and cannot be abstracted from that flow if an adequate explanation of social relations is to be achieved. As already stated, such social relations cannot be divorced from psychic processes such as personality formation and emotional experience and expression.

But researchers examining modernization processes tend to treat social change rather simplistically, in that the nature of changes in how people relate to, identify with, and depend upon one another is often obscured by these catch-all terms like modernization and technological revolutions of one kind or another. These phrases also tend to imply too much human volition, in that the desire to increase QOL, though perhaps defined or understood differently in the past, led to conscious and intentional projects aimed at modernizing or industrializing society. For Elias, though people make choices, they make them within the context of a preexisting figuration that both constrains and compels choices and perceptions. The unequal power ratios within any society also provide some with far more choices than others. Schuessler and Fisher (1985, p. 141) reveal the relation between power position within society and perspective on measures to improve QOL, noting that established groups tend to argue for interventions to improve the individual, while minority groups argue for restructuring the social system. As beneficiaries of the current form of social organization, the establishment does not usually want this to be the target for reform.

Other QOL researchers cite Putnam's *Bowling Alone* to highlight the significance of social capital for individual well-being or happiness (see, e.g., Álvarez-Díaz, González, & Radcliff, 2010). Though social capital echoes somewhat Elias's concept of figuration, it is too static to act as a synonym. The network of capital is conceived more as a property of the individual (a variable quantity at his or her disposal) rather than seeing any individual as part of a moving, structured network. It is difficult for a largely quantitative approach to capture these long-term, dynamic structures constituted by a network of mutually dependent people whose needs, functions for others, and relationships are constantly in process. Elias's approach also asks to keep both the social pattern and particular aspects of that pattern from the perspective of particular individuals and groups in view at the same time.

One potential blind spot in the application of figurational theory to QOL research is Elias's (1987) principle of relative detachment, or a detour via detachment, in the pursuit of social scientific knowledge. Much QOL research is implicitly or explicitly interested in guiding public policy, in arguing for or against certain types of state interventions on the grounds that they do or do not increase QOL for individuals or indeed for societies as a whole. Elias feared personal inclinations and ideological positions of the researcher could easily obscure social reality. This principle can of course be carried too far, and Elias hoped that more reality-congruent knowledge would ultimately be brought to the service of humanity. The problem is knowing how congruent one's knowledge is to reality at any given time while admitting that governments and others have to make decisions in conditions of imperfect knowledge all the time. However, the concept of figurations implies that well-being, happiness, pleasure, and enjoyment in life can only be achieved in relationships with others; these are social outcomes, not mere individual dispositions and action outcomes. At a very basic level, the state seeks a monopoly of ▶ violence within a specific territory, without which it would be hard to imagine much quality in living, at least in terms of Veenhoven's (2010) "Happy Life Years." People rely on state institutions for this relative security and for much else besides that contributes to QOL (see Álvarez-Díaz, González and Radcliff 2010; Lane, 1994).

Finally, the figurational perspective on QOL would echo the concerns of Álvarez-Díaz et al. (2010, p. 903) "that far too little attention has been devoted to theorizing about how sociopolitical conditions determine quality of life."

References

Álvarez-Díaz, Á., González, L., & Radcliff, B. (2010). The politics of happiness: On the political determinants of quality of life in the American States. *The Journal of Politics, 72*, 894–905.

Bubolz, M. M., Eicher, J. B., Evers, S. J., & Sontag, M. S. (1980). A human ecological approach to quality of life: Conceptual framework and results of a preliminary study. *Social Indicators Research, 7*, 103–136.

de Swaan, A. (1988). *In care of the state: Health care, education and welfare in Europe and the USA in the modern era*. New York: Oxford University Press.

Dolan, P. (2009). Figurational dynamics and parliamentary discourses of living standards in Ireland. *The British Journal of Sociology, 60*, 721–739.

Elias, N. (1978). *What is sociology?* (S. Mennell & G. Morrissey, Trans.). London: Hutchinson.

Elias, N. (1987). *Involvement and detachment* (E. Jephcott, Trans.). Oxford: Basil Blackwell.

Elias, N. (2000). *The civilizing process: Sociogenetic and psychogenetic investigations* (E. Jephcott, Trans. Revised ed.). Oxford: Blackwell Publishers

Ewen, S. (1976). *Captains of consciousness*. New York: McGraw-Hill.

Ferriss, A. L. (2004). The quality of life concept in sociology. *The American Sociologist, 35*(3), 37–51.

Gerson, E. M. (1976). On "quality of life". *American Sociological Review, 41*, 793–806.

Inkeles, A. (1993). Industrialization, modernization and the quality of life. *International Journal of Comparative Sociology, 34*(1–2), 1–23.

Lane, R. E. (1994). Quality of life and quality of persons. *Political theory, 22*(2), 219–252.

Nevarez, L. (2011). *Pursuing quality of life: From the affluent society to the consumer society*. New York: Routledge.

Schor, J. B. (2007). In defense of consumer critique: Revisiting the consumption debates of the twentieth century. *The Annals of the American Academy of Political and Social Science, 611*(1), 16–30.

Schuessler, K. F., & Fisher, G. A. (1985). Quality of life research and sociology. *Annual Review of Sociology, 11*, 129–149.

Sirgy, M. J., Michalos, A. C., Ferriss, A. L., Easterlin, R. A., Patrick, D., & Pavot, W. (2006). The quality-of-life (QOL) research movement: Past, present, and future. *Social Indicators Research, 76*, 343–466.

Veenhoven, R. (2010). Life is getting better: Societal evolution and fit with human nature. *Social Indicators Research, 97*, 105–122.

Wilterdink, N. (1995). Increasing income inequality and wealth concentration in the prosperous societies of the West. *Studies in Comparative International Development, 30*(3), 3–23.

Wouters, C. (2007). *Informalization: Manners and emotions since 1890*. London: Sage.

Figure Skating

▶ Arts in British Columbia, Canada

Film

▶ Arts and Quality of Life

Films

▶ Arts in British Columbia, Canada

FIM™

▶ Functional Independence Measure

Financial Capital

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Synonyms

Equity capital

Definition

These are funds used to finance a firm, including both ▶ equity capital and debt (Lipsey, 1993). The funds are invested in a company in order to acquire assets. Financial capital contributes to the wealth of the individuals or companies.

Description

To understand the financial capital of a company, it is important to know the structure of funds which means the way in which the assets (current and fixed) are financed by the shareholders' funds and the outside liabilities (International Labour Office, 1985).

Shareholders' funds are the money employed in a company that has been contributed by individuals and institutions to finance a company in return for ordinary shares and preference shares and which will remain as a permanent source of finance as long as the company remains in existence (Pass, Lowes, Pendleton, & Chadwick, 1991).

Outside liabilities are money employed in a company that has been borrowed from external sources for fixed periods of time.

The optimal financial structure of a company or the optimal mixture of debt and equity financial capital has been analyzed by the static theory of capital structure which supports that a firm borrows up to the point where the tax benefit from an extra dollar in debt is exactly equal to the cost that comes from the increased probability of financial distress (Ross, Westerfield, & Jordan, 1993).

Discussion

Debate about real capital versus financial capital is still taking place. It has been argued that the productive capacity of a company or country is given by real capital such as land, buildings, machines, and knowledge to produce goods. In contrast to such real capital is financial capital such as stocks or bonds. Financial capital contributes to productive capacity of a company indirectly by allowing the separation of the ownership and management of the company and facilitating the transfer of funds to enterprises with attractive investment opportunities.

It is regularly said that a country is poor because it lacks financial capital for ▶ development. Savings for investment accrue only when there is a surplus beyond what is required for immediate ▶ consumption. A lack of financial capital can cause a vicious circle of poverty, which means that when a country has little capital per head, it is poor. Because it is poor, it can devote only few resources to creating new capital. Finally, the country remains poor.

Lack of financial capital is both a cause and a consequence for poor countries. In developed countries, capital investment and technical innovation are related to rising real income and ▶ economic well-being (Galbraith, 1979).

A lack of effective long-range financial planning is a commonly cited reason for financial distress and failure of companies and countries.

Cross-References

▶ Consumption
▶ Development
▶ Economic Well-Being
▶ Equity

References

Galbraith, J. K. (1979). *The nature of mass poverty*. Harmondsworth, UK: Penguin Books.

International Labour Office. (1985). *How to read a balance sheet* (2nd rev. ed.). Geneva, Switzerland: Author.

Lipsey, R. (1993). *An introduction to positive economics* (7th ed.). Oxford: Oxford University Press.

Pass, C., Lowes, B., Pendleton, A., & Chadwick, L. (1991). *Dictionary of business*. Glasgow, UK: Harper Collins.

Ross, S., Westerfield, R., & Jordan, B. (1993). *Fundamentals of corporate finance* (2nd ed., International Student Edition). Homewood, IL: Richard D. Irwin.

Financial Flexibility

▶ Work, Alternative/Flexible Arrangements

Financial Obligations

▶ Debt

Financial Value

▶ Economic Value

Financial Well-Being

▶ Personal Income, Satisfaction with

Findings Archive on Happiness

▶ World Database of Happiness

Finite Mixture Model

▶ Latent Class Model

Finland

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Definition

Finland is a republic with parliamentary democracy and located in Scandinavia near to Russia, Sweden, and Norway. Independence was declared on December 6, 1917. Finland is a member of the United Nations since 1955 and European Union since 1995.

Description

According to Statistics Finland, the population is 5.4 million (15.8 inhabitants per km^2). Finland is the fifth largest country in Western Europe. Most of the citizens are Finnish speaking (91 %) and Lutherans from their religion (79.9 %). The Swedish-speaking citizens (5.4 %) are the biggest minority in Finland. The capital of Finland is Helsinki with 1.25 million inhabitants in the metropolitan area. Contrasts between winter and summer are great. In year 2011 the coldest day was –41.8 °C and the warmest 32.8 °C. Life expectancy for men is 76 years and for women 83 years. GDP per capita was in 2010 33,618 Euros. Finland has been on the top in many international comparisons (see Helliwell, Layard, & Sachs, 2012; Schwab, Salai-Martin, & Brende, 2012) related to the functionality of Finnish society as well as the quality of life.

The Finnish welfare system has been mainly constructed after the WW2. Until the economic crisis of 1990s, the quality of life of Finnish citizens increased and economic disparities decreased continuously. Economic crisis in 1990–1994 was the worst in nation's history and internationally as well. The collapse of the GDP was about 12 % and the unemployment rate rose from 3.5 to 18.4 (Kalela, Kiander, Kivikuru, Loikkanem, & Simpura, 2001). After the recession inequality has been increased (Gini coefficient) from 19.9 in 1992 to 27.3 in 2006 (SVT, 2006). Change was the fastest within all OECD countries (SVT, 2004). In spite of dramatic recessions in 1990 and 2009, the Finnish society and the quality of life of citizens are in relative good shape.

Finland is an information society. Using relevant information in decision-making in different levels is a mainstream in developing better society. Good examples of this are many websites that are open for all to evaluate the situation of different issues. The Statistics Finland and the government have organized all relevant information into one website (http://www.findikaattori.fi/en). Another important player in this topic is the National Institute for Health and Welfare (THL, http://www.thl.fi/en_US/web/en/home), which is a research and development institute under the Finnish Ministry of Social Affairs and Health. THL is the major player in collecting and coordinating welfare indicators in Finland (see http://hyvinvointikompassi.thl.fi/fi/web/hyvinvointikompassi/etusivu). Statistics Finland and THL

are in charge of the nationwide production of quality of life knowledge. The role of universities and universities of applied sciences is narrower, and their production of quality of life knowledge is based more on specific scientific and regional needs.

The ideology behind Finnish welfare system lies on the material resources. This means that we have been interested more on objective than subjective issues of quality of life. This way of thinking has reflected to Finnish research activities as well. Register-based studies have had a major role when evaluating the level of QOL of Finnish citizens. Time-series and longitudinal studies by registers are also possible and in use.

In the late 1960s, the first sociological and sociopolitical dissertations on well-being were published (Kainulainen, 2009). They were part of the international social indicators movement. From the 1970s there have been interests among academics on studying well-being from the subjective viewpoint. The most well-known researcher in this field was Professor Erik Allardt (1975, 1976). He broadened the concept of well-being from the material issues to subjective and relational issues. His keywords, having, loving, and being, are still in use. Arguments against methodological individualism and survey techniques were presented by Professor J.P. Roos when he launched the concept "happiness barrier." He stated that people do not answer their true satisfaction in inquiries (Roos, 1987). But systematic interest on citizens' subjective well-being has been missing until the new millennium. Some nationwide studies have been done in 1986 and 1994 by Statistics Finland. After Finland joined the EU (1995), comparable data on people's subjective well-being is available as well (see www.ec.europa.eu/eurostat). Also the National Institute for Health and Welfare has also done some representative studies (well-being and services study 2002, 2006, 2008, 2010) on subjective well-being of Finnish citizens. The WHOQOL-Bref measure was used in year 2010.

The latest representative data on working aged (20–64 years) Finnish's subjective well-being has been collected in spring 2012 (N = 1883; response rate 38 %) by the researcher of the University of Eastern Finland (WEBE project). In the questionnaire several internationally well-known and validated measures were used (Flourishing Scale (FS) Diener & Biswas-Diener, Personal Well-being Index – Adult (PWI-A) Cummings, overall happiness (Gallup), hedonic level of affect and contentment). Almost all scientifically relevant data is available in a national archive (http://www.fsd.uta.fi/en/) some years after the study has been finished.

According to Vaarama, Moisio, and Karvonen (2011), well-being has been increased in general during the first decade of the millennium, but inequality between socioeconomic groups and relative poverty have been increased as well. In general quality of life is in relative high level (WHOQOL M = 74–79). Compared to Denmark, Norway, and Australia perceived quality of life is a bit higher in Finland when using WHOQOL-Bref measure.

In the WEBE study many different measures were in use. Overall happiness was measured by the question "Taking all together, how satisfied or dissatisfied are you with your life as a whole these days?" and the options varied from 0 (dissatisfied) to ten (satisfied). According to preliminary results overall happiness was in spring 2012 at the level of 7.68. Women were slightly more satisfied (M = 7.78, StdD 1.630) than men (M = 7.57, StdD 1.773).

Recently perceived quality of life has become more popular within academics and in public decision-making. Representative studies have done, for example, from the viewpoints of childhood and families (Lammi-Taskula, Karvonen, & Ahlström, 2009), schoolchildren (Konu, 2002), homeless (Saari, 2012), and people under food aid as well (Saari, Hämäläinen, Kaitokari, & Honkalampi, 2012). From the year 2000 a large-scale annual survey has been collected from the schools. Study is called School Health Promotion Study (Kouluterveyskysely in Finnish; http://info.stakes.fi/kouluterveyskysely/EN/index.htm). In the year 2010 and 2011, more than 190,000 students joined the inquiry.

It gives systematic information on the perceived quality of life (among other issues) of youngsters. From the year 2010, a large-scale study on perceived quality of life has been started by the THL. In the first wave more than 34,000 citizens took part in the study. In this continuous data collection (ATH; Regional Health and Well-being Study), even 150,000 inhabitants will be involved to study within the years 2012–2014. The main aim of this process is to give knowledge on perceived quality of life to local decision-makers in municipalities.

Cross-References

- ▶ Gini Coefficient
- ▶ Perceived Quality of Life
- ▶ Satisfaction with Life as a Whole
- ▶ Student Quality of Life
- ▶ Survey Research

References

Allardt, E. (1975). *Att ha, att älska, att vara: om välfärd i Norden*. Lund, Sweden: Argos.

Allardt, E. (1976). Dimensions of welfare in a comparative Scandinavian study. *Acta Sociologica, 19*(3), 227–239.

Helliwell, J., Layard, R., & Sachs, J. (Eds.). (2012). *World happiness report*. New York: The Earth Institute, Columbia University.

Kainulainen, S. (2009). Hyvinvointitutkimuksen kehityslinjat suomessa [Development of the finnish welfare research]. In J. Saari (Ed.), *Hyvinvointi. Suomalaisen yhteiskunnan perusta*. Helsinki, Finland: Gaudeamus.

Kalela, J., Kiander, J., Kivikuru, U., Loikkanen, H. A., & Simpura, J. (Eds.). (2001). *Down from the heavens, up from the ashes. the finnish economic crisis of the 1990s in the light of economic and social research*. Helsinki, Finland: Gummerus. Government Institute for Economic Research.

Konu, A. (2002). *Oppilaiden hyvinvointi koulussa [Wellbeing of students at school]. Acta electronica universitatis tamperensis 202 (diss.)*. Tampere, Finland: Juvenes Print.

Lammi-Taskula, J., Karvonen, S., & Ahlström, S. (Eds.). (2009). *Lapsiperheiden hyvinvointi 2009 [Wellbeing of families with children]*. Helsinki, Finland: Yliopiston kirjapaino.

Roos, J. P. (1987). Behind the happiness barrier. *Social Indicators Research, 20*(2), 141–163.

Saari, J. (2012). Yksinäisenä yhteisössä [Loneliness in the community]. *Journal for the Study of Diaconia, 9*(1), 32–52.

Saari, J., Hämäläinen, L., Kaitokari, P., & Honkalampi, K. (2012). Kuopion Ruokajonot 2012 [Food aid at Kuopio 2012]. Kuopio ER 2012:1. Kuopio.

Schwab, K., Sala-i-Martín, X., & Brende, B. (Eds.) (2012). The global competitiveness report 2012–2013: Full data edition. World economic forum. Retrieved from World Economic Forum website: www.weforum.org/gcr

Suomen virallinen tilasto (SVT): Tulonjakotilasto [verkkojulkaisu]. ISSN = 1795-8121. 2006, *Tuloerojen kehitys Suomessa 1966–2006*. Retrieved Jan/Feb from http://www.stat.fi/til/tjt/2006/tjt_2006_2008-05-16_tau_001.html

Suomen virallinen tilasto (SVT): Tulonjakotilasto [verkkojulkaisu]. ISSN = 1795-8121. 2004, *Suomen tuloerot kansainvälisessä vertailussa*. Retrieved Jan/Feb from http://www.stat.fi/til/tjt/2004/tjt_2004_2006-06-16_kat_001.html

Vaarama, M., Moisio, P., & Karvonen, S. (Eds.). (2011). *Suomalaisten hyvinvointi 2010 [wellbeing in Finland 2010]*. Helsinki, Finland: Yliopistopaino.

First Nations Education

- ▶ Education, Traditional

First Nations People in Australia

- ▶ Australian Indigenous Peoples

Fisk Distribution

- ▶ Log-Logistic Models

Five Facet Mindfulness Questionnaire (FFMQ)

- ▶ Mindfulness and Life Satisfaction

Five Factor Model of Personality

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Synonyms

Big five model of personality; Big five personality traits; FFMP; Five-dimension model of personality; NEO PI-R; Personality inventory, revised NEO

Definition

The five-factor model of personality is a trait-based taxonomy of personality dimensions based on the lexical hypothesis: the belief that over time natural language accrues terms that have adaptive significance.

Description

Given that humans are social animals, it was reasoned that our language should contain numerous terms that capture adaptively important psychological qualities. The analysis of these natural language terms resulted in the identification of five dimensions: *Neuroticism*, the capacity to experience ▶ negative emotions, such as ▶ anxiety and poor ▶ self-esteem; *Extraversion*, the capacity to experience ▶ positive emotions (such as joy and ▶ happiness) and one's personal tempo (e.g., dominance, energy); *Openness to Experience*, one's capacity to be creative and unstructured versus one's tendency to need structure and clarity; *Agreeableness*, perceptions of others that are caring, compassionate, and altruistic versus manipulative, self-serving, and antagonistic; and *Conscientiousness*, contrasts self-discipline, achievement, and order with low self-control, immediate gratification, and self-centeredness (Costa & McCrae, 1992). These five dimensions constitute a comprehensive taxonomy of personality traits as traditionally defined in psychology. While developed using the English language, these traits have been recovered across cultures, shown to be genetically heritable, recoverable across both self and observer ratings, and predictive of a wide range of important outcomes salient across disciplines (e.g., neurology, psychology, medicine, and psychiatry). This robust, empirically compelling model provides an important framework for understanding the personological aspects of any psychological construct and is an essential element for establishing the ▶ construct validity of new personality constructs (see Piedmont, 1998).

McCrae and Costa (1987) validated the five-factor model of personality using both self-reports and peer ratings. Today, their Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992), based on this five-factor model, is one of the two most widely used personality tests in the workplace.

References

Costa, P. T., Jr., & McCrae, R. R. (1992). Four ways five factors are basic. *Personality and Individual Differences, 13*, 653–665.

McCrae, R. R., & Costa, P. T., Jr. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology, 52*(1), 81–90.

Piedmont, R. L. (1998). *The Revised NEO Personality Inventory: Clinical and research applications*. New York, NY: Plenum.

Five-Dimension Model of Personality

▶ Five Factor Model of Personality

Fixed Anchors

▶ Fixed Reference Points

Fixed Effects Models

► Random Effects Regression for Panel Data

Fixed Reference Points

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Synonyms

Fixed anchors

Definition

Response scales have a fixed reference point when there is no doubt about its position in the mind of the respondent.

Description

Response scales often contain labels for categories given to the respondent as reference or indication of the different positions of the scale. For example, Table 1 shows two formulations of the items measuring the left-right political orientation. The first one is included in the main questionnaire of the European Social Survey (ESS) in each round and the second and third formulations were included in an ► experimental design in the supplementary questionnaire in Round 4.

The first formulation includes two *reference points*, left and right; however those are not fixed as respondents might vary in the interpretation of what "left" and "right" means. The category of number 5, even if it is not labelled, is a *fixed reference point* as regardless their interpretation of left and right; number 5 represents a midpoint which is clear for all respondents. In formulation 2, three *fixed reference points* are presented as the adverb "extreme" implies that nothing can go beyond it, providing indication of the position of the scale for all respondents.

Fixed Reference Points, Table 1 Two formulations for measuring the left-right dimension

1. In politics people sometimes talk of "left" and "right." Using this card, where would you place yourself on this scale, where 0 means the left and 10 means the right?										
Left 0	1	2	3	4	5	6	7	8	9	Right 10
2. In politics people sometimes talk of "left" and "right." Using this card, where would you place yourself on this scale?										
Extreme left 0	1	2	3	4	5	6	7	8	9	Extreme right 10

Source: European Social Survey, http://www.europeansocialsurvey.org/

Saris (1988) shows that respondents can be precise in their answers and reliable; however they may use different response functions. For example, if the reference points are "left" and "right" such as in Formulation 1 in Table 1 and a respondent is used to this words, she might express her answer using the ending points of the scale, for example, 10, even if her own position is much more moderate. If she is presented the fixed reference points indicated by the word "extreme," she may realize that nothing can go beyond them and express their opinion in a number in between, for instance, 8. If the design of a survey introduces variation in response functions among respondents, ► measurement error will be very large and responses are not comparable anymore (Saris 1998; Saris and de Rooy 1988). This is a fundamental problem as survey research assumes that respondents have the same function and that variation in responses comes from variation in opinions.

Saris and Gallhofer (2007a) show that variation in response functions can be larger at the ends of the scale and this may explain why scales with more categories are associated with larger measurement error. However, they show that this problem can be reduced if two fixed reference points are provided in the ending points of the scales because the response scale is the same for all people.

Saris and Gallhofer (2007b) conducted a meta-analysis of 1023 multi-trait multi-method (MTMM) experiments taking as dependent

variables the validity and ▶ reliability coefficients estimated through the experiments and as the independent variables a long list of item characteristics or choices made when designing the survey item. They found that the effect of three fixed reference points in comparison of non-fixed reference points is positive and significant. It contributes to explain 0.0147 of the variance in the reliability coefficient and 0.0217 of the variance of the validity coefficient.

The use of the same qualifiers can be problematic when translating questionnaires into many different languages, as the words can have no literal equivalent. Zavala (forthcoming) compared the codes of a large group of formal properties of a sample of 27 questions of the English source questionnaire in Round 5 of the ESS and the translated versions in 21 languages. For the comparison, they used Survey Quality Predictor program. They found that in Slavic languages, an equivalent meaning of the qualifier "extremely" that is normally used in the Source questionnaire has a very different meaning. They propose that a possible solution is to look for different qualities that keep the same measurement characteristics even if they are not literally translated. The ESS will implement this process in Round 6 (European Social Survey, 2012).

Cross-References

- ▶ Experimental Design
- ▶ Measurement Error
- ▶ Measurement Invariance
- ▶ Measurement Methods
- ▶ Reliability
- ▶ Translation Research

References

European Social Survey. (2012). *ESS round 6 translation guidelines*. Mannheim: European Social Survey GESIS.

Saris, W. E. (ed.), (1988). Variations in response functions: a source of measurement error in attitude research. Amsterdam: Sociometric Research Foundation.

Saris, W. E. (1998). Words are sometimes not enough to express the existing information. In M. Fenema, C. van der Eyck, & H. Schijf (Eds.), *In search of structure: Essays in social science and methodology* (pp. 98–115). Amsterdam: Het Spinhuis.

Saris, W. E., & de Rooy, K. (1988). What kind of terms should be used for reference points. In W. E. Saris (Ed.), *Variations in response functions: A source of measurement error in attitude research* (pp. 199–219). Amsterdam: Sociometric Research Foundation.

Saris, W. E., & Gallhofer, I. N. (2007a). *Design, evaluation and analysis of questionnaires for survey research*. Hoboken: Wiley.

Saris, W. E., & Gallhofer, I. N. (2007b). Estimation of the effects of measurement characteristics on the quality of survey questions. *Survey Research Methods, 1*, 31–46.

Zavala, D. (forthcoming) Avoiding deviations due to questionnaire translations across countries through SQP. Paper presented at the fourth Conference of the European Survey Research Association (ESRA), Laussane, Switzerland, 2011.

Fixed Resource Allocation and Time

▶ Time Trade-Off

Fixed-Term Contracts

▶ Temporary Employment

Flanagan QoLS

▶ Flanagan Quality of Life Scale

Flanagan Quality of Life Scale

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Synonyms

Adapted version of the flanagan quality of life scale; Flanagan QoLS; Flanagan's quality of life

and individual needs questionnaire; Modified flanagan quality of life scale

Definition

Flanagan QoLS is an instrument to evaluate global quality of life. It is composed of 15 items covering 5 domains: physical and material well-being; relations with other people; social, community, and civic activities; personal development and fulfillment; and recreation. In each item, satisfaction and importance of the item in the individual's quality of life is evaluated.

Description

The Flanagan QoLS was developed by the American psychologist John C. Flanagan in the 1970s, based on the results of a qualitative study of approximately 3,000 people that included males and females, as well as various age groups and ethnic/racial backgrounds. The sample was collected to be representative of all regions of the United States of America (USA). The participants in the study were asked a variety of questions to elicit responses regarding their experiences and behaviors in many situations. Examples of such questions are as follows: "Think of the last time you did something very important to you or had an experience that was especially satisfying to you. What did you do or what happened that was so satisfying to you? Why did this experience seem so important or satisfying?;" "Think of a recent time you could not to do something you very much wanted to do or could not have something you very much wanted to have. What did you want to do or have that you could not do or have?" (Flanagan, 1978, 1982). About 6,500 critical incidents were identified and grouped into 15 items covering five domains: physical and material well-being; relations with other people, social, community, and civic activities; personal development and fulfillment; and recreation (Flanagan, 1978).

In the original version of the Flanagan QoLS, individuals were asked about the importance of an item (very important, important, moderately important, important, and not at all important) as well as how well their needs and wants were being met regarding that item (very well, well, moderately well, slightly well, and not at all well) (Flanagan, 1978). The evaluation of needs being met in each item generated another name for the Flanagan QoLS, the Flanagan's Quality of Life and Individual Needs Questionnaire (Weitzenkamp, Gerhart, Charlifue, & Whiteneck, 2000).

In studies using the Flanagan QoLS, the original Likert scale was maintained by some researchers (Weitzenkamp et al., 2000) but was modified to a 6-point scale by others (Crist, 1999). The instrument was further modified to a 7-point scale in the English version (7 = delighted, 6 = pleased, 5 = mostly satisfied, 4 = mixed, 3 = mostly dissatisfied, 2 = unhappy, and 1 = terrible) (Burckhardt & Anderson, 2003; Dantas, Motzer, & Ciol, 2002; Motzer & Stewart, 1996; Motzer, Hertig, Jarrett, & Heitkemper, 2003; Park, Jarrett, & Heitkemper, 2010), and in versions translated to other languages (from 7 = very satisfied to 1 = very dissatisfied) (Burckhardt, Archenholtz & Bjelle, 1992; Brogly, Mecier, Bruneau, Palepu, & Franco, 2003; Dantas, Gois, & da Silva, 2005; Dantas & Ciol, 2008). In the 7-point scale versions, the Flanagan QoLS ranges from 15 to 105 points, with larger values indicating better quality of life.

In a study investigating the psychometric properties of the Flanagan QoLS in four groups of people with chronic diseases, Buckhardt et al. (1989) proposed to augment the scale by including an item related to independence. In their study, the 240 interviewed participants frequently reported that for them it was important "to do things on their own," "to be independent," and "to try to maintain independency." The augmented 16-item chronic illness adapted version of the instrument was tested and showed to be valid when compared to the original 15-item version (Burckhardt & Anderson, 2003; Burckhardt, Anderson, Archenholtz, & Hagg, 2003) and has been called the Modified Flanagan Quality of Life Scale (Dantas et al., 2002; Dantas & Ciol, 2008; Motzer & Stewart, 1996;

Motzer et al., 2003; Park et al., 2010) or Adapted Version of the Flanagan Quality of Life Scale (Bruscia, Shultis, Dennery, & Dileo, 2008; Dantas et al., 2005). The scale of the augmented version varies from 16 to 115 points, with larger values indicating better quality of life.

Both versions of the Flanagan QoLS have been used in research related to quality of life of many groups of individuals. The original version has been used to evaluate quality of life of older adults (Crist, 1999; Carvalho, Gomes, & Loureiro, 2010; Joia, Ruiz, & Donalisio, 2007; de Moraes & Souza, 2005; Santos & Silva, 2002), nurses (Lentz, Costenaro, Gonçalves, & Nassar, 2000), long-term spinal cord injury survivors (Weitzenkamp et al., 2000), individuals with ▶ traumatic brain injury (Brown & Vandergoot, 1998; O'Neill et al., 1998), and injection drug users (Brogly et al., 2003). The 16-item version has been used in studies of women with ▶ irritable bowel syndrome (Motzer et al., 2003; Park et al., 2010), persons with cardiac disease (Bruscia et al., 2008; Dantas et al., 2002; Dantas et al., 2005; Dantas & Ciol, 2008; Motzer & Stewart, 1996), persons with sickle-cell disease (Asnani, Lipps, & Reid, 2009), and nursing practitioners (Schmidt & Dantas, 2006).

Quality of life as measured by Flanagan's perspective (Flanagan, 1978, 1982) has been found to be associated with other objective measures such as types of housing for older adults (Crist, 1999), as well as subjective constructs, such as ▶ self-esteem (Dantas et al., 2002; Motzer & Stewart, 1996), ▶ social support (Dantas et al., 2002; Motzer & Stewart, 1996), ▶ sense of coherence (Bruscia et al., 2008; Dantas et al., 2002; Motzer & Stewart, 1996; Motzer et al., 2003), disease symptoms (Motzer et al., 2003; Park et al., 2010), injury severity (O'Neill et al., 1998), ▶ health-related quality of life (Asnani et al., 2009; Dantas & Ciol, 2008), and quality of life at work (Schmidt & Dantas, 2006).

Discussion

Evaluation of quality of life of the general population as well as of individuals with chronic conditions is an important measure of the impact of healthcare on people's lives and can influence public and health policies (Flanagan, 1978), including prevention of diseases and treatment of people with chronic health conditions (Burckhardt et al., 2003). In health-related areas, there is a great interest in finding instruments that are sensitive to changes in quality of life due to changes in specific therapies. From this perspective, the use of the Flanagan QoLS may not be the best choice, given that it is a global measure of quality of life. However, if the objectives of a study go further than comparing symptoms and functional results of a therapy, focusing on the benefits that a certain therapy offers in order to obtain or maintain satisfaction with everyday life, the Flanagan QoLS may be a good option.

It is unclear whether there is a difference between the Flanagan 7-point scales using the English version "Delighted-Terrible" Scale (Burckhardt et al., 2003; Dantas et al., 2002; Motzer & Stewart, 1996; Motzer et al., 2003; Park et al., 2010) or the translations that use "very satisfied-very unsatisfied" (Brogly et al., 2003; Burckhardt et al., 1992 ; Dantas et al., 2005; Dantas & Ciol, 2008). It is possible that the anchoring terms have different meanings across different socioeconomical or cultural groups. Qualitative studies, such as ethnographic ones, could address this question, as we suspect that satisfaction may be underlined by social and cultural aspects that are not captured by the instrument's ordinal scale.

In a study of American persons who underwent bypass surgery, the authors found that the participants reported low satisfaction with their health status but high satisfaction with their lives as evaluated by the Flanagan QoLS (Dantas et al., 2002). In a similar study with Brazilian persons who underwent bypass surgery, the authors found that the participants reported scores in the Flanagan QoLS similar to their American counterparts (Dantas & Ciol, 2008). These results were not expected, since the study was conducted in a public hospital whose patients were mostly of low income and low education, conditions that were very

different from the ones observed in more developed countries such as the USA. The authors' original expectation was that the less favorable conditions in Brazil would reflect negatively in the level of satisfaction of the participants. These results suggest that the construct satisfaction with life as measured by the Flanagan QoLS may not measure the same construct under every population. More studies should be conducted to show how the construct of satisfaction with life is affected by social, economical, and cultural differences among populations.

Cross-References

- ▶ Health-Related Quality of Life
- ▶ Life Satisfaction
- ▶ Recreation
- ▶ Self-Esteem
- ▶ Sense of Coherence
- ▶ Social Support
- ▶ Work Life, Quality of

References

Asnani, M. R., Lipps, G. E., & Reid, M. E. (2009). Utility of WHOQOL-BREF in measuring quality of life in sickle cell disease. *Health and Quality of Life Outcomes, 7*, 75.

Brogly, S., Mecier, C., Bruneau, J., Palepu, A., & Franco, E. (2003). Towards more effective public health programming for injection drug user: Development and evaluation of the injection drug user quality of life Scale. *Substance Use & Misuse, 38*(4), 2125.

Brown, M., & Vandergoot, D. (1998). Quality of life for individuals with traumatic brain injury: comparison with others living in the community. *The Journal of Head Trauma Rehabilitation, 13*(4), 1–23.

Bruscia, K., Shultis, C., Dennery, K., & Dileo, C. (2008). Predictors of quality of life in hospitalized cardiac patients. *Journal of Health Psychology, 13*(8), 982–987.

Burckhardt, C. S., & Anderson, K. L. (2003). The Quality of Life Scale (QOLS): Reliability, validity, and utilization. *Health and Quality of Life Outcomes, 1*, 60.

Burckhardt, C. S., Anderson, K. L., Archenholtz, B., & Hagg, O. (2003). The Flanagan quality of life scale: Evidence of construct validity. *Health and Quality of Life Outcomes, 1*, 59.

Burckhardt, C. S., Archenholtz, B., & Bjelle, A. (1992). Measuring the quality of life of women with rheumatoid arthritis or systemic lupus erythematosus: A Swedish version of the Quality of Life Scale (QOLS). *Scandinavian Journal of Rheumatology, 21*(4), 190–195.

Burckhardt, C. S., Woods, S. L., Schultz, A. A., & Ziebarth, D. M. (1989). Quality of life of adults with chronic illness: A psychometric study. *Research in Nursing & Health, 12*(6), 347–354.

Carvalho, A. A., Gomes, L., & Loureiro, A. M. (2010). Smoking in elderly patients admitted to long-term care facilities. *Jornal Brasileiro de Pneumologia, 36*(3), 339–346.

Crist, P. A. (1999). Does quality of life vary with different types of housing among older persons? A pilot study. *Physical and Occupational Therapy in Geriatrics, 16*(3–4), 101–116.

Dantas, R. A. S., & Ciol, M. A. (2008). Quality of life after coronary artery bypass surgery. *Western Journal of Nursing Research, 30*, 477.

Dantas, R. A., Gois, C. F., & da Silva, L. M. (2005). Use of the adapted version of the flanagan quality of life scale with post-surgical cardiac patients. *Revista Latino-Americana de Enfermagem, 13*(1), 15–20.

Dantas, R. A., Motzer, S. A., & Ciol, M. A. (2002). The relationship between quality of life, sense of coherence and self-esteem in persons after coronary artery bypass graft surgery. *International Journal of Nursing Studies, 39*(7), 745–755.

de Moraes, J. F., & de Azevedo e Souza, V. B. (2005). Factors associated with the successful aging of the socially-active elderly in the metropolitan region of Porto Alegre. *Revista Brasileira de Psiquiatria, 27*(4), 302–308.

Flanagan, J. C. (1978). A research approach to improving our quality of life. *American Psychologist, 33*(2), 138–147.

Flanagan, J. C. (1982). Measurement of quality of life: Current state of the art. *Archives of Physical Medicine and Rehabilitation, 63*(2), 56–59.

Joia, L. C., Ruiz, T., & Donalisio, M. R. (2007). Life satisfaction among elderly population in the city of Botucatu, Southern Brazil. *Rev Saude Publica, 41*(1), 131–138.

Lentz, R. A., Costenaro, R. G., Goncalves, L. H., & Nassar, S. M. (2000). Nursing professionals and quality of life: An approach based on the dimensions proposed by Flanagan. *Revista Latino-Americana de Enfermagem, 8*(4), 7–14.

Motzer, S. A., Hertig, V., Jarrett, M., & Heitkemper, M. M. (2003). Sense of coherence and quality of life in women with and without irritable bowel syndrome. *Nursing Research, 52*(5), 329–337.

Motzer, S. U., & Stewart, B. J. (1996). Sense of coherence as a predictor of quality of life in persons with coronary heart disease surviving cardiac arrest. *Research in Nursing & Health, 19*(4), 287–298.

O'Neill, J., Hibbard, M. R., Brown, M., Jaffe, M., Sliwinski, M., Vandergoot, D., et al. (1998). The effect of employment on quality of life and community

integration after traumatic brain injury. *The Journal of Head Trauma Rehabilitation, 13*(4), 68–79.
Park, H. J., Jarrett, M., & Heitkemper, M. (2010). Quality of life and sugar and fiber intake in women with irritable bowel syndrome. *Western Journal of Nursing Research, 32*(2), 218–232.
Santos, V. L. C. G., & Silva, A. M. (2002). Qualidade de vida de pessoas com incontinência anal. *Rev Bras Coloproct, 22*(2), 98–108.
Schmidt, D. R., & Dantas, R. A. (2006). Quality of life at work among nursing professionals at surgical wards from the perspective of satisfaction. *Revista Latino-Americana de Enfermagem, 14*(1), 54–60.
Weitzenkamp, D. A., Gerhart, K. A., Charlifue, S. W., & Whiteneck, G. G. (2000). Ranking the criteria for assessing quality of life after disability: Evidence for priority shifting among long-term spinal cord injury survivors. *British Journal of Health Psychology, 5*, 57–69.

Flanagan's Quality of Life and Individual Needs Questionnaire

► Flanagan Quality of Life Scale

Flash Eurobarometer

► Eurobarometer

Flemish City Monitor

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Synonyms

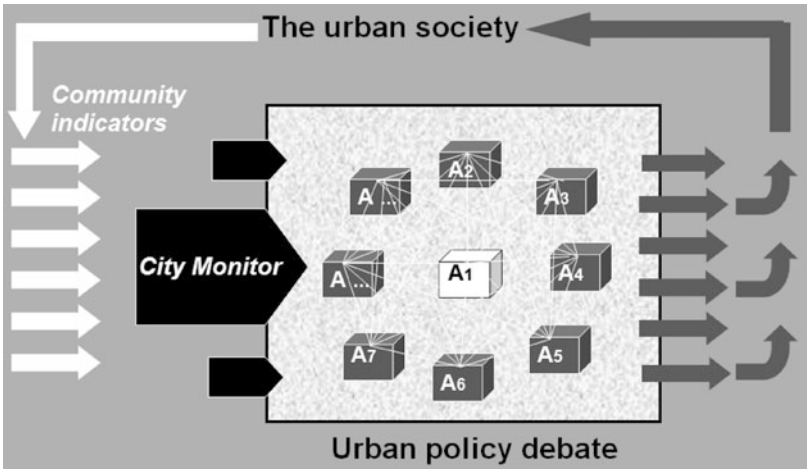
Flemish region (Belgium) development indicators; Indicators for sustainable and liveable Flemish cities; Sustainability indicators for liveable Flemish cities

Definition

The aim of the City Monitor is to provide better support for urban strategy building (of all urban actors and of the city government in particular) (see Fig. 1: A1 stands for the city authority and A2 till A... for all urban actors). The monitor provides the content determining strategic choices and processes of all urban actors, and therefore, it is an instrument at strategic level. This means that the City Monitor approaches the quality of urban life in an integrated way and also focuses on the future. This sort of broad focus corresponds closely to the needs-oriented approach of the concept of sustainable development (see "description of codesign"). At the same time, it requires selectively chosen community indicators and data that are compressed as far as possible.

The City Monitor has three functions. *It is a measuring instrument, containing ► community indicators relevant for a sustainable urban development*. These indicators show evolutions of factors and actors which form part of the urban society, as is indicated at the left part of Fig. 1. As a measuring instrument, the City Monitor must improve the quality of the urban state analysis. This kind of analysis must provide a good state of the art of the evolutions of relevant phenomena for a better quality of urban life. For instance, this applies to social and ecological evolutions, political developments, society needs, patterns of ► values, the perceptions of citizens and companies, and demographic evolutions.

The City Monitor is also a learning and communication tool, intended for all actors involved in urban development. The monitor is a learning instrument since it provides feedback about the evolution of complex phenomena. The social learning effects of the City Monitor are also reflected in the communication and discussion about indicators (how can indications be interpreted?), about the importance for the quality of urban life (what is the relevance of the indicators?), about the response by the urban actors (what could or should be done?), about the division of responsibilities (who should do what?), and about the composition of partnerships (how can people cooperate?). So, the monitor is also a communication tool about the city and its development, between the city authority, residents, the civil society, companies, etc.



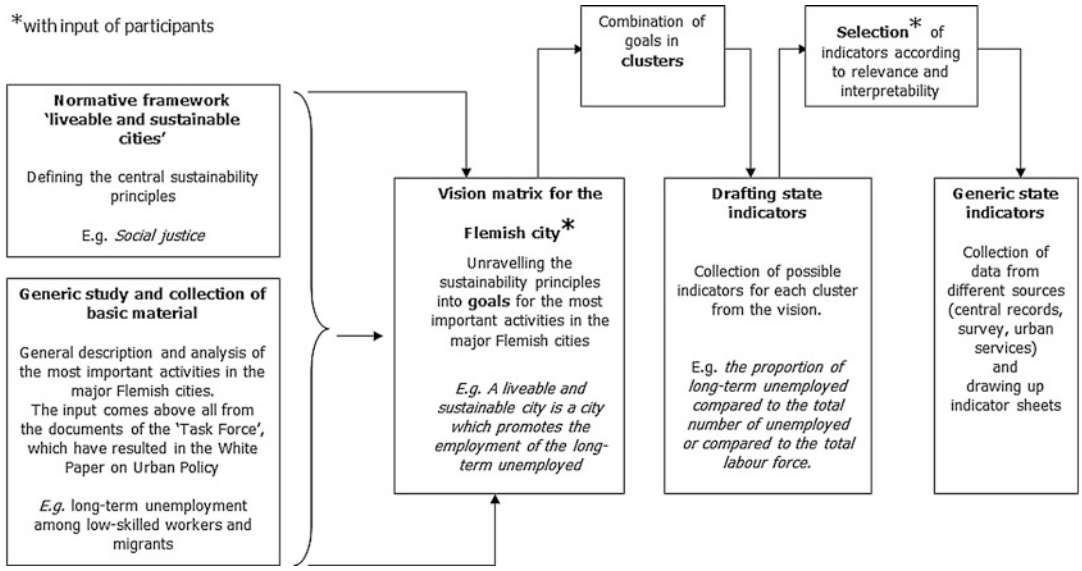
Flemish City Monitor, Fig. 1 Urban indicators, society and policy debate (Block et al., 2008)

Description

At the Centre for Sustainable Development of the Ghent University (http://www.cdo.ugent.be), the codesign methodology was used to develop sustainability indicators for 13 major cities in the Flemish region (in the North of Belgium). The main objective of this approach was to determine and select relevant and usable indicators, really alimenting the policy debate and subsequent decision making. The real challenge was to keep the broad and integrated focus toward all dimensions of the quality of urban life in the selection of measurable indicators, and to be aware of the objective that those indicators also needed to be relevant for the future generations in Flemish cities. To answer this challenge, the Flemish City Monitor was based on two connected concepts, namely, "► sustainability" and "► liveability."

The unravelling of the container concept of "sustainable development" was based upon theoretical insights about *needs and societal aspects of their satisfaction*. Inspiration came from an approach toward a "human scale development," as it was carried out in a project of the Dag Hammerskjöld Foundation (Max-Neef, a.o., 1989). Taking this theory into account, sustainability can be related to the satisfaction of needs of current and future generations. All generations are entitled to a good ► quality of life, and this means the carrying capacity of the earth must not be exceeded. In its translation by the world of politics, sustainability has been complemented by a strong emphasis on the needs of governments for participation and collaboration with all stakeholders. In sustainability research, the aforementioned focal points are often translated in economic, social, physical-ecological, and institutional pillars or principles. Moreover, we believe there are a lot of similarities between the concepts of *liveability* and sustainability, so, for example, both pay attention to satisfaction of needs, ► justice, or ► solidarity with the poor and quality of the living environment. At the same time there are several differences. So, for example, liveability stresses the short term, while sustainability accounts for the long term.

The clarification of the normative framework on liveability and sustainability was the key to the broad and integrative approach for the Flemish City Monitor (see definition). During this preparation, we have translated the *needs-oriented approach* into the aforementioned sustainability principles. After this preparatory phase, it took another three phases to develop the indicators between 2001 and 2004 (see Fig. 2): (1) vision building, (2) indicator selection, and (3) data collection. While highlighting the main elements of those phases in this encyclopedia, a more detailed description of the Flemish City Monitor can be found in an article of Van Assche, Block and Reynaert (2010). In the first two phases, hundreds of "experts" were involved. Those "experts"



Flemish City Monitor, Fig. 2 Participatory* design of urban sustainability indicators

participated in the development of these indicators, on the basis of their involvement in a better quality of life in Flemish cities. They came from different levels in government circles, the civil society, and academia.

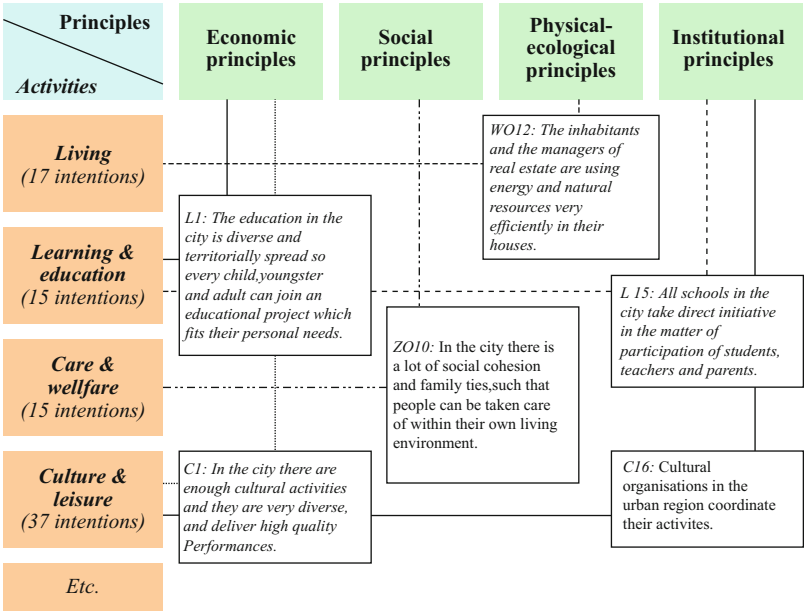
Phase 1: Vision Matrix on the Basis of Sustainability and Liveability

To actually start the construction of the Flemish City Monitor, we developed a vision for a liveable and sustainable Flemish city. We decided to combine the four above-mentioned sustainability principles with crucial activities in a (Flemish) city. Our focus on human activities is based on the capabilities approach of the Sustainable Europe Research Institute that established links between sustainable development, needs, well-being, and quality of life (Rauschmayer, a.o., 2011). This approach underpins common sense, saying that the purpose of all activities and strategies, people carry out, is the satisfaction of their needs. These activities or activity domains are closely related in practice to policy domains. As such, we interrelate activities with economic, social, physical-ecological, and institutional principles. This was done in the so-called *vision matrix*. The rows contain eight activity domains, that is, living, learning and ▶ education, working and enterprise, safety and protection, care and ▶ social welfare, ▶ culture and free time, ▶ transportation and ▶ mobility, and nature and the environment. The columns contain the four major principles of sustainability. In the cells of the matrix, where the columns and rows cross, the "intentions" are indicated according to a principle in an activity domain.

For an initial filling of the vision matrix, we used policy documents, originating from within the city authorities and Flemish government. By doing so, the conceptual principles of sustainability and liveability were translated into policy terms, recognizable by all stakeholders involved in the participatory process of building this umbrella vision on the future of Flemish cities. Figure 3 illustrates how the vision matrix combines rows and columns. The vision matrix is of course not limited to these six examples. In total, about 175 intentions or objectives were formulated, spread across the eight activity domains and the four principles (Block, Van Assche, Vandewiele, De Rynck, & Reynaert, 2008).

Phase 2: Selecting Community Indicators on a Participatory Basis

The vision matrix is an indispensable document because it offers the normative framework for the



Flemish City Monitor, Fig. 3 A diagram of the vision matrix using six examples

choice of relevant indicators. The selection of indicators was performed once again with the experts in question. During a second series of expert meetings, we thought about how we could link indicators to intentions in the vision matrix. We were strict and always looked for the *most desirable* or the best indicator to represent each cluster of intentions in the vision. In other words, we choose for a vision-driven approach. The selection was always accepted by a significant majority of the experts. As researchers, we could facilitate the debate in those meetings, while making use of a consistent and compelling story about satisfaction of needs of all citizens, the comparative needs of particular groups, and needs of the future generations. There, we used that story on human needs to select indicators relevant for all kinds of issues or topics in the actual urban policy debate. In contrast with the experiences of "Sustainable Seattle-like" indicator projects (Holden, 2006), the goal was not to get a smaller list of indicators but to get a set of relevant indicators for all kinds of policy issues relevant for a liveable and sustainable Flemish city. Once the input from the many meetings and contacts had been processed, we had a long list with about 640 "potential" indicators, each linked to elements from the vision matrix.

In accordance with the City Monitor philosophy, it was decided only to include indicators, displaying evolutions of relevant phenomena at a strategic level in urban areas. On the basis of *two selection criteria* (about relevance and interpretability), the draft indicators were selected to be part of the short list of the City Monitor. The selection process resulted in simple indicators that are attractive and accessible to opinion leaders and interested citizens. The screening of all 640 indicators was a difficult task because the stakeholders also had input into the evaluation of the two criteria. We presented (the reasons for) our choice during several consultations. If necessary, discussion among stakeholders was facilitated to build consensus in scoring the criteria. The final selection of indicators was made after this round of consultations with the commissioning parties and the 13 major cities.

Phase 3: Further Development of Sustainability Indicators

In the end, about 200 indicators were selected for full development and data collection. An indicator data sheet has been filled in with statistics,

registrations, surveys, and new data sources made available by the city authorities involved. The lack of data for up to one third of all indicators explains why we always looked for a good *second choice indicator*. For some indicators still no consensus had been reached over a common definition, and therefore, we developed so-called tracks. Those indicator tracks needed to be developed at a later stage. We do not drop them merely because we do not have the statistics yet. Indeed, that would reduce our vision matrix, and we would from that moment on fail to observe relevant phenomena of sustainable urban development.

The first City Monitor was published in 2004. At the end of 2011 a fourth edition was produced with more indicators and the actualization of all data (Bral, a.o., 2011).

Discussion

Can the community indicators of the Flemish City Monitor really feed the urban policy debate? To answer this question, three building blocks can be used in the design of the indicators. As a first building block, we adopt a value- and paradigm-critical approach in the field of information policy (Browne, 1997). So, in this case, we produced a normative framework on liveable and sustainable urban development in order to design and select relevant and interpretable indicators. To do so the "10 Bellagio principles" were useful. They constitute guidelines for measuring sustainability, design of sustainability indicators, and the interpretation of those indicators in the light of a vision on sustainability (Hardi and Zdan 1997). We argue that this approach also fits in a constructive epistemology of science (Carey and Smith 1993). As a matter of fact, the OECD also recently converted to a similar constructivist approach on measuring progress of societies (OECD, 2007).

Decision making always takes place in a context of uncertainty, while it is impossible to have perfect and complete information at any given time to make a decision (Simon, 1948). Therefore, the second building block of the Flemish City Monitor is to recognize the limits of available knowledge. Its community indicators are a working procedure that partially overcome this uncertainty. According to data experts, they are on the top of the information pyramid, which is based on the processing of data (Hammond et al., 1995). By collecting and processing data on phenomena in urban society, the city indicators are supporting decision making in a context of uncertainty and complexity.

And the recognition of complexity is the third building block. Since the nineties, political science has started to look at the steering of local communities on the basis of theories on network steering, using concepts as "local governance" (see among others Denters and Rose 2005; Goss, 2001; Miller et al., 2000). Looking from this governance perspective, decision making in urban politics is a rather complex phenomenon. Therefore, we argue that indicators have to be designed as input to *policy debates* about the main policy directions among the actors in the urban governance system. Indicators should be seeking to create a kind of *local knowledge* that influences policy debate, as they become internalized in the shared understanding of a community, which is engaged in democratic debate (Innes, 1990).

It should be noted that the use of the Flemish City Monitor will be studied in the near future. Hopefully it will be clear to what extent the community indicators really feed the urban policy debate.

References

Block, T., Van Assche, J., Vandewiele, D., De Rynck, F., & Reynaert, H. (2008). *Indicator set for sustainable urban development. City Monitor for liveable and sustainable Flemish cities. 2006 Edition*. Brussels: Flemish Government, (free publication on www.UPRC.UGent.be).

Bral, L. e.a., (2011). City Monitor 2011, A monitor on livable and sustainable Flemish cities, Brussels: Flemish Government, p373.

Browne, M. (1997). The field of information policy: 2. Redefining the boundaries and methodologies. *Journal of Information Science, 23*(5), 339–351.

Carey, S., & Smith, C. (1993). On understanding the nature of scientific knowledge. *Educational Psychologist, 28*(3), 235–251.

Denters, B., & Rose, N. (2005). *Comparing local governance: Trends and developments*. Basingstoke: Palgrave Macmillan.
Goss, S. (2001). *Making local governance work: Networks, relationships and the management of change*. Basingstoke: Palgrave Macmillan.
Hammond, A., Adriaanse, A., & Rodenburg, E., e. a., (1995). *Environmental indicators : a systematic approach to measuring and reporting on environmental policy performance in the context of sustainable development,* Washington (DC): World resources institute.
Hardi, P., & Zdan, T. (1997). *Assessing sustainable development, principles in practice*. Winnipeg, Canada: International Institute for Sustainable Development. 175 p.
Holden, M. (2006). Revisiting the local impact of community indicators projects: Sustainable Seattle as prophet in its own land, in. *Applied Research in Quality of Life Journal, 1*(3–4), 253–277. (25).
Innes, J. E. (1990). *Knowledge and public policy: The search for meaningful indicators*. Rutgers/New Brunswick/New Jersey: Transaction Books.
Max-Neef, M. e.a., (1989). Human Scale Development, in: *Development dialogue*, Dag Hammarskjöld Foundation, Uppsala, 1, pp 1–80.
OECD, (2007). Measuring the progress of societies, Istanbul declaration of the world forum on statistics, knowledge and policy, Istanbul, 27–30 June 2007.
Rauschmayer, F., Omann, I., Frühmann, J. (Hrsg.), (2011). *Sustainable development: capabilities, needs, and well-being*. Routledge studies in ecological economics 9, London: Routledge.
Simon, H. A. (1948). *Administrative behavior: A study of decision-making processes in administrative organization*. New York: Free Press.
Van Assche, J., Block, T., & Reynaert, H. (2010). Can community indicators live up to their expectations? The case of the Flemish city monitor for livable and sustainable urban development. *Applied Research Quality Life, 5*, 341–352.

Flemish Region (Belgium) Development Indicators

▶ Flemish City Monitor

Flexible Employment

▶ Casual Employment

Flexible Work

▶ Home-Based Work
▶ Part-Time Work

Flexicurity

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Synonyms

Flexi-security at work; Security and flexibility at work

Definition

The *European Employment Strategy* (EES) called for labor market institutions to adopt *flexicurity* principles, and Guideline no. 21 of the *Integrated Guidelines for Growth and Employment* for the period 2005–2008 called on Member States to "[. . .] promote flexibility combined with employment security and reduce labour market segmentation."

The *2005/2006 Joint Employment Report* (JER) stated that the four common principles on *flexicurity* should comprise (1) *availability of contractual arrangements*, providing adequate flexibility for both workers and employers to shape relationship according to their needs; (2) *effective active labor market policies*, supporting transitions between jobs as well as from unemployment and inactivity to jobs; (3) *credible lifelong learning systems*, enabling workers to remain employable throughout their careers; and (4) *modern social security systems*, facilitating labor mobility and adequate income support during absences from the labor market.

Description

The Concept of Labor Market Flexibility

In October 1985, with continued attention focussed on labor market flexibility, OECD Secretary-General Jean-Claude Paye established a *High-Level Group of Experts* with a background in business, labor, and government to review the entire field of labor market flexibility and to report on the available policy options (OCDE, 1986). The group (Dahrendorf et al., 1986) identified six categories of labor market flexibility and made policy recommendations on each of them: (1) labor costs; (2) conditions of employment, strike the balance between workers' desire for job security and the needs of economic efficiency; (3) work practices and work patterns; (4) rules and regulations; (5) mobility; and (6) education and training.

Despite the previous, the standard concept of labor market flexibility that the OECD finally used in its 1994 *Jobs Studies* (OCDE, 1994) only focussed on the issue of employment protection legislation (EPL) and, in particular, on the strictness in hiring and firing labor contract conditions. Moreover, the OECD constructed summary indicators to measure *strictness* of employment protection in most advanced countries and ranked them accordingly in different domains of the work contract.

The EU Policy Approach to the *Flexibility-Security Nexus*

The above OECD approach to labor market flexibility created a widespread dissatisfaction among policy-makers (Brodsky, 1994). By the mid-1990s, the European Commission started to use the term *flexi-security* to name those policy approaches aiming at reconciling the need for flexibility by companies to adjust for adverse macroeconomic shocks, together with worker's legitimate claim for security. After the *Luxembourg Jobs Summit* of November 1997, and within the *European Employment Strategy*, the attention paid to the *flexibility-security nexus* was addressed in the first *1998 Employment Policy Guidelines* where social partners were invited to modernize work organization to improve the competitiveness and strike the balance between flexibility and security.

The *Vienna European Council* of December 1998 consolidated the *European Employment Strategy* which set up the *1999 Employment Guidelines* which were organized around four pillars: (1) employability, (2) entrepreneurship, (3) adaptability, and (4) equal opportunities. The *adaptability* pillar proposed a new partnership between the social partners to modernize the organization of work and to invest in human resources. In other words, it aimed at finding the right balance between flexibility for the employers and the security for the employees by means of (1) modernizing the organization of work and developing strategies for lifelong learning; (2) modernizing the legislation of labor contracts to allow for a wider contract diversity and to make possible professional security and career prospects; (3) re-examining the obstacles to invest in human resources and improve the incentives for on-the-job training; and (4) creating a *High-Level Group of Experts* to examine the consequences of economic and social change.

The Definition of Labor Market *Adaptability*

The *1999 Employment Guidelines* broadened the OECD's view on labor market flexibility. They aimed at enhancing the capacity of the labor force to smoothly accommodate to a changing technological environment and to conform to economic shocks.

According to this wider approach, the European Commission services and academics (Sanchis, 2000, 2001) proposed a definition of labor market *adaptability* by focussing on the following dimensions:

1. *Potential availability of labor supply*: to improve the incentives to make work pay.
2. *Health and safety provisions of the labor force and its implementation*: as they reflect an important aspect of the employability of the labor force.
3. *Education and training of the labor force addressed at three levels*: the global level of education, the involvement of employees in updating and upgrading their skills, and the training for the unemployed.

4. *Capacity to utilize new technology*: to assess the labor force capacity to adapt to a changing technological environment.
5. *Degree of flexibility in working time*: to reflect both the capacity of labor supply to better fulfill the companies' production requirements and allow for the reconciling of working time with family life and for improving workers' capacity to choose between consumption and leisure.
6. *Industrial relations*: from both macro- and microeconomic perspective. At micro level, the relevant concept concerns workers' involvement in their respective companies; from a macro viewpoint, industrial relations refer to cooperation between social partners and governments and their capacity and willingness to reach agreements (industrial, wage, etc.) and pacts (social, employment, etc.).
7. *Labor costs flexibility*: downward rigidity of wages is considered to be an element which prevents an economy to adjust to shocks (macroeconomic) and hinders foreign cost competitiveness of enterprises (microeconomic). Therefore, wage developments have to comply with a certain number of rules governing the relation between nominal wages and inflation targets as well as between real wages and productivity and work effort. As a result, there is a need to address wage adjustment mechanisms on regional, sectoral, and skill levels.
8. *Labor taxation*: to understand to which extent the worker's efforts to accept moderate wage increases are fully or partly felt by companies as having a cost-cutting impact. Labor taxation should include not only social contributions, which are the main component, but also other taxes on labor such as personal income taxes, wage taxes, and payroll taxes.
9. *Contract flexibility*: this considers the employment protection legislation, namely, hiring and firing conditions and length of the contracts (fixed term, limited contracts), as they may refrain entrepreneurs from hiring additional workers and might induce a *hoarding effect* which, in turn, may have an adverse impact on job creation.
10. *Labor mobility*: which determines the capability of labor markets to smoothly cushion macroeconomic shocks. The concepts of geographical, occupational, and cross-sectoral mobility are relevant in the definition of labor market *adaptability*. Labor mobility can also comprise the quality of national employment services.

As a follow-up of the previous – and with the aim of broadening the OECD notion of flexibility – the Commission services launched three calls for tender to both set up a new approach of labor market flexibility and provide summary indicators measuring labor market *adaptability*. In them, *adaptability* referred to the labor force capacity to adapt to technological, economic, social, and demographic change by improving its employability and by modernizing the work organization. During 2000–2002, the Commission services organized several seminars in which the final results of the studies were presented. On the basis of the above ten factors, the first report (Scheerlinck et al., 2000) calculated a summary index of labor market *adaptability* for each EU Member State and allowed for comparisons for years 1993–1995.

The second report (Boeri, Garibaldi, Macis, & Maggioni, 2002) defined labor market *adaptability* as the ability of the labor market to (1) provide *protection* against uninsurable labor market risk, (2) provide *training* to ensure that labor skills continuously match the demand, (3) preserve an efficient degree of geographical *mobility* and mobilize labor supply, and (4) ensure *sizable* labor force.

The third study (Algoé & Alphametrics, 2001) was more extensive and made no attempt to construct a single composite index of adaptability. Instead, it concentrated in identifying and developing the following aspects of *adaptability*: (1) *availability of labor*, as measured by the participation in the work force of specific sections of working-age population; (2) *participation of young people in education and initial vocational training*, which is a key determinant of the skills of new entrants to the labor market, and the

participation of those in employment to continuing training, to extend and update their skills; (3) *mobility of labor*, between jobs and by the time taken to find a job by those becoming unemployed and those entering or reentering the labor market; and (4) *flexibility of working time arrangements*, which, as recognized in the *Employment Guidelines*, is potentially an important determinant both of the ability of people, and women in particular, to join the work force and of employers to respond to changing patterns of consumer demand. Other essays to measure labor market adaptability by means of an index were also undertaken thereafter (Tinsley & Monastiriotis, 2007).

The Concept of *Flexicurity* by the European Commission

Most of the above elements of labor market *adaptability* are also present in the definition of *flexicurity* put forward by the European Commission (European Commission, 2006a, 2006b, 2007, and 2010) and labor economists (Madsen, 2004, Muffels & Luijkx, 2008, Nunziata, 2008, Origo & Pagani, 2009, Royuela & Sanchis, 2010). The growing interest on the concept of *flexicurity* resulted from the perceived dichotomy between, on the one hand, companies' quest for increased flexible work contracts to cope with changing market demand conditions and, on the other, workers' claim for income security and brighter career prospects. The *European Employment Strategy* (EES) called for labor market institutions to adopt *flexicurity* principles, and Guideline no. 21 of the *Integrated Guidelines for Growth and Employment* for the period 2005–2008 called on Member States to "[. . .] promote flexibility combined with employment security and reduce labour market segmentation [. . .]."

Similarly, the *Annual Progress Report* (APR) adopted in January 2006 called on Member States to "[. . .] seek convergence views on the balance between flexibility and security (i.e. flexicurity)" and emphasized that the European Commission was committed to present a report aimed at facilitating an agreement on a set of common principles on *flexicurity*. Finally, the *2005/2006 Joint Employment Report* (JER) stated that these four principles should comprise (1) *availability of contractual arrangements*, providing adequate flexibility for both workers and employers to shape relationship according to their needs; (2) *effective active labor market policies*, supporting transitions between jobs as well as from unemployment and inactivity to jobs; (3) *credible lifelong learning systems*, enabling workers to remain employable throughout their careers; and (4) *modern social security systems*, facilitating labor mobility and adequate income support during absences from the labor market.

By mid-2006, the Council put the issue of *flexicurity* at the very center of the EU political agenda, and in December 2007, the European Council endorsed the agreement on the four common principles on flexicurity reached in the Council on 5/6 December 2007: (1) flexible and reliable contractual arrangements, (2) comprehensive lifelong learning strategies, (3) effective active labor market policies, and (4) modern social security systems. Finally, the European Council invited Member States to take these principles into good account when developing and implementing national *flexicurity*-orientated policies. The European Council welcomed the joint analysis of the European social partners on the labor markets and underlined their important role in the design, implementation, and monitoring of *flexicurity* policies.

The Concept of *Flexicurity* in the Netherlands: Wilthagen's Definition

The term *flexibility*, perceived as a certain type of labor market policy or strategy, has been first described as "A policy strategy that attempts, synchronically and in a deliberate way, to enhance the flexibility of labour markets, work organisation and labour relations on the one hand, and to enhance security – employment security and social security – notably for weaker groups in and outside the labour market, on the other hand" (Wilthagen & Rogowski, 2002).

To make empirical research possible, this definition of *flexicurity* is rather strict as it

emphasizes elements such as *synchronization*, *deliberate*, and *weaker groups*. First, *synchronization* means that both flexibility and security have to be developed simultaneously; therefore, reform strategies promoting labor market segmentation or considering flexibility and security separately are ruled out. Second, the term *deliberate way* does not exclude the role played by market forces, financial incentives, fiscal measures, and public or private agencies. Finally, *weaker groups* refer to both in and out of the labor market, so any measure or policy strategy aimed at enhancing exclusively the security – as expressed in terms of employment, income, or social protection – of the group of insiders or protected people in employment at the expense of the group of outsiders or unprotected workers does not fall into the *flexicurity* definition.

Beyond this initial definition, a broader and more operational definition of *flexicurity* underlining certain attributes of the labor market has been proposed: "Flexibility is (1) a degree of job, employment, income and *combination* security that facilitates the labour market careers and biographies of workers with a relative weak position and allows for enduring and high quality labour market participation and social inclusion, while at the same time providing (2) a degree of numerical (both external and internal), functional and wage flexibility that allows for labour markets' (and individual companies') timely and adequate adjustment to changing conditions in order to maintain and enhance competitiveness and productivity" (Wilthagen & Tros, 2004).

This latter definition identifies four dimensions of both flexibility and security as types of trade-offs:

(a) *Flexibility dimension*: (1) *external-numerical flexibility*, degree of rigidity in hiring and firing conditions and the use of fixed-term contracts; (2) *internal-numerical flexibility*, difficulty/ease in changing the quantity of labor used in a firm without having recourse to either hiring or separations (i.e., through changes in working hours, use of part-time work, overtime work, *kurzarbeit*); (3) *functional flexibility*, difficulty/ease to change the working organization or the ability/inability of workers and enterprises to adapt to new challenges (multitasking, job rotations, etc.); and (iv) *wage flexibility*, degree of responsiveness of wage costs to economic conditions.

(b) *Security dimension*: (1) *job security*, expectations concerning job tenure of a specific job; (2) *employment/employability security*, expectations regarding remaining in work, though not necessarily with the same employer; (3) *income security*, degree of income protection in case work paid ceases; and (4) *combination security*, ability/inability to combine paid work with other private or social activities.

Depending on the level at which these trade-offs take place, they might involve individual workers, groups of workers, the whole labor force, sectors of business, or national government systems at different levels. These four types of flexibility (external-numerical, internal-numerical, functional, and variable pay), together with the four types of security (job, employment, income, and combination), result in the so-called flexicurity matrix which reflects the various types of flexibility versus security trade-offs and help classifying national labor markets into distinct groups or clusters characterized by certain commonalities.

The main thrust of this approach is consistent with the EU policy recommendations (*EU Integrated Guideline no. 21*) and with the several proposals on the concept of labor market *adaptability* put forward by the European Commission services and further developed by the above-mentioned studies under its funding and academic guidance. Despite the previous, several attributes of the labor markets which are potentially relevant for an efficient functioning of labor markets have been left out in the definition of *flexicurity*. Indeed, when comparing the *adaptability* and *flexicurity* concepts, it should be emphasized that the first includes some dimensions which are relevant for the well functioning of labor markets. This is the case of some *labor regulations* such as health and safety at work, the

size of the tax wedge – and, in general, the tax burden on labor – and the *potential availability of labor supply* which requires, among others, an efficient social protection system to create the right incentives to make work pay.

The Concept of *Flexicurity* in Denmark: Madsen's Definition

As *flexicurity* is a multidimensional concept, it has also been taken up in a number of other countries, as they tried to translate the flexibility-security debate into their respective institutional realities and historical traditions in labor market and industrial relations. The Danish *flexicurity model* is reflected in the form of the so-called golden triangle of flexicurity which depicts a kind of hybrid employment system consisting of (1) *nonrestrictive employment protection legislation* (EPL) allowing employers to dismiss workers with short notice, (2) *tightly knit social safety net* for the unemployed, and (3) *high spending on active labor market policies* (ALMP) for the unemployed.

The intense and mutual relationship between a flexible labor market and generous welfare schemes reflects a key feature of the Danish *flexicurity model*. In Denmark, there is a high degree of mobility in and out of employment and between jobs: (1) mobility of workers between jobs is surprisingly high, and recent studies found an average rate of turnover of about 30 %, and (2) Denmark ranks at the low end of the international scale in terms of average tenure.

The Danish welfare system is characterized by *universalism*, while economic support for the unemployment is based on a *two-tier system*:

(a) *Members of a voluntary unemployment insurance fund*: who are the majority, around three quarters, and receive unemployment benefits at the rate of 90 % of the reference earnings – average earnings of preceding 12 weeks or 3 months, contributions to the Labor Market Fund (*Arbejdsmarkedsfonden*) deducted – certain unemployed are entitled to 82 % of the maximum amount regardless of reference earnings, but in January 2007 not more than DKK 3,110 (€ 417) per week. Unemployment benefits may be claimed from the first day of unemployment and for a maximum of 4 years, including periods of activation.

(b) *Nonmembers of the unemployment insurance fund*: who are a minority among the unemployed – around one quarter – and receive means-tested social security cash benefits, at a level of around 80 % of normal unemployment benefits for adult family breadwinners.

This two-tier system applies for the active labor market policy. Insured unemployed are under the auspices of the state-run Public Employment Services (PES), while the uninsured unemployed are activated by the municipalities, who in general are responsible for social policy measures. After a certain period, the unemployed who has been unable to find a job can benefit from Public Employment Service referral to one of the comprehensive set of ALMPs, aimed at upgrading the skills or at facilitating adaptation to economic change, thereby supporting individual transitions and career development. The unemployed person seeks work more actively in the period immediately prior to the participation in a mandatory activation program. Therefore, support from generous welfare systems together with activation policies makes the unemployment person more motivated to search jobs (*motivational effect*), whereas robust active labor market policies upgrade their qualifications improving the possibilities to find a job (*training or qualification effect*).

Despite all of the above, it should be borne in mind that the Danish version of *flexicurity* is the outcome of the Danish traditions and should be taken only as a source of inspiration rather than as a model to be implemented mechanically. As labor market's institutions have good reasons to exist and reflect the various countries' traditions, a direct and simple transposition from one country to another constitutes a purpose design recipe for catastrophe. Moreover, the attractiveness of those institutions and policy approaches cannot be assessed by taking each element in isolation but, rather, as a bundle of attributes in connection with every country's tradition.

Cross-References

- ▶ Job Satisfaction
- ▶ Job Security
- ▶ Workplace Flexibility

References

Algoé and Alphametrics. (2001, October). *Construction of an index of labour market adaptability for EU Member States, the US and Japan by a common methodology and with a network of experts* (102 pp.). Report to the European Commission. Lyon, France: European Commission, DG EMPL.

Boeri, T., Garibaldi, P., Macis, M., & Maggioni, M. (2002, June). *Adaptability of labour markets: A tentative definition and a synthetic indicator* (59 pp.). Report to the European Commission. Milan, Italy: European Commission, DG EMPL.

Brodsky, M. M. (1994, November). Labor market flexibility: A changing international perspective. *Monthly Labor Review, 117*(11), 53–60.

COM. (2010). *682 Final: An agenda for new skills and jobs: A European contribution towards full employment* (21 pp.). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.

COM. (2011). *11 Final: Annual growth survey, Annex 3, Draft joint employment report* (13 pp.). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.

Dahrendorf, R., Aubry, M., Fraser, D., Isaac, J., Johansson, L., Kobayashi, Y., O'Sullivan, H. (1986). Labour market flexibility. Report by a group of experts. *Economia e Lavoro, Luglio-Settembre, 20*(3), 3–19.

European Commission. (2006a). *Time to move up a gear*. The European Commission's 2006 annual progress report on growth and jobs. Luxembourg, Grand Duchy of Luxembourg: European Commission.

European Commission. (2006b). *More and better jobs: Delivering the priorities of the European employment strategy* (19 pp.). Joint employment report 2005/2006. European Commission.

European Commission. (2007). *Towards common principles of flexicurity: More and better jobs through flexibility and security*. Luxembourg, Grand Duchy of Luxembourg: Directorate-General for Employment Social Affairs and Equal Opportunities, European Commission. 38 pp.

European Commission. (2010). *New skills for new jobs: Action now. A report by the expert group on new skills for new jobs prepared for the European Commission*. Luxembourg, Grand Duchy of Luxembourg: Directorate-General for Employment Social Affairs and Equal Opportunities, European Commission. 33 pp.

Madsen, P. K. (2004). The Danish model of 'flexicurity': Experiences and lessons. *Transfer: European Review of Labour and Research, 10*(2), 187–207.

Muffels, R., & Luijkx, R. (2008). Labour market mobility and employment security of male employees in Europe: 'Trade-off' or 'flexicurity'? *Work Employment and Society, 22*, 221–242.

Nunziata, L. (2008). European employment and the flexicurity option. *CESifo DICE Report, 4*, 21–28.

OECD. (1986). *Labour market flexibility. Report by a high-level group of experts to the secretary-general*. Paris, OECD.

OECD. (1994). *The OECD jobs study, evidence and explanations, Part II: The adjustment potential of the labour market*. Paris, OECD.

Origo, F., & Pagani, L. (2009). Flexicurity and job satisfaction in Europe: The importance of perceived and actual job stability for well-being at work. *Labour Economics, 16*, 547–555.

Royuela, V., & Sanchis, M. (2010). La flexiguridad como atributo clave de un mercado de trabajo adaptable. *Papeles de Economía Española, Madrid, 124*, 109–127.

Sanchis, M. (2000). Perturbaciones macroeconómicas, políticas de ajuste y adaptabilidad del mercado de trabajo. *Información Comercial Española, 784*, 123–134.

Sanchis, M. (2001, September). Employment performance, economic growth and labour market adaptability. *Labour market flexibility proceedings of a joint United States and European Union seminar* (pp. 28–68). U.S. Department of Labour.

Scheerlinck, I., Pans, M., & S'jegers, R. (2000). *An index of labour market adaptability: A conceptual and statistical approach* (21 pp.). Report to the European Commission. European Commission, DG EMPL.

Tinsley, D., & Monastiriotis, V. (2007). Developing an index of labour market adaptability for the UK. *Employment Relations Research Series, 85*, 40.

Wilthagen, T., & Rogowski, R. (2002). Legal regulation and transitional labour markets. In G. Schmid & B. Gazier (Eds.), *The dynamics of full employment social integration throughout transitional labour markets* (pp. 233–273). Cheltenham, UK: Edward Elgar.

Wilthagen, T., & Tros, F. (2004). The concept of 'flexicurity: A new approach to regulating employment labour markets. *Transfer: European Review of Labour and Research, 10*(2), 166–186.

Flexicurity Indicators

- ▶ European Union Indicators

Flexi-security at Work

► Flexicurity

Flexi-work

► Work, Alternative/Flexible Arrangements

Flexplace

► Workplace Flexibility

Flextime

► Workplace Flexibility

Floodplain Forest

► Wetland(s)

Floor Effect

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Definition

The floor effect is said to occur when participants' scores cluster toward the bottom end (or worst possible score) of the measure/instrument. The opposite is the ceiling effect.

Description

See "► ceiling effect."

Cross-References

► Ceiling Effect

Florence, Quality of Life

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Definition

Florence (Firenze) is a city in the central interior of the region of Tuscany (Toscana), center of Italy.

Description

Florence is the most populous city in the region of Tuscany (Italy) lying on the Arno River, with about 370,000 inhabitants (1,500,000 in the metropolitan area).

The city is known for its history and its importance in the Middle Ages and in the Renaissance when it was one of the wealthiest cities, center of European trade and finance.

Florence, known especially for its art and architecture and, more generally, for its cultural heritage, is considered the birthplace of the Renaissance.

From 1865 to 1870, the city was also the capital of the recently established Kingdom of Italy.

The city, world renowned for its history, culture, Renaissance art and architecture, and monuments, attracts millions of tourists each year and is considered one of the most visited and beautiful cities in the world. The historic center of Florence was declared a World Heritage Site by UNESCO in 1982.

Florence is also a university center (University of Florence) and is the seat of the Italian National Library (one of the most important in Europe).

The annual benchmarking exercise accomplished by the Italian national daily business newspaper *Il Sole 24 Ore* during the last 20 years on quality of life and liveability on the 107 Italian provinces through 36 composite statistical indicators classifies Florence always at the top ranks.

In 2003 Florence reached the first rank in that ranking. In the same year, the Department of Statistics at the University of Florence was commissioned by the city of Florence to conduct a research project regarding the citizens' perception and evaluation of the quality of life in the city (Annicchiarico et al., 2005; Maggino, 2006a, 2006b).

The focus of the study was to identify residents and develop programs and policies to enhance their quality of life. The study also attempted to develop specific indicators of quality of life aimed at measuring and assessing the levels of suitability of the living conditions that the city of Florence offers to its inhabitants. The identified sample was composed by 1,200 residents, interviewed through a structured questionnaire (Annicchiarico et al., 2005).

From the policy point of view, that study provided a cue for a variety of considerations. The used approach well-synthesized information, which makes it possible to depict the composite descriptions necessary to develop strategies and policies aimed to specific urban areas, segment of population, or particular urban urgent situation. Nevertheless, public policy officials need to be aware of some concerns regarding data synthesis and analysis (an excessive synthesis may represent always a risk, especially in the presence of multidimensional characteristics) and the necessity to rely on the possibility to create a reliable and longitudinal database.

Both the annual benchmarking, carried out by *Il Sole 24 Ore*, and the survey accomplished by the University of Florence in 2003 pointed out what are Florence's strong points in terms of high level of quality of life, such as the cultural environment and the public health services.

Cross-References

▶ Urban Quality of Life

References

Annicchiarico, C., Maggino, F., Mola, T., & Schifini D'Andrea, S., (eds.) (2005). *La qualità della vita a Firenze*, Serie "La statistica per la città" Comune di Firenze. Retrieved from http://statistica.fi.it/opencms/multimedia/documents/1265186859582_Comune_di_Firenze_-_La_qualita_della_vita_a_Firenze.pdf (last retrieval date: February 25, 2013)

Maggino, F. (2006a). Definition and analysis of subjective indicators of urban quality-of-life in an 'atypical' city. In W. Ostasiewicz (Ed.), *Towards quality of life improvement*. Wroclaw, Poland: The Publishing House of the Wroclaw University of Economics.

Maggino, F. (2006b). Perception and evaluation of the quality of life in Florence, Italy. In M. J. Sirgy, D. Rahtz, & D. Swain (Eds.), *Community quality of life indicator – Best cases II* (Social indicators research series, Vol. 28). Dordrecht, Netherland: Springer.

Florida Wetland Condition Index

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Definition

Ecological condition – the current state of a resource compared to reference standards for physical, chemical, and biological characteristics.

Ecological integrity – the condition of an unimpaired ecosystem as measured by combined chemical, physical, and biological attributes.

Florida Wetland Condition Index (FWCI) – a series of separate multi-metric indices developed for three freshwater wetland systems in Florida for diatom, macrophyte, and macroinvertebrate communities. Individual metrics are scored and combined within each

biological community group to obtain a single value reflective of wetland condition.

Reference standard condition – the condition of ecosystems thought to represent the best possible condition currently in existence, considered to be the least altered systems that are reflective of characteristic levels of ecosystem function.

Description

The Florida Wetland Condition Index (FWCI) is a collection of community-specific indices of biotic integrity developed for three types of freshwater wetlands: depressional marshes, depressional forested wetlands, and flowing-water forested wetlands (i.e., forested strands and floodplain wetlands). The FWCI relies on biological indicators described through metrics, which are combined to inform a quantitative value of wetland condition. Karr and Chu (1997) defined metrics as biological attributes that have consistent and predictable responses to anthropogenic activities. Anthropogenic activities can alter the condition of wetland ecosystems by causing one or more of the following conditions: eutrophication, contaminant toxicity, acidification, salinization, sedimentation, burial, thermal alteration, vegetation removal, turbidity, shading, dehydration or inundation, and habitat fragmentation (Danielson, 1998).

The working definitions of the United States Environmental Protection Agency (USEPA) 2011 National Wetlands Condition Assessment (NWCA) for condition (i.e., current state of a resource compared to reference standards for physical, chemical, and biological characteristics) and ecological integrity (i.e., condition of an unimpaired ecosystem as measured by combined chemical, physical, and biological attributes) have been adopted. These build upon the definition of integrity from Karr and Dudley (1981, p. 56), defining integrity as "the ability of an aquatic ecosystem to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitats of the region."

Metrics were developed for depressional wetlands using diatoms, macroinvertebrates, and macrophytes wetland community data; metrics for forested flowing-water systems were developed using macrophytes community data. Metrics were explored in five main categories: (1) tolerance metrics determined with indicator species or established index values, (2) autecological metrics that explored a previously described relationship between taxa and an environmental gradient, (3) community structure metrics that explored taxonomic structure, (4) community balance metrics with calculated values, such as evenness or dominance, and (5) functional group metrics related to feeding behavior. Further details are provided in Lane, Brown, Murray-Hudson and Vivas (2003), Lane (2007), Lane and Brown (2006, 2007), Reiss (2004, 2006) and Reiss and Brown (2005). Iterative tests of each dataset were conducted to ascertain distinctions between a priori land use categories (i.e., reference, agricultural, urban), and correlations were made with the Landscape Development Intensity (LDI) index, a quantitative gradient of human disturbance (Brown & Vivas, 2005).

Diatom FWCI

The diatom FWCI for depressional marshes and depressional forested wetlands shares seven metrics (Table 1). Sensitive and tolerant indicator taxa are specific to wetland type. Five additional metrics shared by depressional wetlands are based on established ecological indicator values from published tolerances to particular physical/chemical conditions for each diatom species (i.e., pollution tolerant, tolerant of elevated nitrogen, meso- and polysaprobous, tolerant of elevated pH, and sensitive to low dissolved oxygen). [Meso- and polysaprobous diatoms are defined as those inhabiting aquatic environments with oxygen saturation between 10 % and 25 % and a biological oxygen demand (BOD) of 13–22 mg/l (van Dam, Mertens, & Sinkeldam, 1994)].

Macrophyte FWCI

Three metrics (sensitive indicator taxa, tolerant indicator taxa, and exotic taxa) occur within the

Florida Wetland Condition Index, Table 1 Florida Wetland Condition Index (FWCI) metrics for depressional marshes, depressional forested wetlands, and flowing forested wetlands (From Reiss et al. 2010)

Diatom FWCI metrics			
Shared metrics	*Depressional marshes*	*Depressional forested*	*Flowing forested*
Sensitive indicator taxa	Sensitive elevated pH (1)[a]	No additional metrics	No diatom FWCI
Tolerant indicator taxa	Sensitive elevated salinity (1)[a]		
Pollution tolerant (1)[a]	Tolerate elevated salinity (3)[a]		
Tolerate elevated nitrogen (3)[a]	Sensitive elevated nitrogen (1)[a]		
Meso- and polysaprobous (4)[a]	Tolerate low dissolved oxygen (4)[a]		
Tolerant elevated pH (3)[a]	Oligotrophic (1 and 2)[a]		
Sensitive low dissolved oxygen (1)[a]	Eutrophic (5)[a]		
Macrophyte FWCI metrics			
Shared metrics	*Depressional marshes*	*Depressional forested*	*Flowing forested*
Sensitive indicator taxa	Ratio of annual to perennial species	Native perennial species	Native perennial species
Tolerant indicator taxa	Mean coefficient of conservatism score	Floristic Quality Assessment Index (FQAI) score	Floristic Quality Assessment Index (FQAI) score
Exotic species		Wetland indicator status	
Macroinvertebrate FWCI Metrics			
Shared metrics	*Depressional marshes*	*Depressional forested*	*Flowing forested*
Sensitive indicator taxa	Predators	Florida Index score[b]	No macroinvertebrate FWCI
Tolerant indicator taxa	Odonata	Mollusca	
	Orthocladiinae	Noteridae	
		Scrapers	

[a]Numbers in parentheses refer to Bahls (1993) classes for pollution tolerance and van Dam et al. (1994) classes for nitrogen, saprobity, pH, dissolved oxygen, and salinity
[b]Florida Index score from Beck 1954; USEPA, 2002

macrophyte FWCI for all three wetland type (Table 1); independent lists of indicator taxa were developed for each of the three wetland types. Two additional metrics for the depressional marshes include the ratio of annual to perennial species and the mean Coefficient of Conservatism (CC) score. The CC score was derived from the Floristic Quality Assessment Index (FQAI) developed specifically for Florida (Cohen, Carstenn, & Lane, 2004; Lane et al. 2003; Reiss, 2004; Reiss & Brown, 2005). Additional metrics for both depressional forested and flowing-water forested wetland FWCIs are native perennial species and FQAI score (i.e., sum CC scores divided by total species richness). A sixth metric for the depressional forested wetlands is the wetland status metric, based on obligate and facultative wetland species.

Macroinvertebrate FWCI

The macroinvertebrate FWCI shares two metrics for depressional marshes and depressional forested wetlands, tolerant indicator taxa and sensitive indicator taxa, though indicator taxa lists were developed specific to wetland type. The depressional marsh macroinvertebrate FWCI has three additional metrics: predator functional feeding group, order Odonata (dragonflies and damselflies; class Insecta), and Orthocladiinae tribe (midges, class Insecta, Chironomidae family). The depressional forested macroinvertebrate FWCI has four additional metrics: Florida Index

(based on pollution tolerance), order Mollusca (including Bivalvia, Gastropoda, and Pelecypoda), family Noteridae (order Coleoptera, class Insecta, phylum Arthropoda), and scraper functional feeding group (including macroinvertebrates that scrape periphyton from mineral and organic surfaces and those that browse or graze algal materials).

Metric Scoring and Calculations

Scoring differs among the depressional marshes and the two forested FWCI. For depressional marshes, each metric is assigned a categorical value of 0, 3, 7, or 10 based on standardized scoring tables (Lane et al. 2003). For depressional forested and flowing-water forested wetlands, metrics are scored on a continuous scale based on scoring equations (Reiss, 2004; Reiss & Brown, 2005). Metric scores are calculated in comparison to the reference standard condition based on the highest possible score for each FWCI, allowing for comparison among the different wetland types and community assemblages. A wetland receiving 100% for any given FWCI is considered to have a high wetland condition equated to ecological integrity, whereas lower percentages reflect reduced wetland condition.

Quality of Life

The 1972 Federal Water Pollution Control Act (later referred to as the Clean Water Act) obliged states to protect and restore the chemical, physical, and biological integrity of waters and charged states with establishing water quality standards for all waters within state boundaries including wetlands. The Clean Water Act is protective of both human and environmental health. To meet the goals of the Clean Water Act, methods to evaluate the relative condition of wetland ecosystems need to be developed. The FWCI is one such method, and it provides an assessment of wetland condition that can further be used to compare changes over time, restoration success, or appropriateness for wetland mitigation. While the FWCI cannot be used to predict specific changes in the physical and chemical parameters of a wetland, its strength lies in providing an overview of ecological wetland condition through the integration of changes in community composition from cumulative effects. As the three community assemblages included (i.e., diatoms, macrophytes, macroinvertebrates) represent primary, secondary, and tertiary trophic classes, structural components of the wetland itself, and a portion of the landscape food web (e.g., food source for passerines and wading birds, reptiles and amphibians, small mammals), changes in wetland management strategies to increase wetland ecological condition for all community assemblages would be advantageous to meeting the goals of the Clean Water Act.

Cross-References

▶ Landscape Development Intensity

References

Bahls, L. (1993). *Periphyton bioassessment methods for Montana streams*. Montana: Department of Health and Environmental Science, Water Quality Bureau.

Beck, W. M. (1954). Studies in stream pollution biology I. A simplified ecological classification of organisms. *Quarterly Journal of the Florida Academic Sciences, 17*(4), 211–227.

Brown, M. T., & Vivas, M. B. (2005). A landscape development intensity index. *Environmental Monitoring and Assessment, 101*, 289–309. doi:10.1007/s10661-005-0296-6.

Cohen, M. J., Carstenn, S., & Lane, C. R. (2004). Floristic quality indices for biotic assessment of depressional marsh condition in Florida. *Ecological Applications, 14*(3), 784–794. doi:10.1890/02-5378.

Danielson, T.J. (1998). *Indicators for monitoring and assessing biological integrity of inland freshwater wetlands*. Washington, DC: Wetlands Division Office of Water, United States Environmental Protection Agency, EPA 843-R-98-002.

Karr, J.R., & Chu, E.W. (1997). *Biological monitoring and assessment*: *Using multimetric indexes effectively*. Washington: University of Washington, EPA 235-R-97-001.

Karr, J. R., & Dudley, D. R. (1981). Ecological perspectives on water quality goals. *Environmental Management, 5*(1), 55–68. doi:10.1007/BF01866609.

Lane, C. R. (2007). Assessment of isolated wetland condition in Florida using epiphytic diatoms at genus, species, and subspecies taxonomic resolution.

EcoHealth, 4, 219–230. doi:10.1007/s10393-007-0098-0.
Lane, C. R., & Brown, M. T. (2006). Energy-based land use predictors of proximal factors and benthic diatom composition in Florida freshwater marshes. *Environmental Monitoring and Assessment, 117*, 433–450. doi:10.1007/s10661-006-2766-x.
Lane, C. R., & Brown, M. T. (2007). Diatoms as indicators of isolated herbaceous wetland condition in Florida, USA. *Ecological Indicators, 7*, 521–540. doi:10.1016/j.ecolind.2006.06.001.
Lane, C.R., Brown, M.T., Murray-Hudson, M., and Vivas, M.B. (2003). *The wetland condition index: biological indicators of wetland condition for isolated depressional herbaceous wetlands in Florida*. A Report to the Florida Department of Environmental Protection. Florida: Howard T. Odum Center for Wetlands, University of Florida.
Reiss, K.C. (2004). *Developing biological indicators for isolated forested wetlands in Florida*. Dissertation, University of Florida.
Reiss, K. C. (2006). Florida wetland condition index for depressional forested wetlands. *Ecological Indicators, 6*, 337–352. doi:10.1016/j.ecolind.2005.03.013.
Reiss, K.C., & Brown M.T. (2005). *Pilot study-The Florida wetland condition index (FWCI): preliminary development of biological indicators for forested strand and floodplain wetlands*. A Report to the Florida Department of Environmental Protection. Florida: Howard T. Odum Center for Wetlands, University of Florida.
Reiss, K. C., Brown, M. T., & Lane, C. R. (2010). Characteristic community structure of Florida's subtropical wetlands: the Florida wetland condition index for depressional marshes, depressional forested, and flowing water forested wetlands. *Wetlands Ecology and Management, 18*(5), 543–556. doi:10.1007/s11273-009-9132-z.
United States Environmental Protection Agency (USEPA) (2002). *Methods for evaluating wetland condition: Developing an invertebrate index of biological integrity for wetlands*. Washington, D.C.: Office of Water, US Environmental Protection Agency, EPA-822-R-02-019.
van Dam, H., Mertens, A., & Sinkeldam, J. (1994). A coded checklist and ecological indicator values of freshwater diatoms from the Netherlands. *Netherlands Journal of Aquatic Ecology, 28*, 117–133. doi:10.1007/BF02334251.

Flourishing

▶ Eudaimonia
▶ Well-Being, Philosophical Theories of

Flow

▶ Intrinsic Motivation

Flow Experience

▶ Flow, the Experience of

Flow Scales

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Synonyms

Core DFS; Core FSS; DFS-2; Flow State; FSS-2; Short DFS; Short FSS

Definition

Flow is a positive psychological experience. It is an optimal psychological state, which occurs when one is totally involved in the task at hand. Flow represents those moments when everything comes together in a performance or activity and is often associated with high, or peak, levels of performance (Jackson & Csikszentmihalyi, 1999). Csikszentmihalyi (1975, 1990) developed the flow concept after investigating the experiences of individuals during times when they were totally involved in what they were doing and when everything came together during performance of their chosen activity.

Flow occurs when the individual moves beyond his or her average experience of challenge and skill. A balance of challenges and skills is one of nine key dimensions of flow. The other flow dimensions are action-awareness merging, clear goals, unambiguous feedback,

concentration on task, sense of control, loss of self-consciousness, time transformation, and autotelic experience.

Description

Jackson and colleagues (e.g., Jackson & Eklund, 2002; Jackson, Martin, & Eklund, 2008; Jackson & Marsh, 1996; Martin & Jackson, 2008) have developed a suite of scales – the Long, Short, and Core Flow Scales – to assess ▶ flow. Each of these Flow Scales has a dispositional and state version. The dispositional scales assess general tendency to experience flow within a specified context. The state scales assess the extent of flow experienced in a particular event or activity.

There are three main flow instruments (each of which has a dispositional and a state version):

1. Long Flow Scales: These instruments are designed to assess the nine dimensions of flow (Csikszentmihalyi, 1990). They are the instruments of choice for targeted interventions and/or when a detailed understanding of the flow dimensions is important. Both the state version, known as the FSS-2, and the dispositional version, known as the DFS-2, have 36 items, comprised of four items for each of the nine dimensions of flow.

   There are both Long Flow-General and Long Flow-Physical Scales. The Long Flow-Physical Scales were the initial versions, and because they were developed in sport and performance settings, some items contain words related to movement and/or performance. The General versions of these instruments have minor wording changes to make them adaptable to a wide range of settings.
2. Short Flow Scales: These are nine-item, abbreviated versions of Long Flow, with one item to represent each of the nine flow dimensions. The Short Flow Scales provide a brief assessment that is useful when research or practical constraints prevent use of a longer scale. The Short Flow Scales are applicable to a range of settings.
3. Core Flow Scales: These are ten-item scales, designed as an alternative to the dimensional flow approach of Long and Short Flow. These scales aim to assess the central subjective (phenomenological) experience of flow. The Core Flow Scales are applicable to a range of settings.

All versions of the scales have been validated through confirmatory factor analyses, and the scales have demonstrated good psychometric properties. A brief summary of the psychometrics of the Flow Scales is provided next. The interested reader is referred to a test manual detailing the development, validation, and uses of the various forms of the scales (Jackson, Ekund, & Martin, 2010).

Scoring

The Dispositional Flow Scales are rated on a 5-point Likert scale, ranging from "1" (never) to "5" (always). The State Flow Scales are rated on a 5-point Likert scale, ranging from "1" (strongly disagree) to "5" (strongly agree). For the Long Scales, the item scores for each dimension are summed and then divided by four, to obtain flow dimension item-average scores. A total Long Flow Scale score can also be obtained by summing the item-average dimension scores. The generally recommended procedure for scoring the Short Scales is to sum the 9 items together and then divide by 9 to obtain a Short Flow score. The scoring procedure for the Core Flow Scales is to sum the 10 items together and then divide by 10, to obtain a Core Flow score.

Validity

Substantial factorial validity evidence has been published on the Long Flow Scales in CFA studies of the DFS, DFS-2, FSS, and FSS-2 (e.g., Jackson et al., 2008; Jackson & Eklund, 2002; Jackson & Marsh, 1996; Jackson, Thomas, Marsh, & Smethurst, 2001). This evidence provides strong support for the factorial validity of the Long Flow Scales. Jackson and colleagues have also reported extensive between-network construct validity for the Long Flow Scales. For example, theoretically expected

patterns of the relationship between flow and psychological constructs were observed between flow and perceived ability, anxiety, and ▶ intrinsic motivation (Jackson, Kimiecik, Ford, & Marsh, 1998). In another correlational study (Jackson et al., 2001), relationships were examined between flow and dimensions of athletic self-concept and psychological skills. Jackson et al. found moderate associations between dispositional flow and measures of intrinsic motivation, perceived competence, and anxiety. For state flow, a situational measure of intrinsic motivation was moderately correlated with the FSS-2, while a measure of positive well-being had a moderately high correlation with flow.

Initial psychometric support for the Short Flow Scales is promising, although these are new scales, and so further research is needed to examine their measurement properties. The Short Flow Scales have demonstrated satisfactory CFA results across research with participants from sport, work, school, and music (Jackson et al., 2008; Martin & Jackson, 2008). To assess the extent to which the short items captured the essence of their corresponding long factor, latent correlations between the nine factors comprising the 36-item flow scales and the nine-item flow scales were examined by Jackson et al. The latent correlation between the higher-order Long dispositional factor and the Short flow factor was 0.97, and the correlation between the higher-order Long state factor and its Short flow factor counterpart was 0.89.

Model fit and reliability for the Core Flow Scales have been promising in the initial research conducted with these scales (Martin & Jackson, 2008). Good fit of the hypothesized models to the data was obtained in CFA analyses on samples in school, sport, and other extracurricular activities. Martin and Jackson (2008) conducted a series of external validity analyses with the Short and Core Flow Scales for the following key correlates: participation, enjoyment, buoyancy, aspirations, adaptive cognitions, adaptive behaviors, impeding/maladaptive cognitions, and maladaptive behaviors. Both flow measures were related to external correlates in parallel and hypothesized ways.

Reliability

Long

The internal consistency of the Long Flow scales is robust. The initial study of the original Flow State Scale (Jackson & Marsh, 1996) found alphas ranging from 0.80 to 0.86, with a mean alpha of 0.83. Jackson et al. (1998, 2001) found alphas ranging from 0.72 to 0.92 for the FSS-2 and from 0.70 to 0.89 for the DFS-2. Across two large psychometric studies (Jackson et al., 2008; Jackson & Eklund, 2002), the FSS-2 and DFS-2 have demonstrated good reliability, with FSS-2 alphas ranging between 0.76 and 0.92 and the DFS-2 range being 0.78–90.

Short

Both dispositional and state forms have demonstrated good internal consistency (Jackson et al., 2008; Martin & Jackson, 2008). Coefficient alpha estimates of reliability from the two large data sets of Jackson and Eklund (2002) for the Short DFS-2 were 0.81 and 0.74, and for the Short FSS-2 0.77 and 0.78, respectively. Jackson et al. and Martin and Jackson (2008) found coefficient alphas for Short Flow across several cohorts to range from 0.73 to 0.84.

Core

Internal consistency estimates were strong across three samples in Martin and Jackson (2008), being 0.93 for the general school sample, 0.94 for the mathematics sample, 0.91 for the extracurricular sample, and 0.92 for the sport sample.

Discussion

The triad of Flow Scales developed by Jackson and colleagues provides researchers and practitioners with a good choice of measurement options for assessing flow. The 36-item or Long Flow Scales have been shown over a number of studies to be robust instruments that provide a detailed assessment of the dimensional flow model. The Short Flow Scales provide a suitable tool for a brief assessment of flow from the nine-dimensional conceptualization. The equally short, Core Flow Scales provide a valid and

reliable assessment of the central, or core, subjective experience of being in flow. Studies aiming to capture the very specific "in the zone" experience may opt for Core Flow. Long, Short, and Core Flow offer different but complementary ways of assessing flow and provide a range of possibilities for including flow as a focal construct in research across a diverse range of settings. All of the current versions of the Flow Scales, along with in-depth information regarding their use, are described in *The Flow Manual*, by Jackson et al. (2010).

Cross-References

- ▶ Emotional Well-Being
- ▶ Enjoyment
- ▶ Experience Sampling
- ▶ Flourishing
- ▶ Flow
- ▶ Intrinsic Motivation
- ▶ Motivation
- ▶ Positive Psychology

References

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco, CA: Jossey-Bass.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper and Row.

Jackson, S. A., & Csikszentmihalyi, M. (1999). *Flow in sports: The keys to optimal experiences and performances*. Champaign, IL: Human Kinetics.

Jackson, S. A., & Eklund, R. C. (2002). Assessing flow in physical activity: The FSS-2 and DFS-2. *Journal of Sport & Exercise Psychology, 24*, 133–150.

Jackson, S. A., & Marsh, H. W. (1996). Development and validation of a scale to measure optimal experience: The flow state scale. *Journal of Sport & Exercise Psychology, 18*, 17–35.

Jackson, S. A., Kimiecik, J., Ford, S., & Marsh, H. W. (1998). Psychological correlates of flow in sport. *Journal of Sport & Exercise Psychology, 20*, 358–378.

Jackson, S. A., Thomas, P. R., Marsh, H. W., & Smethurst, C. J. (2001). Relationships between flow, self-concept, psychological skills, and performance. *Journal of Applied Sport Psychology, 13*, 154–178.

Jackson, S. A., Martin, A. J., & Eklund, R. C. (2008). Long and short measures of flow: Examining construct validity of the FSS-2, DFS-2, and new brief counterparts. *Journal of Sport & Exercise Psychology, 30*, 561–587.

Jackson, S. A., Eklund, R. C., & Martin, A. J. (2010). *The flow manual*. Mind Garden Inc. www.mindgarden.com.

Martin, A. J., & Jackson, S. A. (2008). Brief approaches to assessing task absorption and enhanced subjective experience: Examining 'short' and 'core' flow in diverse performance domains. *Motivation and Emotion, 32*, 141–157.

Flow State

▶ Flow Scales

Flow, the Experience of

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Synonyms

Flow experience; Optimal experience

Definition

Flow is a complex subjective experience characterized by deep concentration, absorption, and ▶ enjoyment. It represents a component of ▶ eudaimonic well-being and optimal human functioning, and it contributes to shape the lifelong process of psychological selection.

Description

Flow was first identified by Csikszentmihalyi in the mid-1970s with the aim to investigate the phenomenology of subjective experience while performing autotelic activities, that is, activities that are rewarding in and of themselves

(Nakamura & Csikszentmihalyi, 2009). The term "flow" expresses the feeling of fluidity and continuity in concentration and action reported in individuals' description of this state; its synonym "optimal experience" refers to its pervasively positive cognitive, emotional, and motivational features (Csikszentmihalyi & Csikszentmihalyi, 1988). Specifically, flow is characterized by nine dimensions: clear goals, immediate feedback, high challenges matched with adequate personal skills, merging of action and awareness, concentration on the task at hand, perceived control of the situation, loss of self-consciousness, altered sense of time, and ▶ intrinsic motivation (Csikszentmihalyi, 1975). Studies conducted across a variety of settings, activities, and cultures (Delle Fave & Massimini, 2005) showed that flow is characterized by a stable cognitive core, including high concentration and control of the situation. On the contrary, the values of affective and motivational variables vary according to the kind of associated activities. For instance, individuals report higher levels of excitement and wish to do the activity during structured ▶ leisure, such as sports and hobbies, than during productive activities, such as study and work, which in turn are associated with higher values of perceived life goals (Delle Fave, Massimini, & Bassi, 2011). These findings suggest that flow is neither a peak experience nor a rigidly invariant state (Delle Fave & Massimini, 2005).

Regardless of the ongoing activity, however, the onset of flow is associated with a specific condition: the task has to be challenging enough to require the mobilization of personal skills, promoting concentration and engagement. In particular, the match between high challenges and high skills is not stable. The perception of high challenges promotes the increase in the related skills with time; increased competence, in its turn, will encourage the individual to search for more complex challenges that will require higher capabilities. This virtuous cycle is related to psychological selection, a lifelong process rooted in the moment-by-moment integration and elaboration of information within the human mind (Delle Fave et al., 2011). Steered by individual and social meaning system and goal construction, flow can contribute to foster growth and identity building, orienting individuals' preferential cultivation of specific interests, relationships, and values throughout life.

Methods available to flow researchers are manifold, comprising observation and interview techniques, the administration of self-report questionnaires (e.g., the Flow State Scale), and the conduction of experimental studies. Methods further vary in temporal focus. Most instruments require respondents to provide a retrospective evaluation of flow, while ▶ experience sampling procedures allow for the investigation of flow in real time as daily events and situations take place (Hektner, Schmidt, & Csikszentmihalyi, 2007).

Through these instruments and methods, flow was investigated in various domains, such as work, free time, ▶ education, and ▶ health, showing its potentials in contributing to eudaimonic well-being and optimal human functioning. Much, however, needs to be done to identify the personality and contextual factors favoring the preferential selection of opportunities for flow in daily life. In particular, more studies are needed at the cross-cultural level which could shed light on the relation of flow with social value systems, taking into account the active interaction of human beings with their cultural context.

Cross-References

- ▶ Education
- ▶ Enjoyment
- ▶ Eudaimonic Well-Being
- ▶ Experience Sampling
- ▶ Happiness
- ▶ Health
- ▶ Intrinsic Motivation
- ▶ Leisure
- ▶ Personal Growth

References

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. S. Francisco: Jossey Bass.

Csikszentmihalyi, M., & Csikszentmihalyi, I. (Eds.). (1988). *Optimal experience. Psychological studies of*

flow in consciousness. New York: Cambridge University Press.
Delle Fave, A., & Massimini, F. (2005). The investigation of optimal experience and apathy: Developmental and psychosocial implications. *European Psychologist, 10*, 264–274.
Delle Fave, A., Massimini, F., & Bassi, M. (2011). *Psychological selection and optimal experience across cultures: Social empowerment through personal growth*. Dordrecht, The Netherlands: Springer.
Hektner, J. M., Schmidt, J., & Csikszentmihalyi, M. (2007). *Experience sampling method. Measuring the quality of everyday life*. Thousand Oaks, CA: Sage.
Nakamura, J., & Csikszentmihalyi, M. (2009). The concept of flow. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (2nd ed., pp. 195–206). New York: Oxford University Press.

Flower Arranging

▶ Arts in British Columbia, Canada

Flowerpot Law

▶ Diminishing Returns

FLP

▶ Functional Limitations Profile

Focus Group Discussions

▶ Focus Groups

Focus Groups

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Synonyms

Focus group discussions; Focused group interviews

Definition

Many definitions on focus groups have been provided, emphasizing different aspects of the technique. Morgan (1996) defined focus groups as a research technique that collects data through group interaction on a topic determined by the researcher (p. 129), stressing the relevance of group interaction and focused discussion. Krueger (1994) defined focus groups as discussions planned in order to gather data on a specific topic from participants in a friendly non threatening environment, strengthening the atmosphere of the discussion as a catalyst for data collection; Abramczyk (1995) defined focus groups as a phenomenological technique that collects qualitative data in a group situation, emphasizing the epistemological approach to data collection and analysis. A more general definition could be the following: a qualitative research technique, based on the idea that the group interaction facilitates the production of original information: through group discussion people have the opportunity to express their ideas but also to form and modify them as the discussion develops, similarly to what happens in natural conversational settings.

Research Design & Aims

The opportunity to use focus group depends strictly on the research question and on the characteristics of the population to be examined. According to Barbour & Kitzinger (1999) focus groups should be used when the research aims to:

- Explore the variety of ideas and opinions on a particular topic and how these opinions are built (while if the researcher wants to know how many people share opinions a questionnaire should be used);
- Understand how social knowledge is built and shared among people on specific topics (while if the researcher wants to gain a deep knowledge of personal biographies, in depth interviews are to be preferred) (see also Bloor, Frankland, Thomas, & Robson, 2001).

Marková, Linell, Grossen, and Salazar-Orvig (2007) credit focus groups as a tool that facilitates access to the way people reproduce social

representations: observing and analyzing how people discuss on social objects, how they react to different stimulus, how they put together different meanings and facets of the discourse on a specific topic allows the reconstruction of the dynamics that build social representations, observing them in a "live" setting.

Morgan (1996) suggested that focus groups could be a compromise between the need to control the data gathered and the need to access data in a natural setting.

Kitzinger (1995) proposed that focus groups could facilitate the collaboration of those participants that consider themselves not expert enough for individual interviews, or that would be afraid of an individual setting. For these reasons focus groups are used successfully to gather information from people with low literacy skills, marginalized groups and to involve people that are usually excluded in the research process (see also Schulze & Angermeyer, 2003).

For the same reasons there is a general consensus that focus groups could be used as a participative method, or in participatory community projects (see Zani & Cicognani, 2010). Focus groups are used to this scope in community profiling (see Francescato, Arcidiacono, Albanesi, & Mannarini, 2007) and in "social reconnaissance" a particular technique of community assessment, where simplified forms of focus groups are used to involve community members. Despite the general (enthusiastic) consensus on the participative side of focus group technique, it seems hard to think that focus groups *per se* can promote and sustain participation: it seems more realistic to think that the experience of having voice within the focus group could pose some basis for further involvement, under specific conditions.

Focus group technique can be used as a self contained method, or in combination with other qualitative – quantitative techniques of data collection: usually self contained focus groups are used to access people perspective on particular issues, or to access the perspective of particular groups. As Morgan states "an emphasis on perspectives brings together attitudes, opinions and experiences in an effort to find out not only what participants think about an issue but also how they think about it, and why they think the way they do" (p. 20, 1997).

A typical self – contained exploratory study includes from three to six focus groups: Morgan (1999) suggests, however, that a preliminary trial focus group should always be planned in order to pretest the guide to be used in the discussion. However fixing numbers in advance is not always the best approach to decide when to stop data collection: if focus groups are used as qualitative research, the data collection should stop only when saturation is reached: that is, when across different groups do not emerge further opinions or ideas on a topic because this suggests that further data will not produce new understanding nor address the topic further.

When used in combination with other data collection technique, focus groups can serve to different purposes. At the *early stage* of the research, focus groups could be used to obtain preliminary data on the context of intervention, contributing to the definition of the community profile; on the language and on the perspectives of participants: focus groups are useful to pretest a survey (Are items clear enough? Do the words used by researchers have the same meaning from the participants' perspective?) or to create new scales: in a study on adolescents' sense of community (Albanesi, Cicognani, & Zani, 2007) focus groups were used to understand if the dimensions proposed by Mc Millan & Chavis to describe the construct were relevant for Italian adolescents. Moreover participants' discourses were used to build specific items of a new scale reflecting their views and their experience of community. In the *central stage* of the research, focus groups can supplement other qualitative methods: this strategy, is based on the assumption that different methods give access to different data: when the same research question is addressed by different methods, methodological triangulation (Morse, 1991), can provide new perspectives on the topic. Triangulation is usually recognized as a way to increase the validity of the conclusions of qualitative studies. Morse suggests even more sophisticated approaches to triangulation, designed for theory building, based

on second- order integration (Cisneros-Puebla, 2004).

In the *final stage* of the research, focus groups can serve the purpose to discuss the results of the research collecting qualitative data with people that have not been involved, but have similar characteristics to the sample.

If focus groups are part of an *intervention* (health promotion, organizational change) they can be used also to evaluate the project at different stages of realization, and to support process and outcome evaluation.

The issue of how to analyse data obtained from focus groups, is far to be solved. According to the different aims of the focus group, data analysis can be based on notes, audio registration or written transcriptions of the discussion (Morgan & Krueger, 1998). However, in particular when focus groups are used as a self contained method, a qualitative approach to the data is recommended (Silverman, 2000)., with a major attention to thematic content (Braun & Clarke, 2006) and process analysis (Duggleby, 2005).

Participants, Sample and Group Composition

A focus group involves usually from 8 to 12 people (Stewart & Shamdasani, 1990). Smaller groups are to be preferred when the discussion refers to sensitive topics (e.g., gender violence; social stigma) bigger groups could be ok when people have low levels of involvement on the topic, and the discussion could benefit from a wide range of ideas and opinions that do not necessary need to be explained in details (e.g. residential satisfaction).

Participant should be included in relation to their level of familiarity with the topic to be discussed: it does not mean that participants need to be "expert" on a topic, they can be involved in the discussion because they are supposed to have a significant experience, related to some of their specific characteristics (for example demographics, residential neighborhood, organizational membership, etc.). Participants should be homogenous enough to feel "among peers" and comfortable enough to express their ideas, and heterogeneous enough to have the opportunity to compare and discuss different opinions and thoughts. Some scholars suggest that participants should be not acquaintances, in order to avoid that pre-existing relationships could bias group interaction: even if this risk exists, the rule of "stranger" for practical reasons (focus groups are frequently conducted in real settings – like neighborhoods, organizations, schools - were people usually know each others) is often disregarded. As a rule of thumbs, it is a good idea to avoid all the "asymmetrical situations," that could inhibit the group discussion: pupils with their teacher, nurses with a medical doctor, a couple of men with a group of women, two tight friends with a number of strangers; those represent typical situations that would probably not allow some participants to feel free to express their ideas.

Sample segmentation (Knodel, 1993) is generally used to balance the need to have internal homogeneity within the groups and heterogeneity across them: it allows the exploration of very different points of views, within the same study, avoiding degeneration from discussion to conflict. Demographics like age, gender, SES are the most important criteria adopted for sample segmentation (Krueger, 1994).

How Much Structure: Moderator, Topic Guide & Questioning Route

The role of the moderator is crucial in order to guarantee a successful focus group: on the one hand he/she has the responsibility to manage the group interaction, facilitating the discussion, helping shy people to express their point of view and controlling for "dominant" participants; on the other he/she needs to get all the information that are supposed to be optained by the study, and to be open to new contributions and information that can emerge from group members. The moderator can use a topic guide (a list of topics to be discussed during the focus group) or a questioning route (a list of questions that specify what is going to be asked for each topic and how it is going to be asked). A topic guide is preferable when the moderator is expert, when

he/she is supposed to run all the focus groups planned for the study; the topic guide allows more flexibility, but it requires that the moderator is comfortable with uncertainty. The questioning route, giving more structure compared to the topic guide, is more suitable when different moderators will run the study, making the comparability of data across groups easier. Despite the specific approach to the questions used, a general recommendation for moderators is to be flexible enough to the needs of the focus group as it develops: at the beginning usually participants need more guidance, while in the central phase of the discussion few questions and a listening attitude can encourage the productivity of the group. In the final phase of the discussion, the moderator has the task to sum up the main findings, giving participants the opportunity to add further information.

Cross-References

- ▶ Methodology
- ▶ Qualitative Methods

References

Abramczyk, L. (1995). I gruppi focali come strumento di ricerca e valutazione. In T. Vecchiato (Ed.), *La valutazione dei servizi sociali e sanitari*, Padova: Fondazione Emanuela Zancan.

Albanesi, C., Cicognani, E., & Zani, B. (2007). Sense of community, civic engagement and social well-being in Italian adolescents. *Journal of Community and Applied Psychology, 17*, 387–406.

Barbour, R. S., & Kitzinger, J. (Eds.). (1999). *Developing focus group research: Politics, theory and practice*. London: Sage.

Bloor, M., Frankland, J., Thomas, M., & Robson, K. (2001). *Focus group in social research*. London: Sage.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77–101.

Cisneros-Puebla, C. A. (2004). Let's do more theoretical work . . .: Janice Morse in conversation with César A. Cisneros-Puebla [96 paragraphs]. Forum Qualitative Sozialforschung/Forum. *Qualitative Social Research, 5(3)*, Art. 33. http://nbn-resolving.de/urn:nbn:de:0114-fqs0403331

Duggleby, W. (2005). What about focus group interaction data? *Qualitative Health Research, 15*, 832–840.

Francescato, D., Arcidiacono, C., Albanesi C., & Mannarini, T. (2007). Community psychology in Italy. Past developments and future perspectives. In S. M. Reich, M. Riemer, I. Prilleltensky, & M. Montero (Eds.). *International community psychology: History and theories*. New York: Kluwer Academic Press.

Kitzinger, J. (1995). Qualitative research: Introducing focus group. *British Medical Journal, 311*, 299–302.

Knodel, J. (1993). The design and analysis of focus group studies: A practical approach. In D. Morgan (Ed.), *Successful focus groups: Advancing the state of the art*. Newbury Park, CA: Sage.

Krueger, R. A. (1994). *Focus group. A practical guide for applied research* (2nd ed.). London: Sage.

Marková, I., Linell, P., Grossen, M., & Salazar-Orvig, A. (2007). *Dialogue in Focus Groups: Exploring Socially Shared knowledge*. London: Equinox.

Morgan, D. L. (1996). Focus groups. *Annual Review of Sociology, 22*, 129–152.

Morgan, D. L. (1997). *Focus groups as qualitative research*. Thousand Oaks, CA: Sage.

Morgan, D. L., & Krueger, R. A. (1998). *The focus group kit*. Thousand Oaks, CA: Sage.

Morse, J. (1991). Approaches to qualitative-quantitative methodological triangulation. *Nursing Research, 40*(2), 120–123.

Schulze, B., & Angermeyer, M. C. (2003). Subjective experiences of stigma. A focus group study of schizophrenic patients, their relatives and mental health professionals. *Social Science and Medicine, 56*(2), 299–312.

Silverman, D. (2000). *Doing qualitative research: A practical handbook*. London: Sage.

Stewart, D. W., & Shamdasani, P. N. (1990). *Focus group. Theory and practice*. London: Sage.

Zani, B., & Cicognani, E. (2010). The evaluation of the participatory process: The case of the local plans for health in Italy. *Journal of Prevention & Intervention in the Community, 38*, 55–69.

Focused Group Interviews

▶ Focus Groups

Folk Festivals

▶ Folk Music

Folk Music

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Synonyms

Acoustic music; Electric folk music; Folk festivals; Folk rock; Old-time music; Protest song; Punk folk; Roots music

Definition

English language folk ▶ music traditions are associated with specific and identifiable musical forms of musical performance. Sociology's interest in folk music focuses more on the place of folk music within community. The general interest here lies in understanding the social construction of folk music and the creation, performance, and consumption of folk music in a ▶ community context. As Becker (1982) discusses in *Art Worlds*, one can helpfully examine "folk music worlds" and therefore issues related to the ▶ quality of life.

Description

Others have argued for an instrumentalist view of music. Exposure to music can, it has been suggested, make children smarter, blood pressure lower, inmates calmer, or, happily, keep teenagers from gathering outside a place of business (classical music is allegedly the best option to produce this outcome). (See, e.g., Jensen's (2002) discussion on the limits of this perspective). Much of this literature takes the individual as the primary unit of analysis. That is, the individual experiences musical intervention and is somehow transformed for the better and that transformation somehow produces a better community. However, the distinction between individual and society is a tenuous one at best. For, as Cooley (1964) has argued, the concepts of "individual" and "society" may be helpfully understood as the collective and distributed elements of the same thing – community. A sociological interest in folk music and its relationship to the quality of life moves us towards issues and concepts that apply more fully to communities and their members than to individuals alone. Of course, individuals listen to music, may come to develop emotive attachments and affections for songs and performers, and may develop identities and involvements around music and musicians, but this work occurs in a community context. As a musical genre then, how does folk music and its practice contribute the quality of life more generally?

Access to Performance

Unlike a variety of other forms of musical expression, folk music requires little in the way of training or specialized musical skill to participate in its performance – folk music occupies a particular space for self-expression and participation. It is to music as the notion of one person one vote is to ▶ democracy; it is not viewed kindly by those attempting to preserve the interest of elites. Folk music is therefore people's music; it is made by people for people and can be viewed by others as marginal and worthy of trivializing for that reason.

Folk music therefore allows for the collective experience of shared music making. One does not routinely attend the symphony with your own triangle with any reasonable expectation of joining in with the professional activities of the musician (though the act of striking a triangle requires little specialized training); the symphony is simply not a venue where the audience is routinely engaged in music making. However, even formal presentations within the folk traditions may involve considerable shared music making. For example, Pete Seeger rather famously turns his audiences into choirs, coxing three-part harmonies from the well-heeled of Carnegie Hall and farm workers alike.

Folk music is back-porch music and its instrumentation is consistent with a tradition of everyperson accessibility. The Appalachian dulcimer

can be played with drone strings and a quill; the autoharp produces strummed chords without complex fingerings; the shoe-box guitar can involve as little as one string; the harmonica, concertina, accordion all combine a reed and air-based system for producing chords; and the spoons and washboard all share a similar accessibility albeit on the percussive side of the house.

Folk music therefore allows for the experience of making music collectively and does so in a manner that allows for family-based and intergenerational participation. Unlike the music cultures of classical, opera, and jazz, folk music not only allows for, but nurtures the pleasures of music making in the absence of the gate keepers of the "fine arts." The possibility of shared music making allows for and facilitates the maintenance of community. As Fine writes in his thoughtful *Everyday Genius: Self-Taught Art and the Culture of Authenticity*, a "► sense of belonging is what transforms individuals into a group, both psychologically and as a social reality" (Fine, 2004, 171). Folk music, like other folk arts, allows for those who live in traditional communities (e.g., small towns, urban neighborhoods, ethnic enclaves, fishing villages) to come together out of common interests and concerns and through sharing performance enhance an emotive sense of belonging.

Protest Voices

English language folk music is inextricably bound with the notion of the protest song. In the authenticity literature, the very notion of being a folk singer can be bound to the idea of the protest singer. One is not "really" a folk musician if not committed to political positions most commonly associated with the left, for example, ► human rights, workers' rights, antiviolence, women's rights, antipoverty, aboriginal rights, and environmental issues (Cohen, 2002; Willhardt, 2006).

While the protest song is a well-developed feature of folk music, social scientists have been somewhat remiss in the extent to which they are willing to attend to the role of the arts in the social construction of social problems. In his classic essay on the social problems, Blumer (1971) develops an argument for framing the social construction of social problems relative to social action. He notes that to be recognized as a social problem the issue at hand must move through a process of emergence, recognition, legitimization, and the planning of a response. By turning our attention to how members of a community come to construct the social problems of their time, Blumer encourages us to attend to the collective work that goes into the recognition and response to social problems.

Folk artists may take on active roles in any aspect of this process. Their work may help to name and identify a perceived wrong (e.g., Gordon Lightfoot's *Sinking of the Edmond Fitzgerald* immortalized the dangers of the Great Lakes shipping industry, Buffy St. Marie's *Universal Soldier* named the shared loss of war experienced by mothers, Bruce Cockburn's *Stolen Land* addresses land claims and the accompanying aboriginal issues in North America, and Sarah Harmer's *Escarpment Blues* laments the environmental harm of unchecked development). In a very real sense then, the singer/songwriter is a part of the process of creating the social problems that they sing about, not in the sense that they "cause" them but in the sense that they make them real. The singer gives voice to social problems, participates in their recognition, and, by singing about them, helps to legitimate them and to the extent to which the artist adds some element of celebrity to the cause increases media and other attention. Susan Vega's haunting performance of *Luka* brought issues of ► domestic violence into the daylight in ways that other forms of discourse cannot. By doing so, communities may be encouraged to develop various plans of action to respond to the perceived and named harms in our midst.

Self/Other Identities

Folk music is a specific form of cultural practice or activity. While its definition may be a challenge to accomplish as a matter of language, its accomplishment is not. To the extent that folk music is the product of what folk musicians do and folk music is what is programmed on folk radio stations, and its artists are those that

consider themselves (at least in part) participants in folk traditions, then folk music is culturally bounded by the activities of those within the subculture. This is not the venue for an extended discussion of modernity, forms of collective organization, and the anonymity afforded with the metropolis. Though those interested in such themes would be well served by Simmel's (1950) classic essay *Metropolis and Mental Life*. However, suffice it to say that with the decline of the rural and the traditional forms of social organization that accompany both the rural and urban village life, the rise of the metropolis has been accompanied by an increase in the importance of the subcultural in everyday life and in our understanding of community more generally. Prus (1997) argues for framing community life as a series of subcultural mosaics. Who we are and the commitments we make to one another is influenced by the subcultural involvements that we share.

As a subcultural space, folk music shares a number of generic qualities with other subcultural involvements. Importantly, for some members, the subculture allows for the development of a master status. The question, "Who am I?" is one of the most fundamental of the human condition. Small scale societies provided relatively complete and available identities for members. In more complex settings, the question of self and identity is more variable, more complex, and more existentially problematic (Douglas & Johnson, 1977). Folk music and folk music subcultures may provide for participants a distinct and distinguishable identity, community of involvement, and set of networks that allow for the development and maintenance of a sense of self as distinct from the generalized other.

Readers are encouraged to attend to the range of involvements that are captured here, for, like other complex subcultures, folk music subcultures encompass a range of actors and activities that provide meaning and purpose to activities. For example, folk music involvements include diverse activities and participants such as disk jockeys, journalists, luthiers, guitar technicians, artistic directors, dancers, visual artists, singers, songwriters, instrumentalists, fans, record producers, coffee shop employees, house concert sponsors, and record store owners (Grills, 2009). It is crucial not to oversimplify the complexity of community involvements that are associated with subcultural involvements.

Folk Festivals

One would be seriously remiss in any discussion of folk music and the quality of life to fail to attend to the folk festival. Folk festivals are typically annual events that are the centerpiece of folk music subcultural activity within a local community. Whether in Canada, the USA, or Europe, folk festivals tend to share some of the following qualities: (1) they center around the live creation of music by musicians who are capable of playing their own instruments; (2) they are outdoor events; (3) they are all age events that specifically encourage the participation and socialization of children into music making and music appreciation; (4) a range of music within folk traditions is represented across the programming (e.g., Celtic, singer/songwriter, blues, indie rock, world, gospel, country); (5) within the defined space of the festival, activities otherwise constrained are tolerated, if not condoned and encouraged (e.g., altered expectations of personal hygiene; increased availability of public displays of affection, both hetero and homosexual, marijuana consumption, non-discrete breast feeding of infants and toddlers); (6) that, when gathered, those attending the festival comprise a morally distinct (if not preferred) community (e.g., the assumption of a green, ethical, responsible, and progressive community of like-minded actors). While these generalizations may apply more fully to some settings than others, they are intended to sensitize the reader to the distinctiveness of the folk festival. It is not simply a "concert," but a ritualized gathering.

While festivals have developed their own local cultures, they share in their role in facilitating the gathering of the tribe. As Durkheim (1965) has argued, the ritual is more important than the doctrine. The shared experience of ▶ dance, rhythm, percussion, and ▶ singing allows for an experience of music and music

culture very distinct from the digitalized download and music delivered via headphone. The festival allows for both the ecstatic and contemplative experience of music, alone possibly, but in the company of others and in the context of the expression of the diversity of folk subcultures. Importantly the folk festival is an example of what Middleton (1990) has referred to as "resistance through ritual." Through both the content of the music and the unique moral space created by the festival, participants may engage in affirmative acts or resistance.

In Sum

A sociological interest in folk music encourages us to ask what folk music does for community. Rather importantly, musical preference can be an aspect of self and self-identity. (Martin, 2006) To be a "folkie" is distinct from being a "metal head," or identifying with any other musical tradition. Such identities are exceptionally useful in developing a sense of who we are, particularly so in the context of a pluralistic community. For who we are is also who we are not. Unlike some other more musically related identities that are more commonly associated with youth culture, involvements with folk subcultures may be a lifetime involvement; this is as fully available for artists as it is for others. This lifetime of involvement may be indicative of folk music's interest in the political and in naming and engaging problems that are truly social – in ► social justice writ large.

References

Becker, H. (1982). *Art worlds*. Berkeley, CA: University of California Press.

Blumer, H. (1971). Social problems as collective behavior. *Social Problems, 18*, 298–306.

Cohen, R. D. (2002). *Rainbow quest: The folk music revival & American society, 1940–1970*. Boston: University of Massachusetts Press.

Cooley, C. H. (1964). *Human nature and social order*. New York: Schoken.

Douglas, J. D., & Johnson, J. M. (1977). *Existential sociology*. Cambridge, UK: Cambridge University Press.

Durkhiem, E. ((1965)[1915]). *The elementary forms of the religious life*. New York: The Free Press.

Fine, G. A. (2004). *Everyday genius: Self-taught art and the culture of authenticity*. Chicago: University of Chicago Press.

Grills, S. (2009). Situating public performances: Folk singers and song introductions. *Studies in Symbolic Interaction, 33*, 19–34. doi:10.1108/S0163-2396(2009) 0000033004.

Jensen, J. (2002). *Is art good for us?* Lanham, MD: Rowman and Litlefield.

Martin, P. J. (2006). *Music and the sociological gaze: Art worlds and cultural production*. Manchester, UK: Manchester University Press.

Middleton, R. (1990). *Studying popular music*. Birmingham, UK: Open University Press.

Prus, R. (1997). *Subcultural mosaics and intersubjective realities*. Albany, NY: State University of New York Press.

Simmel, G. (1950 [1903]). The metropolis and mental life. In K. Wolf (Ed.), *The sociology of Georg Simmel* (pp. 409–424). Glencoe, IL: The Free Press.

Willhardt, M. (2006). Available rebels and folk authenticities: Michelle Shocked and Billy Bragg. In I. Peddie (Ed.), *The resisting muse: Popular music and social protest* (pp. 30–48). Burlington, VT: Ashgate.

Folk Rock

► Folk Music

Folklore

► Anthropology

Follow-Up Questions

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Synonyms

Clarificatory questions; Probing questions or probes

Follow-Up Questions, Table 1 Difference between structured, semi-structured, and unstructured interviews

Interview structure	Purpose of research
Structured: questions are all agreed in advance; interviewers must stick rigidly to a script	To collect standard information about informants
Semi-structured: main questions are fixed, but interviewers are able to improvise follow-up questions and to explore meanings and areas of interest that emerge	To explore, probe, and substantiate issues identified by the researcher on a particular topic or topics
Unstructured: the interviewer may have a list of broad topics or themes to explore or may even have none. The direction of the research is largely set by the informant	To generate an interview schedule for subsequent semi-structured interviews; explore what matters to someone and how they articulate this; collect a life history

Definition

A specific question asked after a general or open question to clarify or elicit further information (e.g., examples). Probes can be built into the interview guide to ensure that answers are as detailed and specific as possible, or spontaneous, in response to something interesting that the interviewee has said. They can also be used as part of cognitive debriefing to understand how someone has responded to a question (e.g., what aspects of their life they considered in making an evaluation) and why they have given a particular answer (e.g., "I said that my family are the most important influence on my well-being because. . .").

Description

A first consideration in using interviews is the difference between structured and unstructured methods (Table 1), for example, whether the interviewer uses mainly closed questions (e.g., "do you like your work?") or open questions (e.g., "how do you feel about your work?"). There are situations in which closed questions can be helpful, for example, if you need to collect the same demographic information from all your interviewees. However, there are also situations where it is more helpful to be able to probe responses or ask the respondent to provide more examples.

Semi-structured interviews combine the benefits of structured and unstructured interviews as they enable interviewers to use different types of questions at different points in the interview to get the best possible response (e.g., starting with open-ended questions).

Example. Initial *open-ended* questions (e.g., When did you take over as director? How have you found it here?)

Intermediate questions (e.g., When you were first issued with the new employment guidelines from the government, what were your initial reactions? How did you go about implementing them?)

Probing questions (e.g., You referred to the problems you were facing with engaging with some of your staff, what do you think is the way forward?)

Semi-structured interviews also allow interviewers to change the way that questions are phrased or the order in which they are asked, which helps when discussing sensitive topics. Using follow-up questions means that you can confirm both that the interviewee has understood your question and you have understood their answer. Ideally a conversation will develop between the interviewer and interviewee rather than a rapid exchange of questions and one-line responses. For this reason, interviews are often audio-recorded and transcribed so the interviewer can concentrate on what the other person is saying rather than on taking notes.

Cross-References

- ▶ Closed-Ended Question Format
- ▶ Questionnaire Design
- ▶ Structured Questionnaires

References

Arksey, H., & Knight, P. (1999). *Interviewing for social scientists*. London: Sage. Chapter 1.

Brannen, J. (1988). Research note: The study of sensitive subjects, notes on interviewing. *Sociological Review, 36*(3), 552–563.

Bryman, A. (2008). *Social research methods* (3rd ed.). Oxford: Oxford University Press.
Edwards, R. (1998). A critical examination of the use of interpreters in the qualitative research process. *Journal of Ethnic and Migration Studies, 24*(1), 197–208.
Martin, F. (2011). Perceptions of links between quality of life areas: Implications for measurement and practice. Social Indicators Research (in press), doi: 10.1007/s11205-011-9795-8.
Pole, C., & Lampard, R. (2002). *Practical social investigation: Qualitative and quantitative methods in social research*. New York: Prentice Hall.
Priede, C., & Farrall, S. (2011). Comparing results from different styles of cognitive interviewing: 'verbal probing' vs. 'thinking aloud'. *International Journal of Social Research Methodology, 14*(4), 271–287.

Follow-Up Tests

► Pairwise Comparisons

Fondness

► Love

Food Allergy Quality of Life Questionnaires (FAQLQ)

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Synonyms

FAQLQ

Definition

The Food Allergy Quality of Life Questionnaires (FAQLQ) are disease-specific ► health-related quality of life (HRQL) questionnaires for patients with food allergy. The FAQLQs are reliable and valid instruments to measure the impact of food allergy on HRQL. In total, there are five different forms of the FAQLQ. Three forms are completed by the patients themselves (Child Form, FAQLQ-CF; Teenager Form, FAQLQ-TF; and Adult Form, FAQLQ-AF), and two forms are completed by parents of food-allergic children (Parent Form; FAQLQ-PF) and teenagers (Parent Form Teenager; FAQLQ-PFT).

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Description

As part of the EuroPrevall project, a large European multicenter study on food allergy, a series of HRQL questionnaires for food-allergic patients of all ages were developed and validated. These questionnaires were named the Food Allergy Quality of Life Questionnaires (FAQLQ). Three of these questionnaires were developed to be completed by the patients themselves, and two questionnaires were developed to be completed by the parents of food-allergic children:

- FAQLQ-AF (Adult Form), completed by adults 18 years and older (Flokstra-de Blok et al., 2009a)
- FAQLQ-TF (Teenager Form), completed by teenagers aged 13–17 years (Flokstra-de Blok et al., 2008)
- FAQLQ-CF (Child Form), completed by children aged 8–12 years (Flokstra-de Blok et al., 2009b)
- FAQLQ-PF (Parent Form), completed by parents of children aged 0–12 years (DunnGalvin et al., 2008)
- FAQLQ-PFT (Parent Form Teenager), completed by parents of teenagers aged 13–17 years (Hamp et al., 2008)

Development

The FAQLQs were developed by using an established methodology (Juniper et al., 1996; Oude Elberink et al., 2002). The first step was the item generation in which the food-allergic patients were the most important source. In semi-structured interviews, patients were asked

Food Allergy Quality of Life Questionnaires (FAQLQ), Table 1 Items and domains of the FAQLQs

Questionnaire	Items (n)	Domains
FAQLQ-AF	29	Allergen avoidance and dietary restrictions
		Emotional impact
		Risk of accidental exposure
		Food allergy-related health
FAQLQ-TF	23	Allergen avoidance and dietary restrictions
		Emotional impact
		Risk of accidental exposure
FAQLQ-CF	24	Allergen avoidance
		Risk of accidental exposure
		Emotional impact
		Dietary restrictions
FAQLQ-PF	30	Emotional impact
		Food-related anxiety
		Social and dietary limitations
FAQLQ-PFT	27	Emotional impact
		Food anxiety
		Social restrictions
		Dietary restrictions

about troublesome aspects of having a food allergy in daily life. In addition, we searched the literature on food allergy and asked clinical experts for additional items. When no important new items emerged, the item generation was considered as complete.

This was followed by item reduction. The obtained long lists of items concerning food allergy were given to other groups of food-allergic patients. These patients were asked to indicate whether an item was applicable to them and, if so, to rate on a five-point scale how troublesome that particular item was. By following this method, also named as the clinical impact method (Juniper et al., 1997), we could select the most important items for the questionnaires.

Items, Domains, and Scores

The number of items of each FAQLQ ranges from 23 to 30 items, and each questionnaire consists of 3–4 domains (see Table 1). Total and domain scores are calculated by dividing the sum of completed items by the number of completed items.

Validity and Reliability

The questionnaires were cross-sectionally validated by calculating the correlation with the Food Allergy Independent Measure (FAIM, see paragraph on this subject). The cross-sectional validation determines whether the questionnaires measure what they are supposed to measure at one point in time. By calculating correlation coefficients between the FAQLQs and the FAIM, acceptable levels of ▶ construct validity were found (DunnGalvin et al., 2008; Flokstra-de Blok et al., 2008; Flokstra-de Blok et al., 2009a, b).

The longitudinal validity was investigated, which determines the ability of the questionnaires to measure differences over time. The FAQLQ and FAIM were administered before and 6 months after a double-blind placebo-controlled food challenge which was performed as part of regular care. By calculating correlation coefficients between the changes in FAQLQ scores and changes in FAIM scores, acceptable levels of longitudinal validity were found (DunnGalvin et al., 2010; Van der Velde et al., 2012).

Finally, by administering the questionnaires two times to the same patients within a 10–14-day interval, the FAQLQs showed good ▶ test-retest reliability. Such reliability measures are important to ensure that what the questionnaire is measuring is reproducible (Van der Velde et al., 2009).

Food Allergy Independent Measure (FAIM)

In HRQL research, no "gold standard" HRQL measure exists to which a newly developed HRQL questionnaire could be compared with to investigate ▶ criterion validity. Therefore, ▶ construct validity is the best achievable form of validity, which is ascertained by calculating the correlation between the HRQL questionnaire and an independent measure. An independent measure is usually viewed as an important determinant of HRQL, but it is not itself a HRQL item. In addition, it is often an indication of the severity of the disease, and it may at the same time be a target for intervention, such as FEV1 in asthma. However, in anaphylactic disorders such as food allergy, symptoms occur only upon exposure, and

no objective measurement of the extent or ongoing severity of disease exists. Therefore, the Food Allergy Independent Measure (FAIM) is used to investigate the construct validity of the FAQLQs, which is based on the concept first described by Oude Elberink et al. (2002). The FAIM was developed for this purpose and includes four "expectation of outcome" questions and two other "independent measure" questions. The FAIM measures the perceived severity of the disease (Van der Velde et al. 2010).

Translations

The FAQLQs have been translated and validated for use in many European countries (Goossens et al., 2010) and the USA (Goossens et al., 2011). These translations were performed following the WHO guidelines (World Health Organisation, 2008) which included translation to the target language, back translation to the original language, and comparison of the back translation with the original questionnaire. The translation process was followed by cross-cultural validation, which means that for each translation, the cross-sectional validity was again investigated in the new language (i.e., correlation between FAQLQ and FAIM).

Availability and Use

The FAQLQs are free to use as long as in any scientific publication or other publication is referred to the original publication on the development and validation (Flokstra-de Blok et al., 2009a for AF, Flokstra-de Blok et al., 2008 for TF, Flokstra-de Blok et al., 2009b for CF, and DunnGalvin et al., 2008 for PF; the article on the PFT is not yet published). The FAQLQs are available in many translations and can be obtained through the authors (www.faqlq.com).

References

DunnGalvin, A., de BlokFlokstra, B. M., Burks, A. W., Dubois, A. E., & Hourihane, J. O. (2008). Food allergy QoL questionnaire for children aged 0–12 years: Content, construct, and cross-cultural validity. *Clinical and Experimental Allergy, 38*(6), 977–986.

DunnGalvin, A., Cullinane, C., Daly, D. A., Flokstra-de Blok, B. M., Dubois, A. E., & Hourihane, J. O. (2010). Longitudinal validity and responsiveness of the food allergy quality of life questionnaire – parent form in children 0–12 years following positive and negative food challenges. *Clinical and Experimental Allergy, 40*(3), 476–485.

Flokstra-de Blok, B. M., DunnGalvin, A., Vlieg-Boerstra, B. J., Oude Elberink, J. N., Duiverman, E. J., Hourihane, J. O., et al. (2008). Development and validation of the self-administered food allergy quality of life questionnaire for adolescents. *The Journal of Allergy and Clinical Immunology, 122*(1), 139–144. 144.e1-2.

Flokstra-de Blok, B. M., van der Meulen, G. N., DunnGalvin, A., Vlieg-Boerstra, B. J., Oude Elberink, J. N., Duiverman, E. J., et al. (2009a). Development and validation of the food allergy quality of life questionnaire – adult form. *Allergy, 64*(8), 1209–1217.

Flokstra-de Blok, B. M., DunnGalvin, A., Vlieg-Boerstra, B. J., Oude Elberink, J. N., Duiverman, E. J., Hourihane, J. O., et al. (2009b). Development and validation of a self-administered food allergy quality of life questionnaire for children. *Clinical and Experimental Allergy, 39*(1), 127–137.

Goossens, N. J., Flokstra-de Blok, B. M., van der Meulen, G. N., Asero, R., Barreales, L., Burney, P., et al. (2010). Impact of food allergy on health-related quality of life in adult patients is comparable in seven European countries. *Allergy, 65*(s92), 747.

Goossens, N. J., Flokstra-de Blok, B. M., Vlieg-Boerstra, B. J., Duiverman, E. J., Weiss, C. C., Furlong, T. J., et al. (2011). Online version of the food allergy quality of life questionnaire-adult form: Validity, feasibility and cross-cultural comparison. *Clinical and Experimental Allergy, 41*(4), 574–581.

Hamp, N., Hourihane, J., Knibb, R. C., Dubois, A. E. J., Flokstra-de Blok, B. M. J., & Dunngalvin, A. (2008). Developmental specificity and sensitivity between two age appropriate health-related quality of life measures in food allergic children and teenagers. *The Journal of Allergy and Clinical Immunology, 121*(2), S107.

Juniper, E. F., Guyatt, G. H., & Jaeschke, R. (1996). How to develop and validate a new health-related quality of life instrument. In B. Spilker (Ed.), *Quality of life and pharmacoeconomics in clinical trials* (pp. 49–56). Philadelphia: Lippincott-Raven Publishers.

Juniper, E. F., Guyatt, G. H., Streiner, D. L., & King, D. R. (1997). Clinical impact versus factor analysis for quality of life questionnaire construction. *Journal of Clinical Epidemiology, 50*(3), 233–238.

Oude Elberink, J. N., de Monchy, J. G., Golden, D. B., Brouwer, J. L., Guyatt, G. H., & Dubois, A. E. (2002). Development and validation of a health-related quality-of-life questionnaire in patients with yellow jacket allergy. *The Journal of Allergy and Clinical Immunology, 109*(1), 162–170.

van der Velde, J. L., Flokstra-de Blok, B. M. J., de Groot, H., Oude-Elberink, J. N. G., Kerkhof, M., Duiverman,

E. J., Dubois, A. E. J. (2012). Food allergy-related quality of life after double-blind, placebo-controlled food challenges in adults, adolescents and children. *Journal of Allergy and Clinical Immunology, 130*(5), 1136–1143.

van der Velde, J. L., Flokstra-de Blok, B. M., Vlieg-Boerstra, B. J., Oude Elberink, J. N., Schouten, J. P., Dunngalvin, A., et al. (2009). Test-retest reliability of the food allergy quality of life questionnaires (FAQLQ) for children, adolescents and adults. *Quality of Life Research, 18*(2), 245–251.

van der Velde, J. L., Flokstra-de Blok, B. M., Vlieg-Boerstra, B. J., Oude Elberink, J. N., DunnGalvin, A., Hourihane, J. O., et al. (2010). Development, validity and reliability of the food allergy independent measure (FAIM). *Allergy, 65*(5), 630–635.

World Health Organisation. (2008). Process of translation and adaptation of instruments (Cited February 12, 2008). Available from 2008.

Food in Childhood, Satisfaction with

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Synonyms

Enjoying food during childhood

Definition

Quality of life is a multidimensional construct which includes components of physical, psychological, emotional, and behavioral well-being perceived by people themselves and/or other individuals and which comprises both objective and subjective aspects. Satisfaction with food is an important component of the subjective aspect of quality of life in both adults and children.

When we speak of satisfaction with food, we are referring to evaluating those elements that may contribute to children enjoying food and valuing it as a pleasurable and important element in their subjective well-being and quality of life.

This concept goes beyond the type and quantity of food included in their diet. Feeling good about food is also related to a positive perception of the senses of taste, smell, touch, sight, and hearing associated with eating. It includes aspects of the physical environment (where the eating takes place, furniture, the cutlery used, sound, and environmental temperature, among others), the psychosocial environment (interpersonal relationships with meal companions), and also the beliefs and values held with regard to food in each sociocultural context.

Description

The high prevalence of obesity and the tendency for this to increase over recent decades have led the World Health Organization (WHO) to consider obesity an epidemic with serious consequences for health. In the face of this problem, the WHO has implemented preventive actions to make it one of the principal priorities in the area of public health, particularly for the child populations of most developed countries. The WHO has recommended all member countries to implement and evaluate actions according to their own circumstances as part of global health policies and programs for promoting individual and community health. This involves introducing healthy diets and physical exercise to reduce the risks and incidence of noncommunicable diseases.

In respect of this, interest is oriented towards interventions in the areas of diet and nutrition on the level of the entire population according to the priorities of each region. Many countries have responded to this recommendation by designing intervention programs aimed at improving diet and promoting physical exercise in childhood. Some examples of this are the program "Together we will prevent child obesity" (EPODE France, 2004), the strategy for "Nutrition, physical exercise and preventing obesity" (Spanish Agency for Food Safety and Nutrition, 2005), and the program "Eat Well and Be Active Educational Toolkit" (Health Canada, 2007).

These programs have led to actions in different areas of intervention: political, health,

business, education, and community. Among other things, workshops, educational materials, guides, courses, talks, and revised menus have been devised to inform and educate the child population on the basic issues and benefits of following a healthy diet.

Some of the themes to have been considered under these multiple actions are aspects of a balanced diet, nutritional requirements of children at different stages of growth, questions of hygiene and food safety, and sensory and cooking aspects for improving food acceptability and preferences, among others. However, these actions rarely consider gathering data regarding children's satisfaction when it comes to food, either before or after the program has been implemented.

Promoting elements such as children's participation and decision-making in relation to their diet, approaching food issues from multiple perspectives (ecological, multicultural, sensory, etc.), and ensuring that they feel cared for and loved through food are just some of the actions that might stimulate children's interest in and satisfaction with food, above and beyond considering it a merely physiological need. These aspects, however, are inseparable from the subjective perceptions and evaluations children formulate themselves (such as satisfaction with their own body, satisfaction with eating in general, and satisfaction with conversations with meal companions).

Subjective well-being has a cognitive aspect which refers to the individual's personal evaluation of their overall life (by means of a global and abstract reflection) and also different life domains (by means of more concrete and specific evaluations) such as work, family, leisure, health, income, and interpersonal relationships (Cummins & Cahill, 2000). Food also constitutes a specific domain of life satisfaction that may have an important impact on personal well-being but which has received little attention from researchers until now, especially in the non-adult population.

Knowing which mechanisms might increase overall life satisfaction (OLS) in the child population allows us to identify, design, and promote strategies for improving their quality of life. At the same time, an in-depth analysis of whether food is a relevant indicator paves the way to using it as an area for exploring and understanding their quality of life.

Food practices play an important role in people's state of health, and although satisfaction with health is considered a specific domain of well-being, little research has been dedicated to studying the role that diet and food habits play in OLS.

Among the few studies we have identified that explore satisfaction with food and OLS in the child population, we may cite the review by Proctor, Linely, and Maltby (2009). These authors have produced a review of the literature on positive and negative associations between OLS and variables such as personality, self-esteem, interpersonal relationships, social support, the consumption of toxic substances, high-risk behaviors, physical activity, mental health, physical health, and psychophysiological problems. Among the extensive list of key elements in this evaluation, we find some variables related to food, such as eating disorders and obesity. This association proves to be negative, with a lower OLS observed when children suffer from these types of disorders.

Another study of interest is that conducted by Valois, Zulling, Huebner, and Wanzer (2003), which examined the relationship between subjective well-being and the perception of body weight and eating behaviors in a sample of adolescents, observing that low levels of subjective well-being are associated with poorer dietary behavior.

As well as the scarcity of studies exploring the relationship between food and subjective well-being in children, we must also add the fact that most of the studies that do exist do not focus on the healthy population but rather analyze the deficiencies suffered by people as a consequence of some illness or medical treatment.

It is worth noting that some studies are found in the scientific literature regarding user satisfaction with food services in specific contexts (schools and hospitals, among others), but in general these only focus on evaluating the service (Watters, Sorensen, Fiala, & Wismer, 2003; Stanga et al., 2003; Aranceta et al., 2008).

Exploring which elements might contribute to children enjoying food and valuing it as a pleasurable and important element for their subjective well-being and quality of life may contribute to a new perspective for intervention in addressing some of the public health problems present in the child population, such as the numerous cases of food-related illnesses (Calañas, 2005).

The results of this line of research may also contribute to suggesting new approaches in relation to promoting children's health and proposing new indicators for the evaluation of their OLS.

Cross-References

- ▶ Child Obesity
- ▶ Diabetes Mellitus Type 1
- ▶ Health
- ▶ Health Promotion
- ▶ Health-Related Quality of Life (HRQOL)
- ▶ Life Satisfaction, Concept of
- ▶ Obesity, an Overview
- ▶ Quality of Life (QOL)
- ▶ Quality of Life, Satisfaction with
- ▶ Satisfaction with Life as a Whole
- ▶ Weight Loss

References

Aranceta, J., Pérez, C., Dalmau, J., Gil, A., Lama, R., Martín, M. A., Martínez, V., Pavón, P., & Suárez, L. (2008). El comedor escolar: situación actual y guía de recomendaciones. *Anales de Pediatría, 69*(1), 72–78.

Calañas, A. (2005). Alimentación saludable basada en la evidencia. *Endocrinología y nutrición, 52*(S2), 8–24.

Cummins, R., & Cahill, J. (2000). Avances en la comprensión de la calidad de vida subjetiva. *Intervención psicosocial, 9*(2), 185–198.

EPODE France. (2004). *European network*. http://www.epode-european-network.com/. Accessed June 25, 2011.

Health Canada. (2007). *Eat well and be active educational toolkit*. Resource document.http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/educ-comm/toolkit-trousse/index-eng.php. Accessed June 25, 2011.

Proctor, C., Linely, P., & Maltby, J. (2009). Youth life satisfaction: A review of the literature. *Journal of happiness studies, 10*, 586–630. doi:10.1007/s/10902-008-9110-9.

Spanish Agency for Food Safety and Nutrition. (2005). *Strategy for nutrition, physical activity and the prevention of obesity (NAOS)*. Resource document. Ministry of health and consumer affairs. http://www.naos.aesan.msps.es. Accessed June 25, 2011.

Stanga, Z., Zurfluh, Y., Roselli, M., Sterchi, A., Tanner, B., & Knecht, G. (2003). Hospital food: A survey of patients' perceptions. *Clinical Nutrition, 23*(3), 241–246.

Valois, R., Zulling, K., Huebner, S., & Wanzer, D. (2003). Dieting behaviors, weight perceptions, and life satisfaction among public high school adolescents. *Eating Disorders, 11*, 271–288.

Watters, C., Sorensen, J., Fiala, A., & Wismer, W. (2003). Exploring patient satisfaction with foodservice through focus groups and meal rounds. *Journal of the American Dietetic Association, 103*, 1347–1349.

Food Insecurity in US States

- ▶ Hunger Rates in the US States

Food Production and Supply

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Definition

Food production involves the raising of crops or animals that are edible and contain nutrients.

Description

Concentration and centralization of the food production system has led to increased concern with the impact on environmental quality, nutrition, food security, and the social life in rural communities. Over the past half century, the number of farms in the United States has declined dramatically, while the average size of a farm has grown rapidly (Heffernan, 1972). The large scale of most farm operations today has resulted in the

increased use of chemicals, such as pesticides and herbicides, and the additional demand for hired labor (Lobao, 1990). With fewer farms, there is less demand for goods and services in rural communities. Agribusiness firms, usually defined as providing the inputs to the farm sector and processing and marketing farm products, have also increased their power in the agricultural sector. In most agricultural industries, there are only a few firms that control the markets, which influences prices and quality. These changes in how food production is organized may have important consequences for farmers and consumers, as well as our environment.

There is a fairly extensive body of literature on the impacts of the changing structure of agriculture on the quality of life in rural communities. One of the initial studies on this topic was conducted by Walter Goldschmidt in the 1940s. Goldschmidt, an anthropologist, compared the social and economic life in two California communities – Arvin, which was dominated by large-scale industrialized agriculture, and Dinuba, which was characterized by a pattern of small farms (Goldschmidt, 1978). The main findings of the study were that industrialized agriculture had negative effects on business conditions, the social and economic life of residents, power and decision-making, as well as community integration and interaction. Goldschmidt's general conclusion was that industrialized agriculture diminished most aspects of the quality of life in rural areas (Heffernan, 1972).

Further research on the impacts of industrialized agriculture have generally supported Goldschmidt's findings but with a few important qualifications (Lobao, 1990). Goldschmidt's discussion of industrialized agriculture tended to conflate the farm size and corporate agriculture. Research suggests that corporate agriculture is dominant in only a few regions (e.g., California, Florida, and Arizona) in the United States, while most agricultural production is still controlled by family labor farms. Recent research suggests, however, that the relationship between farm size and quality of life may be curvilinear rather than linear, with the highest levels among midsize farms and lowest among very small and large farms.

There also appear to be regional differences in the relationship between industrialized agriculture and quality of life. The impacts of industrialized agriculture seem to be much stronger in the West and South than in the Midwest and Northeast (Lobao & Meyer, 2001). The regional differences may be due to the fact that agricultural dependent communities are more likely to be located in the West and South. In other regions, more of the population may be dependent on manufacturing and service employment today (Green, 1985).

Most of the research on the "Goldschmidt hypothesis" has been cross-sectional, and very few studies have looked at this issue through a historical lens. The limited amount of evidence suggests that there may be reverse causation in the relationship – poor communities are more likely to experience greater industrialization of agriculture.

Finally, farms in Arvin and Dinuba raised different crops, which may have some important consequences for community life, such as the demand for hired labor and the size of farm operations. Additional research is needed to assess how different commodities may shape the social and economic life in communities.

More than 60 years of social science research has suggested that industrialized agriculture has produced many benefits to society, especially relatively cheap food for a growing population. Yet, there are reasons to be concerned about the impacts on other elements of our quality of life. Industrialized agriculture is heavily dependent on fossil fuels and chemicals that may severely damage our environment. Nutritionists have warned consumers about the many health dangers in our processed food (e.g., the high sugar content) and have suggested that it is contributing to the high rates of diabetes and obesity (Swanson, 1988). Finally industrialized agriculture has been shown to have negative consequences for social life in many rural areas.

Cross-References

- ▶ Anthropology
- ▶ Civic Engagement
- ▶ Community Development

▶ Decision Making
▶ Economic and Social Indicators
▶ Environment and Health
▶ Food Security
▶ Obesity, an Overview
▶ Quality of Life
▶ Regional Disparities

References

Goldschmidt, W. (1978). *As you sow*. Montclair, NJ: Allanheld, Osmun and Company.
Green, G. P. (1985). Large-scale farming and the quality of life in rural communities: Further specification of the Goldschmidt hypothesis. *Rural Sociology, 50*, 262–274.
Heffernan, W. D. (1972). Sociological dimensions of agricultural structures in the United States. *Sociologia Ruralis, 12*, 481–499.
Lobao, L. M. (1990). *Locality and inequality: Farm and industry structure and socioeconomic conditions*. Albany, NY: SUNY Press.
Lobao, L., & Meyer, K. (2001). The great agricultural transition: Crisis, change, and social consequences of the twentieth century farming. *Annual Review of Sociology, 27*, 103–124.
Swanson, L. E. (1988). *Agriculture and community change in the U.S.: The congressional research reports*. Boulder, CO: Westview Press.

Food Security

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Synonyms

Community food security; Food sovereignty; Household food security; Hunger

Definition

While many different definitions of food security have been used in various contexts around the world, the most widely accepted at the global or national level is the one put forward (Food and Agriculture Organization of the United Nations, 1996) and later refined (Food and Agriculture Organization of the United Nations, 2002) by the Food and Agriculture Organization (FAO) of the United Nations in 1996. It is

> Food security [is] a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

When food insecurity is discussed at the household level (particularly in the North American health research literature), it is usually defined as the limited or uncertain availability of nutritionally adequate and safe foods or the limited or uncertain ability to acquire acceptable foods in socially acceptable ways (Radimer, Olson, & Campbell, 1990).

At an intermediate level between that of households and whole countries, researchers in North America have put forward the concept of community food security which is defined as "a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice" (Hamm & Bellows, 2003).

Description

Food Security

The concept of food security emerged in the 1970s as a response to the global food crisis that occurred at that time (Food and Agriculture Organization of the United Nations, 2003). Its initial focus was on food supply problems, but it evolved over a period of about 25 years until it included physical, social, and economic access, as well as food safety and nutritional adequacy concerns. Food preference was added to the concept because of concerns related to the cultural acceptability of foods in different contexts. The FAO definition of food security has been used particularly at global and national levels, but according to the FAO, household food security is "the application of this concept to the

family level, with individuals within households as the focus of concern."

Household Food Security

Beginning in the latter half of the 1980s, community nutrition researchers and practitioners working with low-income people in North America put forward their own concept of household food insecurity as an alternative to the more narrow concept "hunger" that was being used in their field which is focused on having enough food to eat. As poverty in Canada and the United States was increasing due in large part to neoliberal reforms that began in the 1980s, researchers were finding that focusing on "hunger" masked the complexities inherent in an understanding of the experience of food poverty in a wealthy country. This new understanding of food poverty – household food insecurity – includes four dimensions that are quantitative, qualitative, social, and psychological in nature (Frongillo, 1999; Radimer et al., 1990). The quantitative dimension is similar to "hunger" and means having sufficient food to meet basic needs. The qualitative dimension focuses on food that is safe (e.g., no dented cans) and sufficiently diverse (dietary monotony and consumption of a narrow range of inexpensive foods are quality issues that are associated with food insecurity). The third dimension, social acceptability, is focused on how food is acquired; for example, charitable sources such as food banks have been associated with feelings of loss of dignity. The psychological dimension is focused on issues such as anxiety about running out of food and other psychological distress. Household food insecurity tends to follow a predictable sequence of severity, from worrying about not having enough money to buy food, to compromising on quality, and then finally to compromising on the quantity of food eaten (Chen & Che, 2001).

Community Food Security

In the later part of the 1990s, the term "community food security" (CFS) began to be used in the North American nutrition and public health literature (Allen, 1999), partly due to dissatisfaction with the limited nature of the concept of household food security. CFS is a significant expansion on household food security because it explicitly emphasizes issues of human rights, community empowerment and self-reliance (rather than self-sufficiency), and the importance of food system environmental sustainability. Working toward CFS is an attempt to reintegrate production and consumption issues, albeit usually with a local or regional focus especially in its early inception. The consumption element of community food security is concerned with the needs of low-income people while, especially when the concept was first proposed, the production side has focused on the promotion of local and regional food systems. More recently, CFS has shifted toward concern with sustainable agriculture broadly rather than primarily on local or regional food systems (Hamm & Bellows, 2003).

References

Allen, P. (1999). Reweaving the food security safety net: Mediating entitlement and entrepreneurship. *Agriculture and Human Values, 16*, 117.

Chen, J., & Che, J. (2001). Food insecurity in Canadian households. *Health Reports, 12*, 11.

Food and Agriculture Organization of the United Nations. (1996). *Rome declaration on world food security and world food summit plan of action*. World Food Summit, November 13–17, 1996, Rome.

Food and Agriculture Organization of the United Nations. (2002). *The state of food insecurity in the world 2001*. Rome: Author.

Food and Agriculture Organization of the United Nations. (2003). *Trade reforms and food security: Conceptualizing the linkages*. Rome: Author.

Frongillo, E. A. (1999). Validation of measures of food insecurity and hunger. *The Journal of Nutrition, 129*, 506S.

Hamm, M. W., & Bellows, A. C. (2003). Community food security and nutrition educators. *Journal of Nutrition Education and Behavior, 35*, 37.

Radimer, K. L., Olson, C. M., & Campbell, C. C. (1990). Development of indicators to assess hunger. *The Journal of Nutrition, 1200*, 1544.

Food Sovereignty

▶ Food Security

Fool's Hell

► Quality of Life, Two-Variable Theory

Fool's Paradise

► Quality of Life, Two-Variable Theory

Foot Function Index

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Synonyms

FFI; FFI-5pts; FFI-D; FFI-R; FFI-Rl; FFI-Rs

Definition

The foot function index (FFI) is a self-administered questionnaire which can be used to evaluate the extent of foot pain and stiffness, the effect on daily foot-related activities, and the quality of life.

Description

The FFI was originally developed by a group of foot experts as a questionnaire to evaluate foot problems for patients with rheumatoid arthritis (Budiman-Mak, Conrad, & Roach, 1991). The original questionnaire (23 items) intends to measures three constructs of foot-related problems: foot pain, disability, and limitation of activities. Since the development of the original questionnaire, it has been revised by the authors to a more extensive version (FFI-R 68 items) (Budiman-Mak, Conrad, Stuck, & Matters, 2006). The FFI-R measures an additional construct, quality of life, and the original pain construct have been changed into a pain and stiffness construct. Other authors have translated the original version into Dutch and German and further evaluated the ► reliability and validity (Kuyvenhoven et al., 2002; Naal, Impellizzeri, Huber, & Rippstein, 2008). These versions have been validated for patients with less severe foot problems. Both found that the construct "activity limitations" and a few other questions were "not applicable" for the large majority of their group. Thus, these versions consist of less items than the original version. Table 1 offers an overview of the different versions of the FFI. This article will mainly focus on the revised (Budiman-Mak et al., 2006) and original version (Budiman-Mak et al., 1991).

Reliability

The ► internal consistency of the FFI-R has been assessed with Rasch analysis which resulted in the following ► Cronbach's Alpha: the total score (0.95) and the different constructs – pain/stiffness (0.93), disability (0.93), activity limitation (0.88), and quality of life (0.86). The reliability has been calculated for the FFI-original. Intraclass correlation (ICC) (95 % Confidence interval (CI)) for the total score 0.87 (0.79–0.92) and for the subscales are as follows: pain 0.70 (0.53–0.81), disability 0.84 (0.74–0.9), and activity limitation 0.81 (0.7–0.88).

Construct Validity

The FFI-original as well as the FFI-R was developed by a group of experts and only the FFI-R has been evaluated by patients and adapted accordingly. Since there is no gold standard, the FFI-original scores of 57 patients with rheumatoid arthritis have been compared to foot joint count ($r = 0.53$, $p < 0.0001$), 50-ft walking time ($r = 0.48$, $p < 0.0002$), and grip strength ($r = -0.47$, $p < 0.0001$). The total FFI-R score of 59 patients with various foot problems FFI-R has been compared to the 50-ft walking time ($r = 0.31$, $p = 0.018$). These results indicate a limited to moderate evidence for construct validity.

Foot Function Index, Table 1 Different versions of the FFI

	No. of items	Rating method	Constructs	Validation population
FFI *Original* (Budiman-Mak et al., 1991)	23	Visual Analogue Scale (0–10)	Pain Disability Activity limitation	Rheumatoid arthritis ($n = 87$)
FFI-R *Revised version* (Budiman-Mak et al., 2006)	68	Categorical Scale (e.g., no pain – worst pain imaginable)	Pain and stiffness Disability Activity limitation Quality of life	Rheumatoid arthritis General foot problems ($n = 92$)
FFI-RS *Revised short version* (Budiman-Mak et al., 2006)	34	Categorical Scale (e.g., no pain–worst pain imaginable)	Pain and stiffness Disability Activity limitation Quality of life	Rheumatoid arthritis General foot problems ($n =$ non reported)
FFI-5pts *Dutch version* (Kuyvenhoven et al., 2002)	17	Categorical Scale (e.g., no pain–intense pain)	Pain Disability	Nontraumatic foot problems (age ≥ 45) ($n = 250$)
FFI-D *German version* (Naal et al., 2008)	18	Numeric Rating Scale (0–9)	Pain Disability	Patients visiting foot and ankle clinic ($n = 53$)

Responsiveness

For patients with rheumatoid arthritis ($n = 42$), the changes of total scores in the FFI-original correlate moderately to the changes in foot joint count over 6 months ($r = 0.45$, $p = 0.0028$). The changes in foot joint count also correlate moderately with the pain construct ($r = 0.47$, $p = 0.0018$), low with the activity limitation construct ($r = 0.34$, $p = 0.0277$) but not with the disability construct ($r = 0.11$, $p = 0.5022$).

Interpretation

The smallest detectable change or ▶ minimal important difference has not been addressed in either the original or the FFI-R.

Discussion

The FFI-R is a very extensive questionnaire (68 items) with a high internal consistency (Cronbach's α, 0.95). According to the authors, the questionnaire takes less than 30 min to complete. The high Cronbach's α (>0.90) suggests item redundancy even for patients with severe foot problems due to rheumatoid arthritis. The Dutch and German version was validated for patients with less severe foot problems and they both have a lower number of items (resp. 17 and 18). Due to the large number of items and the amount of items that are responsive to extensive foot problems, it is conceivable that the responsiveness of the FFI-R is inadequate when used for groups with minor foot problems.

Content Validity

Some items in the questionnaire in the disability construct could very well be influenced by problems other than foot pain. The guide at the start of every section of the questionnaire does clearly state: "During the past week, how much difficulty did your foot problems cause you?" Actions like "getting out of a chair?" or "when you carried or lifted objects weighing more than five pounds?" are possibly more influenced by, respectively, leg and arm strength than foot function.

The FFI-R is the only foot questionnaire that includes multiple questions about a person's attitudes towards shoes. And the addition of the quality of life construct makes the questionnaire very comprehensive.

Cross-References

- ▶ Construct Validity
- ▶ Content Validity
- ▶ Cronbach's Alpha

- ▶ Internal Consistency
- ▶ Minimal Important Difference
- ▶ Reliability

References

Budiman-Mak, E., Conrad, K. J., & Roach, K. E. (1991). The Foot Function Index: A measure of foot pain and disability. *Journal of Clinical Epidemiology, 44*, 561–570.

Budiman-Mak, E., Conrad, K., Stuck, R., & Matters, M. (2006). Theoretical model and Rasch analysis to develop a revised Foot Function Index. *Foot & Ankle International, 27*, 519–527.

Kuyvenhoven, M. M., Gorter, K. J., Zuithoff, P., Budiman-Mak, E., Conrad, K. J., & Post, M. W. M. (2002). The foot function index with verbal rating scales (FFI-5pt): A clinimetric evaluation and comparison with the original FFI. *Journal of Rheumatology, 29*, 1023–1028.

Naal, F. D., Impellizzeri, F. M., Huber, M., & Rippstein, P. F. (2008). Cross-cultural adaptation and validation of the Foot Function Index for use in German-speaking patients with foot complaints. *Foot & Ankle International, 29*, 1222–1228.

Forced Choice-Type Questions

▶ Closed-Ended Question Format

Forced Migrants

▶ Refugees, Quality of Life

Foreboding

▶ Anxiety

Forensic Care

▶ Care, Forensic

Forensic Mental Health Care

▶ Care, Forensic

Forensic Psychiatry

▶ Care, Forensic

Forest Bathing/Shinrin-Yoku

▶ Restorative Natural Environments

Forest Ecosystems

▶ Forests and Quality of Life

Forest Owners' Satisfaction with Forest Policy

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Synonyms

Group-value theory; Motivational needs; Policy outcome fairness in forestry; Policy outcome satisfaction in forestry

Definition

Policy Outcome Satisfaction

One broad definition of policy outcome satisfaction refers to perceiving policy outcomes as either positive or negative. While "outcome satisfaction" (i.e., favorability) and "outcome fairness" are

frequently used interchangeably, "fairness" refers to outcome evaluation on a normative standard (e.g., need or merit) (Lerner, 1974), whereas "satisfaction" can be defined as a perception of whether outcomes are positive or negative *without* a referent standard of comparison (Skitka, Winquist, & Hutchinson, 2003).

Legitimacy

Legitimacy explains citizens' voluntary cooperation with authorities and determines how they react to authoritative decisions (Tyler, 2004). Many researchers argue that legitimacy is a phenomenon occurring at the societal or collective level (Tyler, 2006). No singular, widely accepted definition of legitimacy exists in the social sciences. The term legitimacy most frequently refers to either a sense of obligation to obeying the authorities and the law or a sense of trust and ▶ confidence in institutions or authorities (Tyler, 2004).

Procedural Justice

Previous research conducted on the group-value theory (GVT) (Lind & Tyler, 1988; Tyler, 1989) has demonstrated that fair procedures enhance positive attitudes towards the authorities and facilitate outcome acceptance. Leventhal, Karuza, and Fry (1980) have proposed six procedural justice principles, that is, the suppression of bias, accuracy of information, representativeness of participants in decision-making, the consistency of individuals in procedure implementation, correctional mechanisms for rectifying bad decisions, and ethicalness. Giving a voice to all parties influenced by policy decisions, meaning the opportunity to express opinions prior to an actual decision, is an important aspect of procedural justice and is claimed to provide individuals with a sense of control in decision-making situations (Lind & Tyler, 1988).

Description

Why Is Forest Owner Satisfaction with Forest Policy Important?

Natural resource-based political tensions are likely to increase during the current era of environmental crisis and ▶ population growth leading to a greater need for successful natural resource management. However, ultimately conflicts over natural resources are based on differences regarding the fair utilization of limited resources (Clayton, 1994). Forests have been used and governed by multiple actors and institutions, such as private forest owners, the forest industry, and environmental authorities. The power imbalance among these actors and the polarization of conservation and forestry values have created perceptions of injustice among forest owners in many countries (Donner-Amnell, 2004; Rantala & Primmer, 2003; Vainio & Paloniemi, 2012; Van Kooten, & Vertinsky, 1999). From the policymakers' perspective, encouraging private forest owners to take forest management actions of any kind poses a challenge (Dominguez & Shannon, 2011). A functioning society requires that authorities can expect citizens to accept and follow their decisions willingly, without coercion or punishment.

Legitimacy, Procedural Justice, and Uncertainty

Tyler's group-value theory (GVT) and Jost's ▶ system justification theory (SJT), two currently important social psychological legitimacy theories, are both based on Tajfel's classic social identity theory (1982). GVT (Lind & Tyler, 1988) links legitimacy to social identity and procedural ▶ justice. It begins from the notion that people need to maintain a positive social identity. Interpersonal treatment during ▶ social interactions gives people information about their status within the group. By now, it is widely acknowledged that fair procedures build up the legitimacy of institutions, such as the police (Hinds & Murphy, 2007; Sunshine & Tyler, 2003) or the US Supreme Court (Tyler & Rasinski, 1991).

GVT considers legitimacy a neutral evaluation of the procedural fairness of decision-makers, whereas according to SJT legitimacy can sometimes reflect a biased evaluation of the status quo (Jost & Banaji, 1994). A number of cognitive and motivational biases cause people to rationalize system outcomes that are neither favorable nor inherently just (Jost, Banaji, & Nosek, 2004),

leading to exaggerations of the legitimacy of existing institutions (Jost & Hunyady, 2002). These biases can be caused by dispositional factors, such as the need for closure and openness to experience, as well as situational factors, such as a perceived system threat (Feygina, Jost, & Goldsmith, 2010; Jost & Hunyady, 2005). Similarly, SJT suggests that procedural justice information processing may be biased by motivational effects. The "uncertainty management" argument similarly proposes that being confronted with social and cognitive uncertainty motivates people to be particularly attentive to justice information, such as procedural fairness (Van den Bos & Lind, 2002).

However, findings regarding relationships between procedural justice and legitimacy in predicting the acceptance of decisions reveal a complex relationship between these variables. Firstly evidence shows that procedural justice information determines legitimacy which in turn determines the acceptance of decisions. Tyler and Rasinski (1991), for example, found that procedural justice has no direct effect on the acceptance of the US Supreme Court decisions, but an indirect effect does exist due to perceptions of the court's legitimacy. Van den Bos, Wilke, Lind, and Vermunt (1998) found in turn that when people had to assess the acceptability of authoritative decisions, they initially appraised the trustworthiness of the authority; if this information was lacking, procedural fairness served as a heuristic substitute when deciding how to judge decisions made by that authority. Tyler and Huo (2002) found that legitimacy (operationalized as trust in the authorities) and procedural justice predicted equally the acceptance level of decisions by legal authorities.

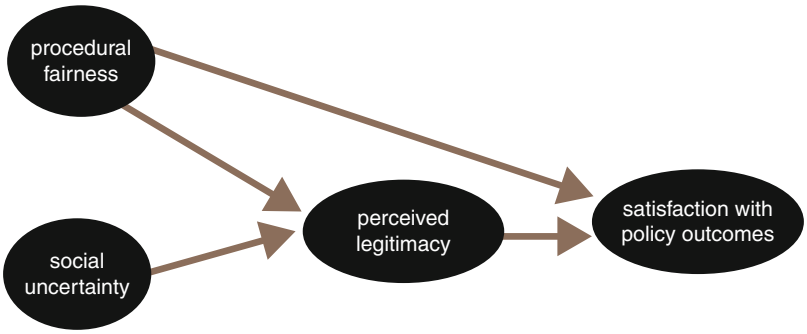
Evidence shows that legitimacy can sometimes shape perceptions of both procedural and outcome fairness (Tyler & Huo, 2002). Hegtvedt, Clay-Warner, and Johnson (2003) suggest that procedural justice and legitimacy function in a joint relationship: the way people attribute bad decisions depends on the perceived legitimacy of the authorities. As the public is not likely to be very knowledgeable about specific high court procedures in the context of the US Supreme Court, people may infer fairness perceptions based on whether they support the institution (see Baird, 2001; Mondak, 1993). The same phenomenon can also apply to citizens' perceptions of political procedures.

Moreover, whereas GVT suggests that procedural justice information is processed neutrally, SJT presents that procedural justice information processing itself may be influenced by an individual's ▶ motivation of perceiving the system as legitimate and just (Feygina & Tyler, 2009). One such motivational bias source is perceived uncertainty (Van den Bos & Lind, 2002). Van den Bos and Lind suggest that in such situations, experiences of unfair procedural treatment pose an increased threat to self, which in turn leads to increased attention to procedural fairness, in order to gain control of the threatening situation.

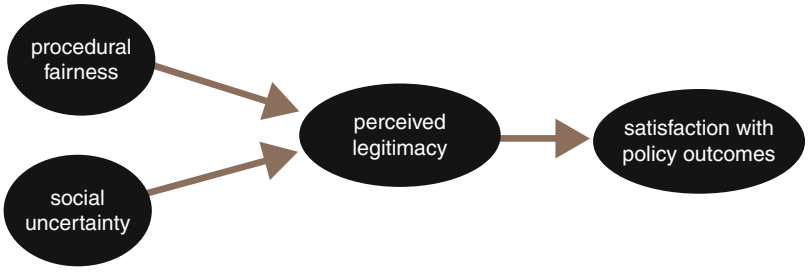
Forest Owners and Forest Policy: The Finnish Case

Forest policy is an important part of Finnish politics, economy, and culture (Sairinen, 2001). Actively managed forest lands in Finland are predominantly privately owned, and the Finnish forest industry heavily relies on private forests. While every fifth Finn is a private forest owner, practically speaking however, there are three big forest companies that procure wood from forest owners (Ylitalo, 2009).

According to Finnish national forest policy,private forest owners are obliged to simultaneously conserve biodiversity, produce timber, and take other public interests into account. Legislation currently regulates the operations of a Finnish forest owner in two ways. Firstly, forest owners' rights to decide about the growth, maintenance, and cutting of their forests are restricted by the Finnish Forest Act (1996), in order to guarantee the renewal of this national resource as well as the provisioning of raw wood to forest companies. Secondly, the Finnish Nature Conservation Act (1996) serves to maintain biological diversity and conserve nature's beauty and scenic value. In order to conserve nature, the environmental authorities have the right to establish permanent or temporary conservation areas within private forests.



Forest Owners' Satisfaction with Forest Policy,
Fig. 1 Determinants of forest owner satisfaction with forest policy when legitimacy is low (Adapted from Vainio (2011)



Forest Owners' Satisfaction with Forest Policy,
Fig. 2 Determinants of forest owner satisfaction with forest policy when legitimacy is high (Adapted from Vainio (2011)

Differences in values are likely to play a role in legitimacy perceptions of environmental context. Since the 1990s, Finnish national forest debate has also focused on biodiversity, which often conflicts with the long-established powerful position held by intensive forestry. This dual goal has frequently created tension between different interest groups. Forest owners are usually more likely to emphasize economic values than non-forest owners (Paloniemi & Tikka, 2008; Rantala & Primmer, 2003), although remarkable differences between various forest owners seem to exist (Vainio & Paloniemi, 2012).

According to a study by Vainio (2011), forest owner forest policy satisfaction was determined by procedural fairness, perceived social uncertainty, and legitimacy. Firstly, perception of procedural fairness increased perceived legitimacy. However, when legitimacy was high or relatively high, procedural justice no longer had an effect on policy outcome satisfaction. Secondly, social uncertainty increased the legitimation of forest policy. Thirdly, procedural justice had a direct effect on outcome satisfaction when legitimacy was low. In other words, legitimacy perceptions of forest owners were based on perceived procedural justice. When legitimacy was high or relatively high, it determined satisfaction with policy outcomes (Fig. 1). However, under social uncertainty the effect of procedural justice was weaker, and legitimacy functioned as system justification. When legitimacy of the political system was low, the critical evaluation of procedural justice determined satisfaction with political decisions (Fig. 2).

Discussion

Highly perceived institutional legitimacy that is not based on justice evaluations poses a challenge for democratic policymakers and institutions implementing these policies. How do we guarantee that they deliver fair outcomes, if people have a tendency to overlook procedural justice when it should be most important, that is, in uncertain situations which are probably becoming more pressing during the advancement of environmental crisis? As Tyler and Jost (2007) observed, a political system aiming to distribute truly just outcomes (and not merely apparently just ones) should genuinely commit to normative standards of procedural justice. However, researchers and policymakers should not rely solely on citizen's

perceptions of procedural fairness, because in some situations procedural justice perceptions can also reflect biased motivational needs (Feygina & Tyler, 2009; Van den Bos & Lind, 2002).

Previous legitimacy research has often focused on citizens' compliance and satisfaction with authorities, while research investigating processes where citizens have actual control of political decision-making together with politicians is still rare (see Paloniemi & Vainio, 2011a, 2011b). A high satisfaction level with a political system can function as a system justification tendency, reducing personal ▶ political participation and transferring sense of responsibility from the self to the system (see Feygina et al., 2010; Paloniemi & Vainio, 2011b; Vainio & Paloniemi, in press).

In order to better understand the prerequisites for political satisfaction, it is highly important to deepen our understanding of both the legitimation and illegitimation processes of citizens. Citizens are more likely to engage in illegitimization, in other words being critical, when they feel psychologically, socially, and environmentally secure (Vainio, 2011). Policymakers and implementers should therefore support such safe environments that allow expressions of critical opinions. On the other hand, researchers and policymakers should identify and develop their competence and skills in participating citizens in healthy legitimation and illegitimation, which could involve the critical evaluation of both procedural practices and outcomes and which could turn citizens into active decision-makers together with political authorities.

Cross-References

- ▶ Democracy
- ▶ Feelings of Justice
- ▶ Finland
- ▶ Job Satisfaction and Perceived Fairness in Hungary and USA
- ▶ Perceived Fairness
- ▶ Population Growth

References

Baird, V. A. (2001). Building institutional legitimacy: The role of procedural justice. *Political Research Quarterly, 54*, 333–354.

Clayton, S. (1994). Appeals to justice in the environmental debate. *Journal of Social Issues, 50*, 13–27.

Dominguez, G., & Shannon, M. (2011). A wish, a fear and a complaint: Understanding the (dis)engagement of forest owners in forest management. *European Journal of Forest Research, 130*, 435–450.

Donner-Amnell, J. (2004). To be or not to be Nordic? How internationalization has affected the character of the forest industry and forest utilization in the Nordic countries? In A. Lehtinen, J. Donner-Amnell, & B. Saether (Eds.), *Politics of forests. Northern forest-industrial regimes in the age of globalization* (pp. 179–204). Aldershot: Ashgate.

Feygina, I., Jost, J. T., & Goldsmith, R. E. (2010). System justification, the denial of global warming, and the possibility of "system-sanctioned change". *Personality and Social Psychology Bulletin, 36*, 326–338.

Feygina, I., & Tyler, T. R. (2009). Procedural justice and system-justifying motivations. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification* (pp. 351–370). New York: Oxford University Press.

Finnish Forest Act (1996). Forest Act 1093/1996. Available online: http://www.finlex.fi/fi/laki/kaannokset/1996/en19961093.pdf

Hegtvedt, K. A., Clay-Warner, J., & Johnson, C. (2003). The social context of responses to injustice: Considering the indirect and direct effects of group-level factors. *Social Justice Research, 16*, 343–366.

Hinds, L., & Murphy, K. (2007). Public satisfaction with police: Using procedural justice to improve police legitimacy. *Australian and New Zealand Journal of Criminology, 40*, 27–42.

Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology, 33*, 1–27.

Jost, J. T., Banaji, M. R., & Nosek, B. A. (2004). A decade of a system justification theory: Accumulated evidence of conscious and nonconscious bolstering of the status quo. *Political Psychology, 25*, 881–919.

Jost, J. T., & Hunyady, O. (2002). The psychology of system justification and the palliative function of ideology. *European Review of Social Psychology, 13*, 111–153.

Jost, J. T., & Hunyady, O. (2005). Antecedents and consequences of system-justifying ideologies. *Current Directions in Psychological Sciences, 14*, 260–265.

Lerner, M. J. (1974). The justice motive. *Journal of Personality and Social Psychology, 15*, 539–550.

Leventhal, G. S. (1980). What should be done with equity theory? New approaches to study of fairness in social relationships. In K. J. Gergen, M. S. Greenberg & R. H. Willis (Eds.), Social exchange: *Advances in*

theory and research (pp. 27–55). New York: Plenum Press.
Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York: Plenum.
Mondak, J. J. (1993). Institutional legitimacy and procedural justice: Reexamining the question of causality. *Law and Society Review, 27*, 599–608.
Paloniemi, R., & Tikka, P. (2008). Ecological and social aspects of biodiversity conservation on private lands. *Environmental Science and Policy, 11*, 336–346.
Paloniemi, R., & Vainio, A. (2011a). The interaction between legitimacy and empowerment-Combining the two conceptual approaches explains forest owners' willingness to cooperate in nature conservation. *Journal of Integrative Environmental Sciences, 8*, 123–138.
Paloniemi, R., & Vainio, A. (2011b). Why do young people participate in environmental action? *Environmental Values, 20*, 397–416.
Rantala, T., & Primmer, E. (2003). Value positions based on forest policy stakeholders' rhetoric in Finland. *Environmental Science and Policy, 6*, 205–216.
Sairinen, R. (2001). Public support for environmental policy in Finland: Cultural interpretations of survey results. *Scandinavian Political Studies, 24*, 129–148.
Skitka, L. J., Winquist, J., & Hutchinson, S. (2003). Are outcome fairness and outcome favourability distinguishable psychological constructs? A meta-analytic review. *Social Justice Research, 16*, 309–341.
Sunshine, J., & Tyler, T. R. (2003). The role of procedural justice and legitimacy in shaping public support for policing. *Law and Society Review, 37*, 513–548.
Tajfel, H. (1982). Social psychology of inter-group relations. *Annual Review of Psychology, 33*, 1–39.
Tyler, T. R. (1989). The psychology of procedural justice: A test of the group-value model. *Journal of Personality and Social Psychology, 57,* 830–838.
Tyler, T. R. (2004). Enhancing police legitimacy. *The Annals of the American Academy of Political and Social Science, 593*, 84–99.
Tyler, T. R. (2006). Psychological perspectives on legitimacy and legitimation. *Annual Review of Psychology, 57*, 375–400.
Tyler, T. R., Boeckmann, R. J., Smith, H. J., & Huo, Y. J. (1997). *Social justice in a diverse society*. Boulder, CO: Westview.
Tyler, T. R., & Huo, Y. J. (2002). *Trust in the law*. New York: Sage.
Tyler, T. R., & Jost, J. T. (2007). Psychology and the law: Reconciling normative and descriptive accounts of social justice and system legitimacy. In T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (2nd ed., pp. 807–825). New York: Guilford Press.
Tyler, T. R., & Rasinski, K. (1991). Procedural justice, institutional legitimacy, and the acceptance of unpopular U.S. Supreme Court decisions: A reply to Gibson. *Law and Society Review, 25*, 621–630.
Vainio, A. (2011). Why are forest owners satisfied with forest policy decisions? Legitimacy, procedural justice and perceived uncertainty. *Social Justice Research, 24*, 239–254.
Vainio, A., & Paloniemi, R. (2012). Forest owners and power: A Foucauldian study on Finnish forest policy. *Forest Policy and Economics, 21*, 118–125.
Vainio, A., & Paloniemi, R. (2013). Does belief matter in climate change action? *Public Understanding of Science, 22*, 382–395.
Van den Bos, K., & Lind, A. E. (2002). Uncertainty management by means of fairness judgments. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 34, pp. 1–60). New York: Academic Press.
Van den Bos, K., Wilke, H. A. M., Lind, E. A., & Vermunt, R. (1998). Evaluating outcomes by means of the fair process effect: Evidence for different processes in fairness and satisfaction judgments. *Journal of Personality and Social Psychology, 74*, 1493–1503.
Van Kooten, C., & Vertinsky, I. (1999). Framework for forest policy comparisons. In B. Wilson, C. Van Kooten, I. Vertinsky, & L. Arthur (Eds.), *Forest policy: International case studies* (pp. 1–22). Oxford: CABI.
Ylitalo, E. (Ed.). (2009). *Finnish statistical yearbook of forestry*. Helsinki, FI: Finnish Forest Research Institute (METLA).

Forests and Quality of Life

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Synonyms

Forest ecosystems; Woodlands; Woods

Definition

Forests are ecosystems in which "trees are the predominate life forms" (Secretariat of the Convention on Biological Diversity, 2001). They are serving ecological functions, which are especially important for climate regulation and in general for global *quality of life*. By providing timber and numerous other wood and non-wood

products, they are serving human needs and they contribute to human well-being at local, national, and global levels.

Description

According to the Millennium Ecosystem Assessment (Hassan et al., 2005), no general definition of "forest" exists, because of the differing contexts in which they occur. There are varying climatic, social, economic, and historical conditions. Forests occur in different ecosystems, at different densities, as well as in different forms. Main types of forests are classified as subtropical and tropical forests (mangrove, dry and moist lowland, swamp, moist montane) and also as boreal, temperate, subarctic, and subantarctic (IUCN, 2011).

Approximately 8,000 years ago, an estimated amount of about 6.2 billion hectares of the world – 47 % of earth's land surface – was covered with forests (Billington, Kapos, Edwards, Blyth & Iremonger, 1996). Since then, about 20–40 % have been lost and degraded due to interactions of economic, political, and institutional factors. In 2000, the Global Forest Resource Assessment, which supplies forest information on a global basis, estimated the remaining global forests at 3.9 billion hectares or about 30 % of the world's land area (FAO, 2001).

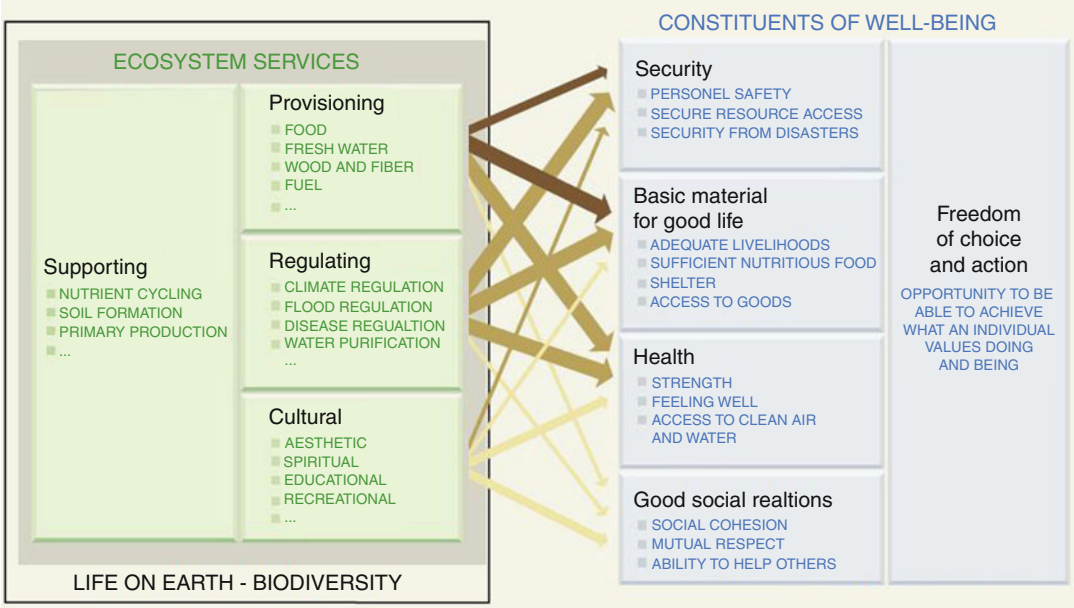
The worldwide forest systems are of fundamental importance for the stability and functionality of the global ecosystems and thus also for the livelihood of our world society. Furthermore, they provide habitats for half or more of the world's known terrestrial plant and animal species (Hassan et al., 2005). This biodiversity, which is still emerging, is essential for the continuing health and functioning of forest ecosystems, and it underlies the many ecosystem services that forests supply to mankind and nature.

Services provided by forests and woodlands are:

- Biodiversity, in terms of forest ecosystems, is one of the most important refuges for terrestrial species (ibid.). Biodiversity incorporates the base of ecosystems which is linked through the provision of diverse ecosystem services to the constituents of well-being that contribute to "Freedom of Choice and Action" (see Fig. 1 below).
- Soil and water protection, as forests are a major stabilizing element of natural landscapes reducing or preventing floods and landslides. Forests also play a major role in the global hydrological cycles, inter alia, the maintenance of water quality, increasing precipitation, and decreasing evaporation. Three quarters of the world's accessible freshwater comes from forest catchments.
- Protection of fragile ecosystems, such as forests in mountains (avalanches, landslides etc.), drylands (soil conservation, providing shade etc.), and small islands (protecting watersheds and marine environments, maintaining water supply).
- Fiber, fuelwood, and non-wood forest products are of major significance in international trade and have substantial economic value. Among the non-wood forest products are fodder for domestic animals, medicines, perfumes, gums, and latex to name just a few which play an important role in human daily life.
- In respect to carbon sequestration, forests play a crucial role in the carbon cycle and help regulate the global climate system.
- According to sociocultural values, the services that forests perform have an essential cultural, spiritual, and recreational role in many societies.
- The fact is that still, for around 300 million people, forests provide the main resource for their subsistence and survival (Hassan et al., 2005).

This altogether demonstrates that forests are a source of ecosystem services which are essential for human well-being.

Information about the world's forests is restricted and irregularly distributed. According to the Global Forest Resources Assessment (FRA-2000) of the Food and Agriculture Organization of the United Nations, only 22 countries



Forests and Quality of Life, Fig. 1 Linkages among biodiversity, ecosystem services, and human well-being (Source: Millennium Ecosystem Assessment, 2005)

provide continual reports (time-series inventories) about the conditions of their forests. An example for continuous national reporting is the forest status report ("Waldzustandsbericht") of Germany which is now available in the third edition. The report of 2011 shows that the overall condition of German forests has slightly worsened compared to previous years (Ernährung & Verbraucherschutz, 2011). The inventory based on forest damage surveys is carried through each year since 1984 and is the basis for further political decisions, regarding forest management.

Discussion

Of course woodlands and forests are essential for people's ▶ quality of life and well-being. ▶ Sustainability is the challenge for the future. The problem is to create sustainable management that takes into account the diverse functions and services that forest ecosystems provide. Unfortunately, conflicts of interest prevent easy solutions. In Germany, future studies regarding forest management under different scenarios (Project: Forest Futures 2100, 2007) show different directions which might be solutions. In addition to privatization and the spatial separation of forests for different purposes, the common pool of management of forests is another way.

Besides a clear sustainable management approach to forests and woodlands, management must also consider the effects of global climate change. Changing spatial and temporal patterns of temperature and precipitation, which are the most fundamental factors determining the distribution and productivity of vegetation, will also require a flexible and locally adapted management.

While in theory the problems are clear, in practice, forest management is driven by conflicts around the functions and services they are providing. Sustainable forest management has been embraced at national and international policy levels, but on the ground implementation is still far from being sustainable. Mitigating the negative trends affecting the world forests is the challenge of the future.

Cross-References

▶ Biodiversity Conservation

References

Billington, C., Kapos, V., Edwards, M., Blyth, S., & Iremonger, S. (1996). *Estimated original forest cover map-A first attempt*. Cambridge, UK: WCMC.

Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz. (2011). *Ergebnisse der Waldzustandserhebung 2011*. Retrieved December 24, 2012, from http://www.bmelv.de/SharedDocs/Downloads/Landwirtschaft/Wald-Jagd/ErgebnisseWaldzustandserhebung2011.pdf?blob = publicationFile

FAO. (2001). *Global forest resource assessment 2000-main report*. FAO Forestry Paper 140, Food and Agriculture Organization of the United Nations. Rom. 495 pp. Retrieved February 13, 2012, from http://www.fao.org/docrep/013/i1757e/i1757e.pdf

Forest Futures 2100. Retrieved April 2012, from http://www.waldzukuenfte.de/index.php?id=2

Hassan, R. M., Scholes, R., Ash, N., & Group, M. E. A. (Program). C. and T. W. (2005). *Ecosystems and human well-being: Current state and trends?: Findings of the condition and trends working group of the millennium ecosystem assessment*. Island Press.

IUCN. (2011). *IUCN red list of threatened species*. Version 2011.2. www.iucnredlist.org. Downloaded on April 27, 2012.

Millennium Ecosystem Assessment. (2005). *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC. Retrieved April 2012, from http://www.unep.org/maweb/en/Synthesis.aspx.

Secretariat of the Convention on Biological Diversity. (2001). *Global biodiversity outlook*. Montreal, Canada. 182 pp. Retrieved January 2012, from http://www.cbd.int/gbo1/gbo-pdf.shtml

Forgiveness of Others Scale

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Synonyms

FOS

Definition

Interpersonal forgiveness is typically thought to be a prosocial multidimensional change whereby a victim copes with the offense suffered by progressively reducing her negative responses – thoughts, feelings motivations, and/or behaviors – toward the offender as well as increasing her positive ones.

Several self-reported measures have been developed and validated in order to assess the construct. The proliferation of forgiveness scales is due not only to existing discrepancies in its definition but also to the different levels of specificity at which forgiveness can be assessed (trait, dyadic, and state one). Independently of these levels of assessment, available research has repeatedly proved that, despite some possible negative implications, forgiveness commonly has deep beneficial effects on psychophysical well-being.

Description

Common to most definitions present in the literature is the idea that forgiveness is a complex phenomenon, entailing distinct dimensions. Although items for forgiveness scales are sampled accordingly, so as to capture the diverse facets of the construct, validation evidence attests the multidimensional nature of forgiveness instruments mainly when forgiveness is assessed at a high level of specificity.

As many other prosocial constructs, forgiveness can be measured at three different levels of specificity (McCullough, Hoyt, & Rachal, 2000):

- As a trait
- As an offense-specific response
- As a tendency toward a specific relationship partner

Trait forgiveness, or forgivingness, is the global disposition to forgive across multiple offenses occurring in a variety of relationships and interpersonal situations; offense-specific forgiveness, or state forgiveness, is defined as a single act of forgiveness for a specific offense occurred within a particular interpersonal context;

and the tendency to forgive a relationship partner, or dyadic forgiveness, is conceptualized as the proneness to forgive him/her across multiple offenses.

At the trait level, forgiveness has mainly been assessed by unidimensional multi-item scales asking people to refer their general inclination to forgive others, like the Trait Forgivingness Scale (TFS; Berry & Worthington, 2001) and the Tendency to Forgive Scale (TTF; Brown, 2003). Thus, even though the argument that a benevolent disposition cannot be inferred from the absence of a revengeful or resentful one (and vice versa) holds on a priori ground (see also Mullet, Neto, & Riviere, 2005), items tapping these dispositions often do result to load on the same dimension empirically. Forgivingness is also sometimes measured by scenario-based scales asking people to indicate on one-item Likert scale their likelihood of forgiving/not forgiving each of the transgressions depicted. However, these scenario-based instruments are often less reliable and valid than multi-items ones because they do not allow covering different contents of the construct which cannot be assessed with a single item.

At the offense-specific level, forgiveness has mostly been measured by self-reported multi-item scales, involving two or more underlying distinct, but correlated dimensions. For instance, the Transgression-Related Interpersonal Motivations Inventory (TRIM −18; McCullough, Root, & Cohen, 2006) and the Enright Forgiveness Inventory (EFI; Subkoviak et al., 1995) are well-known offense-specific forgiveness scales, all of which implies different dimensions, some positive and some negative. These instruments are in line with the argument that forgiveness measures should entail at least one positive and one negative dimension, both of which are thought to be necessary in order to properly assess the construct (Fincham, 2000). The negative dimensions involve the presence of vengeful, resentful, and/or avoidant cognitions, emotions, motivations, and/or behaviors toward the offender, while the positive dimension reflects the presence of benevolent and conciliatory ones. Just as health cannot be inferred from the absence of illness, a high score on the positive dimension cannot be inferred from the absence of a low score on the negative dimension. Consistent with this view, the positive and negative dimensions of offense-specific forgiveness have been shown to have different outcomes and correlates.

Forgiveness's measures at the dyadic level reflect an intermediate case, with some scales, like the Dispositional Marital Forgiveness Scale (Fincham, & Beach, 2002), having a multidimensional structure and others, like the Family Forgiveness Questionnaire (FFQ; Maio, Thomas, Fincham, & Carnelley, 2008), having a unidimensional one.

Existing research shows modest associations between scores on offense-specific, dyadic, and trait forgiveness scales as well as modest stability of scores on offense-specific forgiveness scales when assessed across multiple transgressions, even when they occur within a relatively short time period and within the same relationship context (see for example, Paleari, Regalia, & Fincham, 2009). This lack of consistency can be explained by the fact that people generally take the specificity of an offense into account before forgiving or not forgiving it (e.g., its severity, intentionality, the degree to which it violates personal or relational standards).

Independently of the level of specificity at which forgiveness is measured, its association with quality of life appears to be robust: higher levels of offense-specific, dyadic, and trait forgiveness have been found to positively predict the victim's mental and physical health as well as the well-being of the social relations to which she is committed (Witvliet & McCullough, 2007). For example, forgiving individuals have lower blood pressure; report less physical symptoms of illness, fatigue, stress, loneliness, and depression; and refer an enhanced quality of sleep, positive ▶ mood, ▶ self-esteem, and ▶ life satisfaction; when facing offenses perpetrated by close others, forgiving people also report less ongoing conflict and an improved intimacy, satisfaction, commitment, and quality of relationships with them. Caution is however needed in grating forgiveness in abusive relationships as well as in expressing it before the offender's repentance.

Cross-References

- ▶ Life Satisfaction
- ▶ Mood
- ▶ Self-Esteem

References

Berry, J. W., & Worthington, E. L., Jr. (2001). Forgivingness, relationship quality, stress while imagining relationship events, and physical and mental health. *Journal of Counseling Psychology, 48*, 447–455.

Brown, R. P. (2003). Measuring individual differences in the tendency to forgive: Construct validity and links with depression. *Personality and Social Psychology Bulletin, 29*, 759–771.

Fincham, F. D. (2000). The kiss of the porcupines: From attributing responsibility to forgiving. *Personal Relationships, 7*, 1–23.

Fincham, F. D., & Beach, S. R. H. (2002). Forgiveness in marriage: Implications for psychological aggression and constructive communication. *Personal Relationships, 9*, 239–251.

Maio, G. R., Thomas, G., Fincham, F. D., & Carnelley, K. B. (2008). Unraveling the role of forgiveness in family relationships. *Journal of Personality and Social Psychology, 94*(2), 307–319.

McCullough, M. E., Hoyt, W. T., & Rachal, K. C. (2000). What we know (and need to know) about assessing forgiveness constructs. In M. E. McCullough, K. I. Pargament, & C. E. Thoresen (Eds.), *Forgiveness: Theory, research, and practice* (pp. 299–319). New York: Guilford Press.

McCullough, M. E., Root, L. M., & Cohen, A. D. (2006). Writing about the benefits of an interpersonal transgression facilitates forgiveness. *Journal of Consulting and Clinical Psychology, 74*, 887–897.

Mullet, E., Neto, F., & Riviere, S. (2005). Personality and its effects on resentment, revenge, forgiveness, and self-forgiveness. In E. L. Worthington (Ed.), *Handbook of forgiveness* (pp. 159–181). New York: Routledge.

Paleari, F. G., Regalia, C., & Fincham, F. D. (2009). Measuring offence-specific forgiveness in marriage: The Marital Offence-specific Forgiveness Scale (MOFS). *Psychological Assessment, 21*, 194–209.

Subkoviak, M. J., Enright, R. D., Wu, C.-R., Gassin, E. A., Freedman, S., Olson, L. M., et al. (1995). Measuring interpersonal forgiveness in late adolescence and middle adulthood. *Journal of Adolescence, 18*, 641–655.

Witvliet, C. V. O., & McCullough, M. E. (2007). Forgiveness and health: A review and theoretical exploration of emotional pathways. In S. G. Post (Ed.), *Altruism and health: Perspectives from empirical research* (pp. 259–276). Oxford, UK: Oxford University Press.

Forgiveness of Self Scale

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Definition

Self-forgiveness occurs when a person who committed a wrongdoing against the self or the other becomes able to forgive himself/herself for the negative things said, thought or done. It is defined as an adaptive process of coping that consists in the shift over time from an attitude of negative feeling and thought toward the self, caused by the wrongdoing, to a more positive one.

Description

Literature underlines that the real self-forgiveness process consists of three essential steps: the acknowledgment of the wrongdoing, the acceptance of own responsibility, and the prosocial motivational change that reduces negative feeling and behaviors (such as guilt, self-judgment, and self-resentment) while it increases feeling of acceptance, respect, and compassion toward the self (Enright & HDS Group, 1996; Exline & Fisher, 2006; Hall & Fincham, 2005). The first two steps permit to distinguish self-forgiveness from a self-justification mechanism more related to an ego-syntonic offender's behavior. If a person shifts guilt or blame for a given transgression onto another party or does not realize the victim position as victim, there is no condition for a real self-forgiveness.

Self-forgiveness has been measured mainly by items created ad hoc (e.g., Exline, Root, Yadavalli, Martin, & Fisher, 2011; Hall & Fincham, 2008; Wohl, Pychyl, & Bennett, 2010), while there are few self-report scales measuring the tendency to forgive the self. While the construct validity is generally good, the concurrent and predictive validity is not always consistent.

The most widely used scale is the Heartland Self-forgiveness Scale by Thompson et al. (2005), which measures the offender's change

in reframing both the perception of self and the wrongdoing from a negative valence to a more positive or neutral one. The scale is able to capture both the positive and negative valence of self-forgiveness process Two examples of items are "With time I get understanding of myself for mistakes I've made" (positive reframing) and "It is really hard for me to accept myself once I've messed up" (negative reframing).

The State Self-Forgiveness Scales (Wohl, DeShea, & Wahkinney, 2008) is noteworthy because it assesses self-forgiveness in relation to a specific offense and concerns the offender's attitude to think and act in a proactive manner toward the self after a wrongdoing.

Another available scale is the Forgiveness Self Scale by Mauger et al. (1992), which measures the persistence of the painful memory of a negative behavior and the tendency to consider the self as a blameworthy and guilty person. The comparison with the results to the MMPI scale highlights how the failure in forgiving the self is specifically related to a intropunitive mechanism of coping: Nonforgiving people seem to be more depressed, introverted, anxious, and distrusted.

Even if there are not yet consistent findings about the link between self-forgiveness and ▶ quality of life, existing data show that self-forgiveness is positive related to mental health, ▶ self-esteem (Mauger et al., 1992), mental flexibility, emotional ability (Hodgson & Wertheim, 2007), and to a greater satisfaction of life (Thompson et al., 2005).

Cross-References

▶ Self-Esteem

References

Enright, R. D., & HDS Group. (1996). Counseling within the forgiveness triad: On forgiving, receiving forgiveness, and self-forgiveness. *Counseling and Values, 40*, 107–126.

Exline, J. J., & Fisher, M. L. (2006). Self-forgiveness versus excusing: The roles of remorse, effort, and acceptance of responsibility. *Self and Identity, 5*, 127–146.

Exline, J. J., Root, B. L., Yadavalli, S., Martin, A. M., & Fisher, M. L. (2011). Reparative behaviors and self-forgiveness: Effects of a laboratory-based exercise. *Self and Identity, 10*, 101–126.

Hall, J. H., & Fincham, F. D. (2005). Self-forgiveness: The stepchild of forgiveness research. *Journal of Social and Clinical Psychology, 24*, 621–637.

Hall, J. H., & Fincham, F. D. (2008). The temporal course of self-forgiveness. *Journal of Social and Clinical Psychology, 27*, 174–202.

Hodgson, L. K., & Wertheim, E. H. (2007). Does good emotions management aid forgiving? Multiple dimensions of empathy, emotion management and forgiveness of self and others. *Journal of Social and Personal Relationships, 24*, 931–949.

Mauger, P. A., Perry, J. E., Freeman, T., Grove, D. C., McBride, A. G., & McKinney, K. (1992). The measurement of forgiveness: Preliminary research. *Journal of Psychology and Christianity, 11*, 170–180.

Thompson, L. Y., Snyder, C. R., Hoffman, L., Michael, S. T., Rasmussen, H. N., & Billings, L. S. (2005). Dispositional forgiveness of self, others, and situations. *Journal of Personality, 73*, 313–359.

Wohl, M. J. A., DeShea, L., & Wahkinney, R. L. (2008). Looking within: Measuring state self-forgiveness and its relationship to psychological well-being. *Canadian Journal of Behavioural Science, 40*, 1–10.

Wohl, M. J. A., Pychyl, T. A., & Bennett, S. H. (2010). Forgive myself, now I can study: How self-forgiveness for procrastinating can reduce future procrastination. *Personality and Individual Differences, 48*, 803–808.

Formal Social Capital

▶ Association Memberships

Forum for Early Child Development Monitoring

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Definition

The *Forum for Early Child Development Monitoring* is a Canadian research network committed to building a comprehensive, longitudinal

population-based monitoring system on early child development.

Description

The *Forum for Early Child Development Monitoring* (www.childdevelopmentmonitoring.net) is a Canadian research network committed to building a comprehensive, longitudinal population-based monitoring system on early child development. This entry provides a brief overview of the Forum's purpose and research focus. (Detailed background information on the research initiatives can be obtained from the Forum's website.)

Understanding the Importance of Early Childhood Care and Development

Research shows that positive early experiences have beneficial effects on health and well-being, and early risk factors are associated with poor long-term outcomes. The reason for this is that early experiences become biologically embedded in our brains and our nervous, hormone, and immune systems. By shaping our physiological pathways, frequent high levels of early social stress increase the susceptibility to maladaptive physical and mental functioning. Consistent loving care and social support, on the other hand, pave the way for highly adaptive functioning. These insights reflect a large body of converging research from multiple disciplines, spurring a growing awareness of the "importance of the early years" (Keating & Hertzman, 1999; McCain & Mustard, 1999; Shonkoff & Phillips, 2000).

Transforming Research and Contextualized Knowledge into Action

Knowledge of early child development does not make a difference for children by itself. Rather, knowledge needs to be transformed into actions in ways that meaningfully support children and their families. In this regard, collecting population-level data to obtain ▶ social indicators that capture child development fulfills two purposes. First, in response to the adage "no data, no problem-no problem, no action," population-level data on children's development provide a reference point for identifying areas of needs and challenges with respect to children's development (Ben-Arieh, 2012; Casas, 2011; Guhn, Zumbo, Janus, & Hertzman, 2011). Second, the transformation of research knowledge into action is most effective when the process is informed by local, contextualized data and when the action builds on local strengths and resources in socially and culturally appropriate ways (Guhn, 2009).

Building a Comprehensive Database on Children's Developmental Trajectories

The Forum's initiatives build on the first Pan-Canadian population-based database on children's early development, collected via the ▶ *Early Development Instrument* (EDI; Janus & Offord, 2007; Guhn, Janus, & Hertzman, 2007). The EDI is a survey on which kindergarten teachers rate the social, emotional, cognitive, and physical development of their kindergarten students. The EDI has been implemented at population level in most Canadian provinces and territories. Today (i.e., in 2012), EDI data are being used by governments, schools, and communities to inform debates and decisions about early childhood development practices, programs, and policies (www.earlylearning.ubc.ca/edi/; www.offordcentre.com/readiness/).

The Forum is committed to expanding the EDI database by linking it to population-level data on children's earlier development – that is, universal developmental screening at 18 months and at 3 years of age – and later development, that is, children's education, health, and well-being during the elementary school years (e.g., see the ▶ Middle Years Development Instrument). The resulting longitudinal population-level database allows researchers to describe to what extent children's developmental trajectories differ across socially and culturally diverse community and neighborhood contexts and to monitor child development trends over time.

Collecting Population-Level Data as a Means to Enhance Support Systems and Professional Practice

From the viewpoint of the Forum, collecting comprehensive population-level data on child

development can become a means to enhance early child development and education support systems and professional practice (Heymann, Hertzman, Barer, & Evans, 2006). Universal developmental screening, for example, can become a means to facilitate interactions and relationship building between parents and health and education professionals. This, in turn, can initiate dialogue about child development and create opportunities for children to play, learn, and grow up in home, school, and community environments that are loving, stimulating, creative, healthy, and safe.

Cross-References

- ▶ Attachment
- ▶ Cultural Diversity
- ▶ Early Childhood Development (ECD)
- ▶ Early Development Instrument
- ▶ Earlylearning.ubc.ca/edi/
- ▶ Knowledge Transfer and Exchange
- ▶ Middle Years Development Instrument
- ▶ Social Indicators
- ▶ Social Indicators Research
- ▶ Trend Analysis
- ▶ www.childdevelopmentmonitoring.net
- ▶ www.offordcentre.com/readiness/

References

Ben-Arieh, A. (2012). How do we measure and monitor the "state of our children"? Revisiting the topic in honor of Sheila B. Kamerman. *Children and Youth Services Review, 34*, 569–575. doi:10.1016/j.childyouth.2011.10.008.

Casas, F. (2011). Subjective social indictors and child and adolescent well-being. *Child Indicators Research, 4*, 555–575. doi:10.1007/s12187-010-9093-z.

Guhn, M. (2009). Insights from successful and unsuccessful implementations of school reform programs. *Journal of Educational Change, 10*, 337–363. doi:10.1007/s10833-008-9063-0.

Guhn, M., Janus, M., & Hertzman, C. (Eds.). (2007). The early development instrument. *Early Education and Development*, 18, 369–570.

Guhn, M., Zumbo, B. D., Janus, M., & Hertzman, C. (2011). Validation theory and research for a population-level measure of children's development, wellbeing, and school readiness. *Social Indicators Research, 103*, 183–191. doi:10.1007/s11205-011-9841-6.

Heymann, J., Hertzman, C., Barer, M. L., & Evans, R. G. (Eds.). (2006). *Healthier societies: From analysis to action*. New York: Oxford University Press.

Janus, M., & Offord, D. (2007). Development and psychometric properties of the early development instrument (EDI): A measure of children's school readiness. *Canadian Journal of Behavioural Science, 39*, 1–22.

Keating, D. P., & Hertzman, C. (Eds.). (1999). *Developmental health and the wealth of nations: Social, biological and educational dynamics*. New York: Guilford Press.

McCain, M. N., & Mustard, J. F. (1999). *Early years study. Reversing the real brain drain: Final report*. Toronto: Ontario Children's Secretariat.

Shonkoff, J. P., & Phillips, D. (Eds.). (2000). *From neurons to neighborhoods*. Washington, DC: National Academy Press.

FOS

- ▶ Forgiveness of Others Scale

Foster Care

- ▶ Care, Foster
- ▶ Care, Residential

Fostering Pro-environmental Behavior

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Synonyms

Climate change and human behavior; Free-rider avoidance; Human action and tipping points; Promoting favorable environmental change; Tragedy of the commons avoidance

Definition

Pro-environmental behavior manifests along two lines: (1) individual behaviors aimed toward mitigation or adaption to global climate change (GCC) and (2) purposeful acts to organize for pro-environmental ▶ social change. In this entry, I will begin by providing a historical context for social science understanding of the relationship between humans and the natural world. Then, I will discuss obstacles to pro-environmental behavior, both in terms of individual and collective action. Successful promotion of pro-environmental behavior changes can include the combined efforts of critical environmental education, identity formation linked to nature, ▶ social marketing techniques, and strong grassroots leadership.

Description

Introduction

Pro-environmental behavior manifests along two lines: (1) individual behaviors aimed toward mitigation or adaption to global climate change (GCC) and (2) purposeful acts to organize for pro-environmental social change. GCC is characterized by the increased temperature of the earth's atmosphere that began in the late 1800s and continues to increase, largely due to the increased burning of fossil fuels and rampant deforestation (Intergovernmental Panel on Climate Change, 2001). GCC is associated with increased community disruptions (e.g., droughts, floods, earthquakes, and tsunamis). In addition to GCC, other hazardous waste, such as chemical spills or leaky landfills, can harm communities and inspire increased pro-environmental action. Likewise, some actions, such as creating urban gardens or bicycle paths, are designed to environmentally enhance communities. Both individual pro-environmental behavior changes and ▶ collective action have the potential to benefit human health and restore the well-being of the planet.

Historical Context: The Complex Relationship Between Humans and the Natural World

Duncan (1961) was one of the first social scientists to develop a model to describe the relationship between humans and the nature. Dubbed the POET model, it posited that societal impact on the natural world was a function of the interplay between four primary components: (1) population, (2) organization (i.e., social relations), (3) environment, and (4) technologies. Building on this, Ehrlich and Holdren (1971) incorporated environmental degradation and human well-being into their IPAT model that added the notion of *impact* to three other components, including (1) population, (2) affluence, and (3) technologies. In this model, a causal relationship was established between human activity and the destruction of the natural environment. As early as 1980, Catton argued that we had past a global *tipping point* where human consumption of natural resources was above the ability of the planet to produce. In 1992, Dunlap described the main functions of the natural world for the survival of humans (and all life) to include a supply of raw materials, a repository for waste, and a habitat for protection. As such, environmental problems are caused when one function encroaches on another (e.g., toxic chemicals invade a residential neighborhood) or when human demand for resources exceeds the supply available from the environment. In short, our individual and collective actions have global consequences. Human behaviors, and the technologies that humans have developed, have led to this *tipping point* and it is imperative for human well-being, and for all life forms, that humans increase pro-environmental behaviors and decrease consumption of resources.

Overcoming Barriers to Pro-environmental Behaviors

The first step to foster increases in pro-environmental behavior is to identify and overcome barriers. Our stewardship of nature is essential to fight industries that might be poisoning our communities with hazardous materials, combat GCC, and create a sustainable world. However, individuals' concerns have not

always translated into pro-environmental behavioral changes (Kaplan, 2000; Wall, 1995). Even self-proclaimed environmentalists report a lack of efficacy with regard to making informed pro-environmental changes. At the individual level, researchers have identified multiple barriers, including time, money, low efficacy, and lack of education around environmental issues (Quimby & Angelique, 2011). Perhaps most importantly, a perceived disconnection from the natural world appears to be related to the absence of pro-environmental behavior (Shultz, Shriver, Tabanico, & Khazian, 2004).

Moreover, new habits are difficult to form in general. Habitual behaviors, be they intentional (e.g., an exercise routine) or unintentional (e.g., nail biting), are difficult to change. For example, one can care about the environment and feel quite empowered and still throw recyclables in the trash simply out of habit, not malice or disregard. This may be, in part, because it is difficult to predict the consequences of any individual environmentally-unfriendly behavior. On the other hand, it may be a function of the *tragedy of the commons* or the *free-rider* effect, two barriers to pro-environmental action. Hardin's (1968) *tragedy of the commons* refers to a dilemma that people face when they are considering whether to act in their own short-term interests, even when long-term consequences are understood. The theory posits that the belief that others are acting for the general good will suffice and one's individual actions will be of little consequence. For example, using plastic water bottles and disposable diapers and driving cars are all decisions with short-term benefits and long-term consequences. Similarly, *free-riding* occurs when individuals are willing to benefit from others taking to ameliorate the effects of GCC (Coleman, 1988; Wall, 1995). In the western world, it can be argued that we are all free-riders and suffer from the tragedy of the commons in the sense that we are over-consuming our share of the planet's resources. Both the tragedy of the commons and the free-riding phenomenon influence decisions to mobilize collectively to fight for structural, institutional, and policy changes related to GCC.

Promoting Pro-environmental Behavior Change

Pruneau, Doyon, Langis, and Vasseur (2006) identified three factors that could lead to increased pro-environmental behaviors, including (1) level of awareness; (2) emotions, feelings, and perceptions; and (3) situational and community factors. As such, increased personal competence and awareness along with community and institutional support are important catalysts for increasing pro-environmental behaviors. To promote individual behavior changes related to GCC, education programs and social marketing techniques can help to shift one's identity to be in-line with environmental concerns.

One catalyst to increased pro-environmental behaviors is to provide education as to what can be done of education (Quimby & Angelique, 2011). However, while researchers such as Kaplan (2000) found that both environmental education and/or experiences in nature led to increased pro-environmental behaviors, most programming to increase environmental awareness has met with limited success regarding behavior change (McKenzie-Mohr, 2000). Programs that include a social marketing component hold more promise. For example, McKenzie-Mohr (2000) described two successful social marketing programs, one that involved backyard composting and one aimed at reducing water usage. The researcher outlined four important steps, including (1) uncovering barriers and selecting behaviors to promote, (2) designing a program to overcome the barriers, (3) pilot testing the program, and (4) evaluating the program.

Removing the barriers to the behavior is an important step in the process. Barriers may be individual (lacking skill) or external (lacking resources). Therefore, it is important to consider how to obtain resources to overcome barriers (e.g., providing composting bins or water consumption gages). Further, ways to establish new social ▶ norms are deemed critical to success, as well. In McKenzie-Mohr's composting study, participants were asked to place a decal on their recycling bins indicated that they were also composters. This served two functions.

The act of placing the decal increased the likelihood that the participant would engage in composting (i.e., it established a commitment to compost) and it also created a community advertising campaign, of sorts, to make composting visible and an accepted practice. As Wall (1995) pointed out, people are more likely to engage in a behavior when others are practicing that behavior as well.

Changing Social and Societal Norms

Promoting new societal norms around environmental actions can foster the development of new behaviors and help to overcome the personal conflict between *being green* and *being normal* (Connolly, 2008). When considering the promotion of pro-environmental behaviors, it is important to understand both the encouragement and disincentives to engage in environmental behaviors. To the extent that one's neighbors are recycling, changing light bulbs and riding bikes to work dictate the social acceptability of that behavior. On the other hand, to the extent that one decides to buy only vintage clothing, live without gas or electric heat and air-conditioning, and turn their lawn into a suburban vegetable garden may be perceived as eccentric and outside of one's community norms.

Small environmental groups can create their own norms with the potential of becoming accepted outside their community. The use of reusable cloth grocery bags is a case in point. Larger societal norms can be fostered through organizational structures. The option and encouragement to reuse towels in hotel rooms is a prime example. The decision to engage in new pro-environmental behaviors is embedded within a complex web of social relations that can promote a strengthened strong ▶ sense of community and can shift, shape, and reinforce social norms (Bicchieri, 2006). In short, promoting changes in ▶ attitudes and beliefs is not sufficient to ensure behavior changes because other factors influence behaviors, such as the tragedy of the commons, the free-rider effect, as well as social norms. Therefore, environmental education must not simply focus on individual change but must also attend to social and structural obstacles to change.

One large structural impediment to change is the ever-emerging western consumer culture. As early as 1899, Veblen described how an emerging *leisure class* gained society power via *conspicuous consumption* as well as *conspicuous leisure* and *conspicuous waste*. In societies characterized by alienation and disconnection from others, people can find ways to socially connect through shared consumption (e.g., purchasing the same designer shoes, and furniture). For environmentally minded consumers, *green* advertising plays on individual guilt and encourages further consumption. Moreover, capitalism has encouraged planned obsolescence or the design of objects that will not function for long and be cheaper to replace than to fix. Bell (2012) has called this the *treadmill of production*. This phenomenon is coupled with *constraints of convenience* that include our coercion to rely on automobiles for transportation when a community's infrastructure does not include adequate bicycle paths or public transportation (Bell, 2012). Therefore, public environmental education must also attend to a critical analysis of consumerism and consumptionism.

Participating in Environmental Social Movements

Environmental education can encourage community mobilization to fight for policy and legal changes. The publication of *Silent Spring* in 1962, by Rachel Carson, is credited with creating the contemporary environmental social movement. Her classic work increased public awareness about the use and abuse of pesticides and sparked a national debate over pesticide regulation. Her work led to the banning of the dangerous insecticide DDT and inspired communities across the USA to challenge aerial spraying of pesticides over their communities.

While Carson (1962) instigated the environmental movement, it is Lois Gibbs who became a household name when she organized her neighborhood, Love Canal, to fight against the toxic waste dump that her community had been built upon that was associated with many serious illnesses among its residents. After years of struggle, her neighborhood was

evacuated and cleaned-up. Her work led to national policy changes, specifically the U.S. Environmental Protection Agency's Comprehensive Environmental Response, Compensation and Liability Act (aka Superfund), which has been instrumental in locating and cleaning up toxic waste sites across the USA. Today, Gibbs runs the Center for Health, Environment and Justice, dedicated to protecting communities from hazardous waste exposure (Gibbs, 1982).

These are just two examples of ways that individuals inspired others to act, one by raising the collective consciousness of the country and the other by forming a neighborhood association. The dedication and ▶ motivation of one determined individual with leadership abilities has the potential to become a catalyst for others to act pro-environmentally.

As indicated by Gibbs' organization, the environmental movement is also a movement of ▶ social justice, in that it is characterized by environmental racism, the practice of targeting communities of color for toxic waste dumping (Bullard, 1993). While Carson and Gibbs may be the most visible leaders in the environmental movement, Bullard (1993) provided an overview of multiple individuals and groups fighting toxic contamination in multiple communities of color across the USA and on Native American lands, including water pollution, air pollution, nuclear testing, lead poisoning, hazardous waste incinerators, and work hazards. He indicated that three factors are important for mobilization: (1) dispute mechanisms used in challenging environmental threats, (2) circumstances that inspire mobilization, and (3) external support. He discovered that there was a gendered division in leadership. Most leaders were women and it was the direct threat to their families that motivated them to act. Also, when the issue was framed as one of discrimination, people of color were more likely to act. In sum, the framing of an environmental issue, the immediacy of the threat, the presence of a strong leader, and the information to raise awareness are important catalysts for environmental action.

Conclusion: Changing for Increased Well-being

To sum, fostering pro-environmental behavior includes two aims: to encourage individual, personal behavioral, changes and to inspire ▶ public participation. To promote individual change, the combination of environmental education and social marketing appears to be effective. Shifting social norms through a critical analysis of consumerism and consumptionism, along with an increased environmental identity around one's connection to the natural world, can also facilitate pro-environmental behavior changes. The presence of strong leadership, a focus on direct threats, along with a pro-environmental identity and education that attends to structural and institutional barriers to change, as well as social justice, can promote grassroots organizing. Social scientists are equipped with the skills to play a leading role in promoting pro-environmental behavior changes at both individual and collective levels. To the extent that we are successful, we will inspire and influence the development of healthier people, healthier communities, cultural renewal, social justice, and a healthier planet.

Cross-References

▶ Community
▶ Sustainable Development

References

Bell, M. (2012). *An invitation to environmental sociology*. Washington, DC: Sage.
Bicchieri, C. (2006). *The grammar of society: The nature and dynamics of social norms*. Cambridge, UK: Cambridge University Press.
Bullard, R. D. (1993). *Confronting environmental racism: Voices from the grassroots*. Boston: South End Press.
Carson, R. (1962). *Silent spring*. New York: Houghton Mifflin.
Catton, W. R. (1980). *Overshoot: The ecological basis of revolutionary change*. Chicago: University of Illinois Press.
Coleman, J. (1988). Free-riders and zealots: The role of social networks. *Sociological Theory, 6*(1), 52–57.
Connolly, J. (2008). Green consumption: Life-politics, risk and contradictions. *Journal of Consumer Culture, 8*(1), 117–145.

Duncan, O. (1961). From social system to ecosystem. *Sociological Inquiry, 31*, 140–149.
Dunlap, R. E. (1992). From environmental to ecological problems. In C. Calhoun & G. Ritzter (Eds.), *Social problems*. New York: McGraw Hill.
Ehrlich, P. R., & Holdren, J. P. (1971). Impact of population growth. *Science, 171*, 1212–1217.
Gibbs, L. M. (1982). *Love canal: My story*. Buffalo, NY: State University of New York Press.
Hardin, G. (1968). The tragedy of the commons. *Science, 162*(3859), 1243–1248.
Intergovernmental Panel on Climate Change. (2001). *Third assessment report: Climate change. World Meteorological organization and United Nations Environment programme (UNEP)*.
Kaplan, S. (2000). Human nature and environmentally responsible behavior. *Journal of Social Issues, 56*, 491–508.
McKenzie-Mohr, D. (2000). Promoting sustainable behavior: An introduction to community-based social marketing. *Journal of Social Issues, 56*(3), 543–554.
Pruneau, D., Doyon, A., Langis, J., & Vasseur, L. (2006). When teachers adopt environmental behaviors in the aim of protecting the climate. *The Journal of Environmental Education, 37*(3), 3–13.
Quimby, C. C., & Angelique, H. (2011). Identifying barriers and catalysts to fostering pro environmental behavior: Opportunities and challenges for community psychology. *American Journal of Community Psychology, 47*(3/4), 388–396.
Shultz, P. W., Shriver, C., Tabanico, J. J., & Khazian, A. M. (2004). Implicit connections with nature. *Journal of Environmental Psychology, 24*, 31–42.
Veblen, T. (1899). The theory of the leisure class. Reprint: New York: Macmillan. 1979.
Wall, G. (1995). Barriers to individual environmental action: The influence of attitudes and social experiences. *The Canadian Review of Sociology and Anthropology, 32*(4), 465–491.

Four-Dimensional Symptom Questionnaire (4DSQ)

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Definition

The four-dimensional symptom questionnaire (4DSQ) is a self-report questionnaire comprising four scales covering the most important dimensions of psychopathology in primary care settings: distress, depression, anxiety, and somatization. The 4DSQ has been developed for clinical and research purposes. In clinical situations, the 4DSQ not only detects emotional problems and common mental disorders but also facilitates the doctor-patient communication about mental health issues. The 4DSQ helps to differentiate between normal distress and psychiatric disorder (anxiety and depression).

Description

Background

The 4DSQ was developed as a by-product of a study into the characteristics of primary care patients who had been diagnosed by their GP as having a "nervous breakdown" (i.e., adjustment disorder) as it demonstrated the presence of (severe) distress to be the most important characteristic of nervous breakdown (Terluin et al., 2006). Cluster and factor analysis of the symptoms of a consecutive sample of adult primary care patients revealed the four dimensions of the 4DSQ. Importantly, the content of the 4DSQ was data driven, not theory driven. However, the scales match well with existing knowledge on common mental disorders. Unlike most psychological symptom questionnaires, the 4DSQ provides a means to separate depression and anxiety (as psychiatric disorders) from normal distress (including adjustment disorder).

Concepts

The distress scale measures "the unique discomforting, emotional state experienced by an individual in response to a specific stressor or demand that results in harm, either temporary, or permanent, to the person" (Ridner, 2004). Distress reflects the effort people have to put into dealing with stressors or demands that tax their coping abilities and resources, trying to maintain their psychosocial equilibrium. Distress is the basic, most general way in which people respond to "stress" of any kind, be it life events (traumatic or otherwise), psychosocial difficulties, adversity, or demands such as in their work or family life.

Four-Dimensional Symptom Questionnaire (4DSQ), Table 1 Characteristics and interpretation of the 4DSQ scales (Based on clinical experience and partly based on Terluin B, Brouwers EPM, van Marwijk HWJ, Verhaak PFM, van der Horst HE. Detecting depressive and anxiety disorders in distressed patients in primary care; comparative diagnostic accuracy of the Four-Dimensional Symptom Questionnaire (4DSQ) and the Hospital Anxiety and Depression Scale (HADS). BMC Fam Pract 2009; 10:58)

Scales	# items	Range	Interpretation		
			Low	Moderate	Severe
Distress	16	0–32	0–10	11–20	21–32
Depression	6	0–12	0–2	3–5	6–12
Anxiety	12	0–24	0–7	8–12	13–32
Somatization	16	0–32	0–10	11–20	21–32

The depression scale measures symptoms that are specific to (moderate and severe) major depressive disorder such as loss of pleasure and depressive cognitions (Beck, Rush, Shaw, & Emery, 1979; Snaith, 1987). The depression score reflects the probability of a patient having a major depressive disorder needing specific treatment such as antidepressants or specialized cognitive behavioral therapy.

The anxiety scale measures symptoms that are specific to anxiety disorders (in particular panic disorder and phobic disorders) and reflects the probability of having an anxiety disorder needing specific treatment.

The somatization scale measures symptoms of somatic distress (Clarke & Smith, 2000). High somatization scores suggest the presence of "sensitization" (Wilhelmsen, 2005).

Validity

Some of the more important data will be summarized here; more detailed information can be found elsewhere (Terluin et al., 2009, 2006; Terluin, van Rhenen, Anema, & Taris, 2011). Conventional cut-off points are provided in Table 1.

The patients' distress score is associated with the probability of GPs recording a psychosocial diagnosis (e.g., "depression," "occupational problems") (OR 1.14 per point increase in score). The somatization score is associated with the GPs suspecting a psychosocial background when patients present somatic symptoms and GPs do not record a psychosocial diagnosis (OR 1.07 per point increase in score) (Terluin et al., 2006).

The depression score is a good discriminator between patients with and without major depression (AUC 0.75 for any major depression, AUC 0.78 for moderate or severe major depression). The anxiety score is a good discriminator between patients with and without an anxiety disorder (AUC 0.79 for any anxiety disorder, AUC 0.85 for panic disorder and/or phobic disorder) (Terluin, Brouwers, van Marwijk, Verhaak, & van der Horst, 2009).

The distress score is associated with stress people experience, in particular with the number of psychosocial problems (standardized B 0.47) (Terluin et al., 2006).

The somatization and distress scores predict future (1 year) sickness absence in employees (relative risk for moderate to severe somatization 1.69, RR for moderate to severe distress 1.26) (Terluin et al., 2011).

The four-factor structure has been confirmed using confirmatory factor analysis (Terluin et al., 2006).

Reliability

Cronbach's alpha varies between 0.84 and 0.90 (Terluin et al., 2006). Test-retest reliability varies between 0.89 and 0.94.

Smallest Detectable Change (SDC)

The SDC of the 4DSQ scales (i.e., the amount of change that with 95 % certainty should be ascribed to a real change) is about one quarter of the scale range (21 % for distress to 27 % for depression).

Responsiveness and Minimally Important Change (MIC)

The distress scale is the most responsive scale for subjective improvement (either spontaneous or through treatment) in a cohort of primary care patients with mental health problems (AUC 0.88). The MIC for distress, measured as the difference in mean change scores between improved and unchanged patients, is 8.5 points

(Terluin et al., 2006). Importantly, the MIC is larger than the SDC (7 points).

Language Versions

The original 4DSQ is in Dutch. The 4DSQ has been translated into English, French, German, and Polish. The English, German, and Polish versions are being studied for psychometric equivalence.

More Information

The 4DSQ (in the various language versions) and more detailed information can be accessed at www.emgo.nl/researchtools/4dsq.asp.

Cross-References

- ▶ Anxiety
- ▶ Anxiety Disorders
- ▶ Cluster Analysis
- ▶ Cronbach's Alpha
- ▶ Distress
- ▶ Factor Analysis
- ▶ Life Events
- ▶ Stress
- ▶ Test-Retest Reliability

References

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.

Clarke, D. M., & Smith, G. C. (2000). Somatisation: What is it? *Australian Family Physician, 29*, 109–113.

Ridner, S. H. (2004). Psychological distress: Concept analysis. *Journal of Advanced Nursing, 45*, 536–545.

Snaith, R. P. (1987). The concepts of mild depression. *The British Journal of Psychiatry, 150*, 387–393.

Terluin, B., Brouwers, E. P. M., van Marwijk, H. W. J., Verhaak, P. F. M., & van der Horst, H. E. (2009). Detecting depressive and anxiety disorders in distressed patients in primary care; comparative diagnostic accuracy of the four-dimensional symptom questionnaire (4DSQ) and the hospital anxiety and depression scale (HADS). *BMC Family Practice, 10*, 58.

Terluin, B., van Marwijk, H. W. J., Adèr, H. J., de Vet, H. C. W., Penninx, B. W. J. H., Hermens, M. L. M., van Boeijen, C. A., van Balkom, A. J. L. M., van der Klink, J. J. L., & Stalman, W. A. B. (2006). The four-dimensional symptom questionnaire (4DSQ): A validation study of a multidimensional self-report questionnaire to assess distress, depression, anxiety and somatization. *BMC Psychiatry, 6*, 34.

Terluin, B., van Rhenen, W., Anema, J. R., Taris, T. W. (2011). Psychological symptoms and subsequent sickness absence. International Archives of Occupational and Environmental Health [Epub ahead of print].

Wilhelmsen, I. (2005). Biological sensitisation and psychological amplification: Gateways to subjective health complaints and somatoform disorders. *Psychoneuroendocrinology, 30*, 990–995.

Fourth Age and Well-Being

- ▶ Oldest Old, Life Satisfaction, and Health

Fractionalization of Cultures

- ▶ Cultural Diversity

Frail Elderly

- ▶ Nursing Home Residents

Fraser Basin Council Sustainability Reporting

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Synonyms

Charitable organization for sustainability assessment; Healthy communities; Metrics of sustainability; NGO; Not-for-profit organization for sustainability reporting; Quality of life in the Fraser Basin, British Columbia, Canada; Sustainability; Sustainability benchmarks of Fraser

Basin by NGO; Sustainability indicators for the Fraser Basin in British Columbia, Canada; Sustainability measures for Fraser Basin, British Columbia, Canada; Watershed health; Well-being and sustainability accounting

Definition

Formed in 1997, the Fraser Basin Council (FBC) of British Columbia, Canada, is a charitable, not-for-profit organization committed to advancing sustainability. FBC has a collaborative governance structure, led by 38 directors drawn from the four orders of government – federal, provincial, local, and first nations – and from the private sector and civil society. In its capacity as a civic educator, the FBC developed a Sustainability Indicators Program in 2000 to measure and report on the state of sustainability within the Fraser River Basin and its subregions.

Description

Formed in 1997, the Fraser Basin Council (FBC) is a charitable, not-for-profit organization committed to advancing sustainability. There are numerous definitions of sustainability. FBC's vision is "Social well-being, supported by a vibrant economy and sustained by a healthy environment." Depending on one's definition, the concept of sustainability may have substantial overlap with other concepts including quality of life, well-being, healthy communities, and community resilience.

FBC has a collaborative governance structure, led by 38 directors drawn from the four orders of government – federal, provincial, local, and first nations – and from the private sector and civil society. Well into its second decade of service, the FBC works to bring people together to find practical, common sense solutions to longstanding sustainability issues. The FBC recognizes that sustainability issues cannot be effectively addressed by any one jurisdiction or by different sectors working in isolation from each other. Therefore, a collaborative approach is needed to advance sustainability and quality of life (Fig. 1).

Sustainability Indicators Program

A key role of the Council is to serve as a civic educator, particularly to educate on the need for sustainability. In this capacity, the FBC developed a Sustainability Indicators Program to measure and report on the state of sustainability within the Fraser River Basin and its subregions. The Program aims to measure and report on trends and current conditions with the following goals in mind:

- To increase public awareness and understanding about sustainability
- To identify critical issues and responses to improve progress
- To inform decisions and influence actions
- To advance sustainability

The Council initiated this work in 2000 with a literature review to scan the emerging field of sustainability indicators to learn about different approaches to the development and use of indicators and to identify commonly used indicators. The next step included a broad-based community and stakeholder engagement process, including workshops and surveys, to learn about the priority issues and preferred indicators of diverse individuals, organizations, sectors, and regions throughout the Fraser Basin (FBC, 2000, 2001). Following the community process, a technical advisory process was facilitated that engaged a wide cross section of jurisdictions, disciplines, and perspectives. Advisors helped assess the technical merit and suitability of the various indicators suggested by the public, suggested additional indicators, and helped identify the best available data in relation to various indicators. Advisors were also helpful in the process of reviewing draft reports, including verification, validation, refinement, and/or resolving questions or concerns related to various data.

The Council's first report *A Snapshot on Sustainability: State of the Fraser Basin Report* was published in January 2003 (FBC, 2003). Including this inaugural report, the FBC has

Fraser Basin Council Sustainability Reporting, Fig. 1 The Fraser Basin, British Columbia, Canada, showing Fraser Basin Council administrative regions (Fraser Basin Council, 2011a)

published four reports on the sustainability of the overall Fraser River Basin (2004 State of the Fraser Basin Report: Sustainability Snapshot 2; (FBC, 2004) 2006 State of the Fraser Basin Report: Sustainability Snapshot 3 – Inspiring Action; (FBC, 2006) and 2009 State of the Fraser Basin Report: Sustainability Snapshot 4 – The Many Faces of Sustainability) (FBC, 2009) and three reports on subregions, including the Upper Fraser (2008), Thompson (2005), (FBC, 2008, 2005) and Lower Mainland (2010) regions (FBC, 2010). Each of the basin-wide and regional reports includes a comprehensive set of reporting themes (e.g., biodiversity, health, education, community engagement), a suite of quantitative indicator measures, analyses of trends and current conditions, profiles of case studies to advance sustainability, and suggested actions for positive change.

Lessons Learned

The Council has found the reports to be useful in a wide variety of ways. For example, the Council has used the reports as a reference document to inform the development of its 5-year strategic

plans to ensure that the Council's strategic priorities are informed by accurate and comprehensive information about the status of a wide variety of sustainability issues. Through feedback forms and interviews, the Council has also validated that the reports are being used in many different ways by diverse audiences. Some examples include: increasing public awareness; influencing behavioral change; monitoring progress; and informing planning, policy development, and decision-making.

In 2011, the Council prepared a report to share a wide range of good practices and lessons learned from the field of sustainability indicators and reporting (Fraser Basin Council, 2011b). The report includes lessons from over a decade of FBC observations and experiences, including collaboration with other partners and initiatives. The report spans several different themes and phases of work, including:

1. Getting Started – Process Planning and Design
2. Getting from Data to Knowledge
3. Presenting and Communicating Results
4. Getting from Indicators to Action

This report is intended as a reference for diverse audiences, which are already involved in the development and use of indicators, or are initiating this type of work, including all orders of government, business, researchers, and nongovernment organizations. It is not intended as a comprehensive step-by-step manual but rather a collation of experiences, observations, insights, and lessons learned. This report and the complete series of Fraser Basin Council sustainability reports are available online at http://www.fraserbasin.bc.ca/.

Cross-References

- ▶ Ecohealth
- ▶ Ecological Well-Being
- ▶ Economic and Social Indicators
- ▶ Environmental Management
- ▶ Environmental Sustainability
- ▶ Regional Quality of Life
- ▶ Systems of Indicators
- ▶ Vital Signs: Vancouver

References

Fraser Basin Council. (2000). *Sustainability indicators for the Fraser basin: Workbook*. Retrieved from www.fraserbasin.bc.ca/

Fraser Basin Council. (2001). *Sustainability indicators for the Fraser basin: Consultation report*. Retrieved from www.fraserbasin.bc.ca/

Fraser Basin Council. (2003). *Snapshot on sustainability: State of the Fraser basin report*. Retrieved from www.fraserbasin.bc.ca/

Fraser Basin Council. (2004). *2004 State of the Fraser basin report – Sustainability snapshot 2*. Retrieved from www.fraserbasin.bc.ca/

Fraser Basin Council. (2005). *How is our region doing? – Sustainability snapshot of the Thompson region*. Retrieved from www.fraserbasin.bc.ca/

Fraser Basin Council. (2006). *Sustainability snapshot 3 – Inspiring action – State of the Fraser basin report*. Retrieved from www.fraserbasin.bc.ca/

Fraser Basin Council. (2008). *Upper Fraser snapshot – A picture of our region*. Retrieved from www.fraserbasin.bc.ca/

Fraser Basin Council. (2009). *Sustainability snapshot 4 – The many faces of sustainability – State of the Fraser basin report*. Retrieved from www.fraserbasin.bc.ca/

Fraser Basin Council. (2010). *Sustainability snapshot 2010: Working together in the lower mainland*. Retrieved from www.fraserbasin.bc.ca/

Fraser Basin Council. (2011a). *Fraser river basin and sub-regions [map]*. Vancouver: Author.

Fraser Basin Council. (2011b). *Measuring and reporting on sustainability: A report on lessons learned*. Vancouver: Author.

F-Ratio

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Synonyms

Analysis of variance; Equality of variances; F distribution; F test; Mean square between; Mean

square within; Mean-squared error; Significance testing; Sum of squares

Definition

Statistic obtained from dividing two sample variances assumed to come from normally distributed populations in order to compare two or more groups.

Description

The *F-ratio* is widely used in quality life research in the psychosocial, behavioral, and health sciences. It broadly refers to a *statistic* obtained from dividing two sample variances assumed to come from normally distributed populations in order to compare two or more groups. The *F-ratio*, in its various forms, can be used to compare whether the variances of two samples are equal (an assumption of several statistical tests), but it finds a much broader application in the context of analysis of variance (ANOVA) to analyze factorial experiments and in least-squares regression analysis (Rice, 1988).

Under the null hypothesis, the ratio of two variance estimates coming from normal distributions follows an F-distribution against which a specific F-statistic, calculated from the observed data, can be compared to assess statistical significance. Contingent on the complexity of the experimental design being analyzed, the calculation of the two variance estimates changes, although the F-ratio generally follows the form of being the quotient of the mean-squared error between groups divided by the mean-squared error within groups. In the case of regression, the mean-squared error between groups refers to the variance due to the linear model being fit, and the mean-squared error within groups is the variance due to the error.

The logic behind the F-ratio is to decompose the observed variance in two components: that which is assumed to represent true differences between groups (the numerator) and that which is assumed to be due to random fluctuations because of sampling variability. The more an F-ratio increases away from unity, the more likely it is that true group differences are present in the data being analyzed. If the F-ratio is close to one, variability due to sampling is undistinguished from variability due to group differences, so there is no possibility to make a statistical claim as to whether true group differences are being observed or not.

The F-ratio, as well as any statistical test, depends on certain assumptions for its conclusions to be valid. Such assumptions include (but are not restricted to) that the estimated sample variances are assumed to come from normally distributed populations, equality of variances across the groups being compared, and more depending on the type of analysis being conducted. Harwell, Rubinstein, Hayes, and Olds (1992) provide a comprehensive overview of the cases where the F-ratio may or may not be robust against certain violations.

Cross-References

- ▶ Control Groups
- ▶ Experimental Design
- ▶ Statistical Experimental Design

References

Harwell, M. R., Rubinstein, E. N., Hayes, W. S., & Olds, C. C. (1992). Summarizing Monte Carlo results in methodological research: The one- and two-factor fixed effects ANOVA cases. *Journal of Educational Statistics, 17*(4), 315–339.

Rice, J. A. (1988). *Mathematical statistics and data analysis*. Monterey, CA: Brooks/Cole.

Free Time

- ▶ Spare Time

Free Time with Partners

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Synonyms

Leisure time with a partner

Definition

Free time with a partner refers to time together with a partner that is not spent at work, doing domestic tasks, or on personal care such as sleeping, bathing, and eating. Free time with a partner differs conceptually from individual leisure and from family leisure, where children are present.

Description

Spending time in leisure activities is important for well-being and ▶ quality of life. Given that most leisure has a social dimension, it has the ability to bind people together (Roberts, 2006).

Shared free time, or leisure time, with a partner is positively related to ▶ marital well-being measures and ▶ relationship satisfaction. Spousal interaction and spousal joint leisure activities – as a form of enjoyable interaction – strengthen the attachment between partners and draw them closer together, helping them to maintain their marriage.

Gender

It is well established in leisure research that men and women do not have the same amount of leisure, nor do they experience leisure in the same way. This is related to the "care ethic" of women, whereby women are encouraged to put their family's leisure needs above their own (Shaw, 1997). Men and women differ in the quantity of leisure time (men tend to have more leisure time at their disposal compared to women) and in the nature of it. Women's leisure is found to be more family-oriented, homebound, and fragmented, whereas men generally have more opportunities for leisure independent of the family. Moreover, they experience joint leisure time differently: whereas women report stronger feelings of overall balance when they have more couple leisure without children present, men feel they are better able to balance different roles in life when leisure is experienced as a family.

Work Arrangements

Dual-earner couples face more time restrictions than couples in other work arrangements. People with a paid job have more ▶ work time and hence generally less leisure time at their disposal. When both partners in a couple have a paid job, the relative share of what is already a curtailed reservoir of leisure time spent in each other's presence is smaller than for single-earner couples (Voorpostel, Van der Lippe, & Gershuny, 2010).

Trends

There are two main theoretical views on trends in the shared time of partners, both related to processes of individualization:

1. Competing demands result in a struggle between one's own and shared time. Individualization may have resulted in less ▶ interdependence within couples and demands from other domains, such as the labor market; couples may have resulted in more difficulty organizing leisure time together.
2. Changes in society have led to changes in the nature of marriage and couple relationships. People look for different rewards in couple relationships these days, emphasizing

▶ personal growth and intimacy. This increases the importance of joint leisure time for marital well-being.

Notwithstanding the often expressed concern that couples today have more difficulty organizing shared time than before because of increasing demands from other domains of life, research shows that the amount of leisure time at peoples' disposal has increased over time in Western countries (Gershuny, 2000). Moreover, a study based on American time use data from 1965, 1975, and 2003 concludes that partners spend more than half of their leisure time in each other's presence and that this share was higher for 2003 compared to earlier years (Voorpostel, Van der Lippe, & Gershuny, 2010), indicating an increase in the importance of partners spending time together in leisure activities.

Cross-References

- ▶ Interdependence
- ▶ Marital Well-Being Measures
- ▶ Personal Growth
- ▶ Quality of Life
- ▶ Relationship Satisfaction
- ▶ Work Time

References

Gershuny, J. (2000). *Changing times: Work and leisure in postindustrial society*. New York: Oxford University Press.

Roberts, K. (2006). *Leisure in contemporary society* (2nd ed.). Wallingford, UK: Cabi.

Shaw, S. M. (1997). Controversies and contradictions in family leisure: An analysis of conflicting paradigms. *Journal of Leisure Research, 29*, 98–112.

Voorpostel, M., Van der Lippe, T., & Gershuny, J. (2010). Spending time together: Changes over four decades in leisure time spent with a spouse. *Journal of Leisure Research, 42*(2), 243–265.

Freedom

- ▶ Liberty

Freedom and Quality of Life

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Synonyms

Choice; Inner control

Definition

Freedom is the opportunity to choose, in other words, absence of limitations to choose.

Description

Concept of Freedom

Freedom can be defined as the *possibility to choose*. The "possibility" to choose requires first of all that there be an "opportunity" to choose, which is an attribute of the environment. The possibility to choose requires also "capability" to choose, which is an individual attribute.

Variants of Freedom

Opportunity to choose involves two requirements: one that there be something to choose and two that the choice is not blocked by others. The latter variant is called "negative freedom" by Berlin (1969) and "social freedom" by Bay (1965).

Capability to choose also involves two requirements, first that one is aware of opportunities to choose and second that one has the guts to choose. Bay (1965) refers to these variants as respectively "potential freedom" and "psychological freedom."

Link with Perceived Freedom

Actual freedom is not always paralleled by *perceived* freedom. One may think one is free when

one is unaware of restrictions and manipulation, as is the case in the movie "The Matrix." One may also be unaware of opportunities, as in the case of the prisoner who does not know that the door is unlocked. In both cases the concept of potential freedom applies. Still another possibility is that lack of guts to choose gives rise to ego-defensive denial of opportunities to choose, which is a case of psychological unfreedom.

Measurement

Opportunity to choose is typically not measured by availability of options, since that is difficult to grasp and overlaps with notions of societal development. Therefore, the focus is rather on *restrictions* to choice, such as in rules and dependencies. Restrictions are assessed in social contexts, such as families, organizations, and societies. In these contexts one can then focus on particular kinds of restrictions, such as restrictions on choice of mates in families, restrictions to work hours in organizations, and restrictions on free speech in nations.

Capability to choose is less easily measured. It is difficult to assess awareness of restrictions (potential freedom), since there are many possible restrictions and one cannot ask people about things they are not aware of. Hence, we have to resort to proxies, such as level of education and media attendance. It is also difficult to assess to what extent people are able to face choice (psychological freedom), and in this case more general psychological traits are used as a proxy, such as ego strength, inner control orientation, and conformism.

Below I present some measures of opportunity to choose in nations, which focus on restrictions to choice in economic, political, and private life.

Economic freedom

This is measured by absence of restrictions on free trade, such as price control, excessive taxing, or closed-shop practices. This is measured by the Heritage Foundation (2008), reputed to be a think tank of the New Right. This index is based on national ratings of (1) limitations to trade, (2) fiscal burden, (3) government intervention, (4) monetary policy, (5) limitations to foreign investment, (6) limitations to banking, (7) control of wages and prices, (8) limitations to property rights, (9) regulation, and (10) limitations in access to international markets.

Political freedom

This is measured by absence of restrictions on (1) political liberties and (2) civil liberties. The political liberties involved in this measure are as follows: (a) state leader elected through free and fair elections; (b) legislative representatives elected through free and fair elections; (c) fair electoral laws, equal campaigning opportunities, fair polling, and honest tabulation of ballots; (d) freely elected representatives that have real power; (e) right to organize in political parties, system open to rise and fall of competing groups; (f) realistic possibility for opposition, de facto opposition power, 7. national independence; (g) influence of minority groups; and (h) political power decentralized.

The civil liberties involved in this measure are as follows: (a) free and independent media; (b) open public discussion, free private discussion; (c) freedom of assembly and demonstration; (d) freedom of political organization; (e) equal law, nondiscriminatory judiciary; (f) protection from political terror; (g) free trade unions, effective collective bargaining; (h) free professional and other private organizations; (i) free business; (j) free religion; and (k) personal freedoms such as gender equality, property rights, freedom of movement, choice of residence, and choice of marriage and size of family.

The degree of restriction to these liberties in nations is assessed using expert ratings and partly based on surveys among foreign journalists.

Private freedom

Restriction of choice in private life is most manifested in legal constraints. Legal restraints can be assessed by inspection of legislation and law enforcement. Comparative data on these matters are reported in several sources, e.g., data on restrictions to birth control in the statistics of the IPPF. Many restrictions in private life are often informal, however, especially restrictions on sexuality. The degree of informal social control in

nations can be estimated on the basis of attitudes in nations as assessed in surveys. Such data is available in the World Values Survey, the latest wave of which covered 90 nations in 2000. On the basis of these sources (Veenhoven 2008), I constructed an index of absence of restrictions to (1) travel, (2) religion, (3) marriage, (4) divorce, (5) euthanasia, (6) suicide, (7) homosexuality, and (8) prostitution. Using the measures, he found considerable differences in freedom across nations. Some illustrative cases are discussed below.

Level of Freedom in Nations

The above measures of opportunity to choose have been applied on most nations of the present-day world, with the following results:

- *Economic freedom*: The theoretical variation on this index is from 0 to 100. The actual range in this data set is between 3 (North Korea) and 89 (Hong Kong). Iran is in the middle with a score of 43 (Fraser Institute).
- *Political freedom*: The index of political freedom ranges from 2 to 14. Countries that score the minimum of 2 on this index are Cuba and Saudi Arabia; all the western nations score the maximum of 14 on this index. Countries that score in the middle are Nigeria and Colombia (Freedom, 2005).
- *Private freedom*: Private freedom is expressed in z-scores that vary from −1.92 (Indonesia) to 1.48 (the Netherlands). Romania is in the middle with a z-score of + .07 (Veenhoven, 2008).

Relation with Happiness

Freedom is seen as a quality of life in itself and also as something that affects to other qualities of life. Below I will consider the relationship of freedom with subjective enjoyment of life.

Assumed Effects on Happiness

Opinion about the impact of freedom on happiness is mixed. Different philosophies stress different effects and suggest different net outcomes.

Individualistic social philosophy stresses the possible positive effects. It is typically assumed that people know best what will make them happy and hence that they will enjoy life more if they can follow their own preferences. Conflicts of interest are seen to be solved by the invisible hand of the market, which is believed to yield more optimal solutions than prescription by king or custom. Though this intellectual tradition is not blind to the perils of free choice, it expects that the positive effects will prevail.

Conservative thought tends to emphasize the negative consequences of freedom. Conservatives doubt that people really know what is best for them. The wisdom of tradition and the benefits of solidarity are seen to bring a better life than short-sighted egoism. Through the ages, proponents of this view have complained that individual freedom has gone too far, that it is about to destroy vital institutions. There are also claims that freedom imposes stress on individuals and that we live better with less choice (e.g., Schwartz, 2004). Again, the other side of the coin is also acknowledged but deemed to be less relevant.

Some schools see different effects of different variants of freedom. Currently the New Right is quite positive about economic freedom, but at the same time it is critical about freedom in the private sphere of life. Free sex and the legalization of soft drugs are seen to lead to unhappiness. Likewise the leading view in Southeast Asia is that economic freedom will improve the human lot, but not political freedom.

Another theme in the discussion is that freedom will add to happiness only in specific conditions. The most commonly mentioned condition is that people are sufficiently "mature." If people are incapable of making a choice, they will "fear freedom" and seek refuge under authoritarian leaders and strict rules for life (e.g., Fromm, 1941). In this line it is also argued that freedom adds to happiness only in rich nations, since material needs predominate in poor nations.

Observed Relationship with Happiness

Data on both freedom and happiness are available for 126 nations around 2006. Correlations between the three kinds of freedom and happiness are quite strong: r is respectively + .63, + .55, and + .57 (Veenhoven, 2008, Table 1). This suggests

that the positive effects of freedom on happiness outweigh possible negative effects. The correlations are stronger in countries where the level of education is high than in countries where the level of education is low, which suggests that the opportunity to choose adds more to happiness when accompanied by capability to choose.

Cross-References

► Perceived Freedom

References

Bay, C. (1965). *The structure of freedom*. New York: Stanford University Press.
Berlin, I (1969). Four essays on liberty. (Reprinted from *Liberty*, by H. Hardy, Ed., 2002, Oxford University Press)
Freedom House (2005). *Freedom in the world 2005*. http://www.freedomhouse.org/research
Fromm, E. (1941). *Escape from freedom*. New York: Rinehart.
Heritage Foundation. (2008). http://www.heritage.org
Schwartz, B. (2004). *The paradox of choice. Why more is less*. New York: HarperCollins.
Veenhoven, R. (2008). *Freedom and happiness: Comparison of 126 nations in 2006*. Paper presented at Legatum Prosperity Workshop, June 21–22 2008, London, UK. Available at: http://www2.eur.nl/fsw/research/veeenhoven/Pub2000s/2008b-full.pdf

Freedom from Discrimination

► Human Rights

Freelancing

► Self-Employment

Free-Rider Avoidance

► Fostering Pro-environmental Behavior

Fretfulness

► Anxiety

Friends with Benefits

► Casual Sex and the Quality of Life

Friendship and Happiness

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Synonyms

Friendship quality

Definition

Friendship is a voluntary interdependence between two individuals that includes the experience and satisfaction of various provisions (intimacy, support, self-validation) to varying degrees.

Description

Friendship is a cherished personal relationship that plays a significant role in the lives of individuals. In posing the question "What makes people happy?" to a layperson or scholar, most would likely include friendships on the top of their lists. Consistent with this idea, friendship has been recognized and studied as a correlate of

► happiness since the seminal work of Watson (1930). Since then, hundreds of empirical studies have investigated the associations of various aspects of friendship (e.g., number, intimacy) with happiness and multiple reviews of the literature have been published (e.g., Argyle, 2001; Demir & Weitekamp, 2007; Diener & Ryan, 2009).

In the most recent review of the empirical studies on friendship and happiness, Demir, Orthel, and Andelin (2013) highlighted the advances observed in the literature and provided suggestions for future research that would enhance our understanding of the friendship-happiness link. Specifically, Demir et al. (2013) reported that having a friend, number of friends, intimacy and support experienced in the friendship, and overall friendship quality are reliable correlates of happiness across age, ethnic, and cultural groups. The authors also highlighted that the association of friendship quality with happiness was stronger than that of friendship quantity (i.e., number of friends), a pattern replicated across age and cultural groups. Considering the well-established relationship between friendship and happiness, Demir et al. (2013) suggested that future research should move beyond the mere documentation of the friendship-happiness link and investigate theoretically identified variables that might explain or account for how friendship is related to happiness. This is an important call for future research because although we know that friendship experiences are associated with happiness, our knowledge about why the two are related is limited. Investigation of the mediators of the friendship-happiness link is an essential empirical endeavor because findings from this line of research have the potential to illuminate how friendship is related to happiness. A recent study gave heed to this important call and investigated perceived mattering to friends (Marshall, 2001) as the mediator of the relationship between friendship quality and happiness among college students (Demir, Özen, Dogan, Bilyk, & Tyrell, 2011).

Demir and his colleagues (2011) conducted two studies to test their idea that perceived mattering (PM) to friends would explain why friendship quality is related to happiness. The authors defined PM to friends as "the psychological tendency to evaluate the self as significant to specific other people" (Marshall, 2001, p. 474). In their review of the theoretical and empirical literature, the authors highlighted three key points about PM. First, PM to a friend addresses one's perceived relevance to the friend which includes feelings of belongingness and relatedness. Defined in this way, PM does not refer to the quality of the relationship (e.g., intimacy and support). Second, individuals develop a sense of PM to their friends by engaging in multiple social comparisons. Specifically, individuals develop an idea about their significance to their friends by not only comparing the attention they receive from their friends to the attention their friends give to others but also by contrasting the attention they receive from their friends to that of other significant individuals in their lives (Marshal, 2001). Also, the overall quantity and quality of the social interactions with the friend have the potential to influence feelings of PM to that friend (Marshall, 2001). The authors capitalized on this theoretical argument by suggesting that various relationship experiences with a friend, ranging from engaging in numerous activities together (e.g., going to a Radiohead concert) to the friend throwing a surprise birthday party for the individual to receiving compliments about one's decisions and accomplishments, have the potential to promote feelings of PM in the friendship. Third, feelings of PM to a friend or a significant other have been positively associated with a variety of psychosocial well-being indices (e.g., ► self-esteem, friendship support). In light of the theoretical arguments suggesting that feelings of PM are based on interactions with the friend and the empirical evidence linking PM to well-being, Demir et al. (2011) proposed that positive friendship experiences (e.g., friendship quality) would influence one's sense of mattering to the friend, which in turn predict happiness. The authors tested their mediational model by using path analysis in LISREL. Although their model was based on theory and research, the authors aimed to rule out alternative explanations by testing an alternative model (friendship quality as the

mediator between PM and happiness) and comparing its fit to that of the proposed model.

Demir et al. (2011) tested their model among best friends in their first study by gathering data from college students in the USA ($n = 212$). In contrast to some studies in the literature, the authors first assessed the presence of a best friend in the lives of individuals by providing the participants with a definition of friendship (Demir & Weitekamp, 2007) before assuming that everyone has a best friend. The authors also asked their participants not to consider their romantic partners as their best friends. This approach proved useful such that 8 % of their sample did not report having a best friend and were excluded from the analyses. The remaining participants ($n = 196$; $M_{age} = 19.91$, $SD = 1.25$) completed well-established scales that measure friendship quality (FQ; Mendelson &Aboud, 1999) and PM to best friends (Marshall, 2001). Finally, the authors measured the affective component of happiness (Watson, Clark, & Tellegen, 1988) and defined happiness as the predominance of ▶ positive affect over ▶ negative affect.

The results of the first study showed that the variables of interest were positively and significantly related to each other to varying degrees (FQ-PM: $r = .68$; FQ-Happiness: $r = .21$, PM = Happiness: $r = .36$; all significant at the .001 level). The proposed model yielded excellent fit indices providing support to the idea that PM mediates the effect of FQ on happiness. On the other hand, the alternative model (PM as the mediator) had worse model fit indices and explained less variance in happiness when compared to the proposed model (4 % vs. 13 %). Additional analyses revealed that the proposed model fit the data better than alternative one and applied equally well for both men and women.

Although the first study of Demir et al. (2011) contributed to the literature by providing a unique way to understand how friendship is associated with happiness, the authors conducted another study to address two issues they deemed important: generalizability of their model to the other close friends of the individuals and conceptual differentiation of PM from other similar constructs such as received social support (RSS). Specifically, the authors acknowledged the fact that their first study tested the model only for best friends, and it remained to be seen whether the mediational model was generalizable to the other close friends of the individual. One of the well-established findings in the literature on friendship among young adults is that individuals have multiple friendships in their social networks and make clear distinctions between best, close, and casual friendships (Demir & Özdemir, 2010). Thus, Demir et al. (2011) believed that it was theoretically important to investigate the generalizability of their model supported in the first study among best friends to the less close friendships of the individual. This was because finding support for the model across friendships differing in degree of closeness would highlight the robustness of the model. On the other hand, failing to support the model across multiple friendships would require revising theoretical arguments such that the mediating role of PM is applicable only to the most important friendships but not for other close friendships.

Demir et al. (2011) aimed to address an important conceptual issue in their second study. The authors noted that the way PM is defined in their study, the tendency of the individual to consider him/herself significant to the other, and one item of the PM scale assessing feelings of support might raise the possibility that PM might be conceptually similar to the construct of RSS. The two constructs, although might share some common variance, tap into the different social experiences of the individual. For instance, according to theory, feelings of PM in a friendship are directly related to the friend noticing that the partner is in need of help but contingent on the actual help provided by the friend. On the other hand, RSS capitalizes on the actual help provided by the friend in times of need. Although PM and RSS address different experiences at the conceptual level, Demir et al. (2011) aimed to rule out the possibility that their findings in the first study were confounded by RSS.

In their second study, the authors gathered data regarding the three closest friendships of the individuals attending a university in the USA ($n = 255$) as college students in the USA generally have three close friends (Demir & Özdemir, 2010). In doing so, the authors relied on the definition of friendship used in the first study and asked the respondents to rank order their friendships (e.g., best friend, first close friend, second close friend). After the exclusion of the 4% of the sample that did not have a best or three friend(s), the remaining participants ($n = 245$; $M_{age} = 19.17$, $SD = 1.67$) completed the FQ and PM measures for their best and first two closest friends. The participants also completed a scale assessing socially supportive behaviors (Inventory of Socially Supportive Behaviors, ISSB; Barrera, Sandler, & Ramsay, 1981) in their friendships. Overall, the participants completed the FQ, PM, and ISSB three times for every friendship assessed. Finally, the participants completed the measure of happiness used in the first study.

The authors highlighted the conceptual distinction between PM and RSS by providing three sets of findings. First, the authors found that PM and RSS were moderately related to each other such that that the average correlation across the three friendships was .47. Second, the associations of PM with FQ across the three friendships were significantly stronger when compared to the relationships of RSS with FQ across the friendships assessed. Finally, only PM to friends revealed significant associations with happiness. Overall, the authors argued that PM and RSS tap into the different relationship experiences of the individual and that their model supported in their first study is not confounded with RSS from friends.

Gathering data from the three closest friends of the individual allowed the authors to examine possible differences across the friendships. It was found that closer friends were rated higher in FQ and PM compared to less close friends. Specifically, best friends were rated higher on FQ and PM compared to the first and second closest friends, and first closest friend had higher compared to the second closest friend (small to moderate effects sizes). These findings suggest that individuals experience various positive relationship experiences differently in their close friendships and make finer distinctions between them.

The results of the second study revealed significant correlations (all at the.001 level) between PM, FQ, and happiness across the best, first, and second closest friendships (FQ-PM: $rs = .67, .70$, and .77; FQ = Happiness: $rs = .24, .17$, and .20; PM-Happiness: $rs = .31, .24$, and .21, respectively). Next, the authors tested their model (that PM mediates the FQ = Happiness association) separately for the friendships assessed. Their results showed that the model had excellent fit indices for every friendship. The authors also conducted additional analyses to investigate whether the mediating effect of PM would hold the same across the three friendships. The results, once again, yielded excellent fit indices and confirmed that the mediating role of PM was consistent across the friendships. These findings suggest that the model supported for best friends in the first study is generalizable to other close friendships differing in degree of closeness. Consistent with the first study, the authors found support for their model across the three friendships for both men and women.

One of the well-established findings in the scientific literature on happiness pertains to the robust association between friendship and happiness. Yet, the limited empirical understanding of why friendship experiences are related to happiness has been voiced in recent reviews of the literature (Demir et al., 2013). Thus, the two studies reported by Demir et al. (2011) could be considered as meaningful contributions to the literature such that PM to friends has been shown to explain why friendship quality is related to happiness. Specifically, the authors' argument, based on the theoretical literature (e.g., Marshall, 2001), that various positive experiences in the friendship provide important indicators about one's mattering to the friend, and this relationship-specific feeling

contributes to one's happiness has been supported not only for the best friends but also for close friends of the individuals. Providing empirical support for the generalizability of the model to friendships varying in degree of closeness is notable and highlights the robustness of the model. Not surprisingly, the authors confidently concluded that PM to friends explains how friendship experiences are associated with happiness.

Although the studies reported by Demir et al. (2011) provided a novel way to understand why friendship is associated with happiness, the authors highlighted the limitations of their studies and provided valuable suggestions for future research. To start with, not only the cross-sectional nature of the studies but also the possibility that being happy promotes positive friendship experiences prevents one from making causal arguments. Although the model supported was in line with theory and past empirical research, the authors underscored the need for longitudinal studies to establish confidence in the findings reported/address the direction of causality. Second, the authors drew attention to a frequently raised concern in this line of research such that their studies relied on convenient samples reflecting the experiences of young adults who are in college and findings might not be generalizable to those who are not in college or other age groups. This valid concern, reliance on college students, has been frequently voiced in the literature (e.g., Reynolds, 2010) and polishes up the limitations sections of a significant portion of the empirical articles published in the literature on happiness. Yet, recent research provided evidence showing that various psychological attributes and experiences of college students are similar to those of non-students in different age groups (e.g., Cooper, McCord, & Socha, 2011). Also, the authors argued that their model would be generalizable to different age groups by citing evidence documenting the importance of FQ and PM in the well-being of individuals across the life-span and called for future research to address this important empirical issue. Finally, the authors underlined an inevitable consequence of relying on US college students when testing theoretical models and investigating the friendship-happiness link: the generalizability of the findings to other cultures. This issue has been receiving growing recognition in the mainstream psychological literature (Arnett, 2008). Reflecting this concern, the authors called for future research to test the generalizability of the model supported in the individualistic cultural context of the USA to the friendship experiences of those in collectivistic cultures. The authors predicted that their model would be supported in other cultures since friendship and feelings of mattering that develops in response to the quality of social interactions are universal experiences associated with well-being in different cultures (e.g., Bell & Coleman, 1999).

Collectively, the work of Demir et al. (2011) contributes to the literature and highlights one essential methodological issue that should be considered in future research on friendship. The contribution of this study stems from the documentation of a theoretically relevant psychological variable (PM) as the mediator of the friendship-happiness association across friendships varying in degree of closeness. It is time researchers move beyond the mere documentation of friendship and happiness and investigate other potential mediators, and more complex theoretical models, that would promote the empirical understanding of how and why friendship is related to happiness. In doing so, as this study showed, it is imperative to provide the respondents with a definition of friendship and assess the presence of a friend in the lives of the participants instead of assuming that everybody has a friend. We know that friendship is associated with happiness. The task before us is to keep researching why this is the case.

Cross-References

▶ Friendship Satisfaction

References

Argyle, M. (2001). *The psychology of happiness* (2nd ed.). London: Routledge.

Arnett, J. J. (2008). The neglected 95 %: Why American psychology needs to become less American. *American Psychologist, 63*, 602–614.

Barrera, M., Jr., Sandler, I. N., & Ramsay, T. B. (1981). Preliminary development of a scale of social support: Studies on college students. *American Journal of Community Psychology, 9*, 435–447.

Bell, S., & Coleman, S. (1999). *The anthropology of friendship*. New York: Berg Publishers.

Cooper, C. A., McCord, D. M., & Socha, A. (2011). Evaluating the college sophomore problem: The case of personality and politics. *The Journal of Psychology, 145*, 23–37.

Demir, M., Orthel, H., & Andelin, A.K. (2013). Friendship and happiness. In S.A. David, I. Boniwell, & A. Conley Ayers (Eds.), *The Oxford handbook of happiness* (pp. 860–870). Oxford: Oxford University Press.

Demir, M., & Özdemir, M. (2010). Friendship, need satisfaction and happiness. *Journal of Happiness Studies, 11*, 243–259.

Demir, M., Özen, A., Dogan, A., Bilyk, N. A., & Tyrell, F. A. (2011). I matter to my friend, therefore I am happy: Friendship, mattering, and happiness. *Journal of Happiness Studies, 12*, 983–1005.

Demir, M., & Weitekamp, L. (2007). I am so happy' cause today I found my friend: Friendship and personality as predictors of happiness. *Journal of Happiness Studies, 8*, 181–211.

Diener, E., & Ryan, K. (2009). Subjective well-being: A general overview. *South African Journal of Psychology, 4*, 391–406.

Marshall, S. K. (2001). Do I matter? Construct validation of adolescents' perceived mattering to parents and friends. *Journal of Adolescence, 24*, 473–490.

Mendelson, M. J., & Aboud, F. E. (1999). Measuring friendship quality in late adolescents and young adults: McGill Friendship Questionnaires. *Canadian Journal of Behavioural Science, 31*, 130–132.

Reynolds, C. R. (2010). Measurement and assessment: An editorial view. *Psychological Assessment, 22*, 1–4.

Watson, G. (1930). Happiness among adult students of education. *Journal of Educational Psychology, 21*, 79–109.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.

Friendship Quality

► Friendship and Happiness

Friendship Satisfaction

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Synonyms

Satisfaction with friendships

Definition

Friendship satisfaction refers to a person's perception of the overall quality of relationships with friends.

Description

Friendship serves many functions in a person's life. Examples include providing companionship, help, intimacy, reliable alliance, self-validation, and emotional security (Mendelson & Aboud, 1999). Therefore, friendship is regarded as a major domain of life, and satisfaction with friendships is included as one of the important indicators of a person's ► subjective well-being (Rojas, 2006). Past research studies on friendship satisfaction can be broadly classified into the following two categories.

One line of friendship satisfaction research focuses on identifying the predictors of friendship satisfaction. The social provisions perspective on personal relationships suggests that friendship fulfills various needs of an individual (Weiss, 1974), and the level of satisfaction with friendship is determined by the extent to which the friendship fulfills these needs (McAdams, 1988). Thus, high levels of friendship satisfaction are associated with high levels of rewarding

friendship processes (e.g., companionship, help, validation, caring) and low levels of aversive friendship processes (e.g., conflict, betrayal) (Ladd, Kochenderfer, & Coleman, 1996; Parker & Asher, 1993). Nevertheless, some scholars argue that in addition to the level of need fulfillment, a person's evaluation of friendship satisfaction also depends on a number of individual and relationship factors (Berg, 1984). For example, Zarbatany, Conley, and Pepper (2004) proposed that the relation of need fulfillment to friendship satisfaction was subject to a person's personality disposition. They found that compared to preadolescents who scored lower on agency (i.e., needs for individuation), those who scored higher on agency reported greater dissatisfaction with their best friends when their best friendship could not fulfill agentic friendship needs (e.g., affirmation of self-worth, provision of instrumental aid). Meanwhile, when communal friendship needs (e.g., provision of companionship, emotional support, nurturance) were not met in the best friendship, preadolescents and young adults who scored higher on communion (i.e., needs for closeness) reported higher levels of loneliness than did their counterparts who scored lower on communion. Schulz (1995), on the other hand, suggested that individuals' cognitive conceptions of friendships would affect their satisfaction toward friends. They showed that compared to resource variables like the number of intimate friends and the frequency of meeting friends, variables derived from ▶ multiple discrepancies theory (Michalos, 1985), such as self/other and self/deserved comparisons, were stronger predictors of friendship satisfaction. Similarly, Demir and Orthel (2011) found that among college students, the greater the real-ideal discrepancies of friendship experiences, the greater the dissatisfaction toward the friends. Equity theory, further, considers the benefits and costs of both parties in the friendship dyad when the construct of friendship satisfaction is examined (Walster, Walster, & Berscheid, 1978). The theory states that when the two friends have the same benefit-to-cost ratio, the friendship is balanced, and friendship satisfaction emerges. As a result, perceived inequity in a friendship is often found to be negatively associated with the level of satisfaction toward the relationship (Mendelson & Kay, 2003; Roberto & Scott, 1986).

Another line of friendship satisfaction research focuses on comparing the friendship satisfaction level reported by individuals of different social groups, or a person's satisfaction toward different types of friendship. In this body of research, gender is one of the most widely investigated variables. Empirical findings suggest that females generally report higher levels of friendship satisfaction than do males (e.g., Hays, 1988; Jones, 1991). One possible explanation for this difference is that self-disclosure is a strong predictor of friendship satisfaction, and females often disclose more to their friends than males do (Jones, 1991). The gender of the friend also matters. Same-sex friendship has frequently been found to be more satisfying than cross-sex friendship (e.g., Argyle & Furnham, 1983; Lempers & Clark-Lempers, 1993). This is perhaps because same-sex friends share more similarities and experience less pressure than cross-sex friends do. Nevertheless, it should be noted that a mere examination of the differences in the magnitude of friendship satisfaction cannot yield many implications for the mechanism underlying the functioning of friendship. Future researchers in this area should therefore also address the question of whether there are differences in the predictors of friendship satisfaction across different social groups or friendship types (Jones, 1991).

Discussion

Researchers have used a variety of tools to assess friendship satisfaction. Sometimes, researchers select items from a scale intended to measure a number of relationship outcomes, with satisfaction being one of them. For example, Furman and Buhrmester (1985) developed the Network of Relationships Inventory to assess children's relationships with significant others, such as parents, grandparents, siblings, and friends. The three items that tapped a person's overall satisfaction of a relationship in the scale were then used by some researchers to assess the perceptions of

children and adolescents of their friendship satisfaction levels. In some other cases, the items measuring friendship satisfaction came from a scale of life satisfaction, in which friendship is one of the domains of life being assessed. One example is the Multidimensional Students' Life Satisfaction Scale (Huebner, 1991), which contains nine items assessing the degree to which a person is satisfied with his or her relationship with friends. Last but not least, some researchers modify scales which were originally intended to measure relationship satisfaction with romantic partners or spouses (e.g., Hendrick, Hendrick, & Adler, 1988; Spanier, 1976) to fit into the context of friendship. Due to the different assumptions underlying different types of friendship satisfaction scales, the content of these items tends to vary. Whereas some scales ask respondents to indicate the amount of social provisions they have obtained from the friendship, other scales ask respondents to indicate their overall positive feelings toward the friendship as a whole. Readers should therefore be aware of the definition of friendship adopted by the researchers when they interpret findings of different friendship satisfaction studies.

Cross-References

- ▶ Multiple Discrepancies Theory
- ▶ Subjective Well-Being

References

Argyle, M., & Furnham, A. (1983). Sources of satisfaction and conflict in long-term relationships. *Journal of Marriage and the Family, 45*, 481–493.

Berg, J. H. (1984). Development of friendship between roommates. *Journal of Personality and Social Psychology, 46*, 346–356.

Demir, M., & Orthel, H. (2011). Friendship, real-ideal discrepancies, and well-being: Gender differences in college students. *Journal of Psychology, 145*, 173–193.

Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology, 21*, 1016–1022.

Hays, R. B. (1988). Friendship. In S. W. Duck (Ed.), *Handbook of personal relationships: Theory, research, and interventions* (pp. 391–408). New York: Wiley.

Hendrick, S. S., Hendrick, C., & Adler, N. L. (1988). Romantic relationships: Love, satisfaction, and staying together. *Journal of Personality and Social Psychology, 54*, 980–988.

Huebner, E. S. (1991). Further validation of the student's life satisfaction scale: Independence of satisfaction and affect ratings. *Journal of Psychoeducational Assessment, 9*, 363–368.

Jones, D. C. (1991). Friendship satisfaction and gender: An examination of sex differences in contributors to friendship satisfaction. *Journal of Social and Personal Relationships, 8*, 167–185.

Ladd, G. W., Kochenderfer, B. J., & Coleman, C. C. (1996). Friendship quality as a predictor of young children's early school adjustment. *Child Development, 67*, 1103–1118.

Lempers, J. D., & Clark-Lempers, D. S. (1993). A functional comparison of same-sex and opposite-sex friendships during adolescence. *Journal of Adolescent Research, 8*, 89–108.

McAdams, D. P. (1988). *Power, intimacy, and the life story: Personological inquiries into identity*. New York: Guilford Press.

Mendelson, M. J., & Aboud, F. E. (1999). Measuring friendship quality in late adolescents and young adults: McGill friendship questionnaires. *Canadian Journal of Behavioral Science, 31*, 131–132.

Mendelson, M. J., & Kay, A. C. (2003). Positive feelings in friendship: Does imbalance in the relationship matter? *Journal of Social and Personal Relationships, 20*, 101–116.

Michalos, A. C. (1985). Multiple discrepancies theory (MDT). *Social Indicators Research, 16*, 347–413.

Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29*, 611–621.

Roberto, K. A., & Scott, J. P. (1986). Friendships of older men and women: Exchange patterns and satisfaction. *Psychology and Aging, 1*, 103–109.

Rojas, M. (2006). Life satisfaction and satisfaction in domains of life: Is it a simple or a simplified relationship? *Journal of Happiness Studies, 7*, 467–497.

Schulz, W. (1995). Multiple-discrepancies theory versus resource theory. *Social Indicators Research, 34*, 153–169.

Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family, 38*, 15–28.

Walster, E., Walster, G. W., & Berscheid, E. (1978). *Equity: Theory and research*. Boston: Allyn and Bacon.

Weiss, R. S. (1974). The provisions of social relationships. In Z. Rubin (Ed.), *Doing unto others* (pp. 17–26). Englewood Cliffs: Prentice-Hall.

Zarbatany, L., Conley, R., & Pepper, S. (2004). Personality and gender differences in friendship needs and experiences in preadolescence and young adulthood. *International Journal of Behavioral Development, 28*, 299–310.

Frontier Analysis Techniques

► Data Envelopment Analysis

FSFI

► Female Sexual Function Index

FSI

► Failed States Index

FSS-2

► Flow Scales

FSSA

► Faceted Smallest Space Analysis (Faceted SSA; FSSA)

FSSAWIN

► Faceted Smallest Space Analysis (Faceted SSA; FSSA)

Fuck-Buddy Sex

► Casual Sex and the Quality of Life

Full Functioning

► Eudaimonic and Hedonic Happiness
► Eudaimonic Well-Being

"Full Life"

► Pleasure, Engagement, Meaning, and Happiness

Fully Functioning Person

► Personal Growth

Functional Activities Questionnaire

► Pfeffer Functional Activities Questionnaire

Functional Assessment of Cancer Therapy (FACT)

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Synonyms

FACT-G

Definition

The Functional Assessment of Cancer Therapy-General (FACT-G, Cella et al., 1993) is an instrument used to measure health-related quality of life in clinical trials, particularly in oncology clinical trials, as well as clinical research and practice.

Description

The Functional Assessment of Cancer Therapy-General (FACT-G, Cella et al., 1993) is a widely used health-related quality of life instrument.

Now a constituent part of the Functional Assessment of Chronic Illness Therapy Measurement System (FACIT, Cella, 1997; Webster, Odom, Peterman, Lent, & Cella, 1999), the FACT-G was designed originally for use in oncology clinical trials (Cella et al., 1993) and is now also a well-established instrument in cancer-related treatment evaluations and clinical interventions (Webster et al., 1999), as well as clinical research and practice (e.g., Taylor et al., 2011). Beyond oncology, the FACT-G has also been used in chronic illnesses such as HIV, arthritis, multiple sclerosis (e.g., Diamond, Taylor, & Anton-Culver, 2010; Webster, Cella, & Yost, 2003), as well as Parkinson's disease and stroke (www.facit.org).

The latest version of the FACT-G (Webster et al., 1999) has 27 items with 4 subscales: physical well-being (PWB, 7 items), social/family well-being (SWB, 7 items), emotional well-being (EWB, 6 items), and functional well-being (FWB, 7 items).

Additional modules may be used in combination with the core FACT-G to extend the instrument to focus on disease-, treatment-, and condition-specific issues. Currently, there are 20 cancer-specific measures, including instruments for the most commonly occurring cancers such as breast (Brady et al., 1997), colorectal (Ward et al., 1999), and lung cancers (Cella et al., 1995), as well as other cancers affecting the central nervous system (Weitzner et al., 1995) and hepatobiliary system (Heffernan et al., 2002). The FACIT (www.facit.org) also includes 13 cancer-specific symptom measures, 6 treatment-specific measures (e.g., bone marrow transplantation, enteral feeding, taxane therapy), 15 symptom-specific measures (e.g., anorexia/cachexia treatment, abdominal symptoms, ascites, fatigue, urinary and fecal incontinence), as well as 11 non-cancer-specific measures (e.g., dyspnea, palliative care, spiritual well-being) and 3 pediatric measures.

Items on the FACT-G are rated on a 5-point Likert scale. The responses on the individual FACT-G subscales (PWB, SWB, EWB, FWB) are summed to produce four subscale scores, where a higher score indicates better well-being. In addition to the individual subscale scores, the four subscales (PWB, SWB, EWB, and FWB) may be summed to produce a total FACT-G score. Disease-, treatment-, and condition-specific subscale scores can be summed to produce an additional concerns subscale score which is added to the FACT-G score to produce a total score. A Trial Outcome Index (TOI) may also be calculated by summing subscales for physical well-being, functional well-being, and the additional concerns subscales for use in clinical trials (Webster et al., 2003).

The original FACT-G, later versions (Cella et al., 1993; Webster et al., 1999), and the additional concerns measures have been extensively validated in both cancer and non-cancer patient populations. The FACT-G has been demonstrated to have robust psychometric properties. FACT-G version 2 (Cella et al., 1993) was shown to have good test-retest reliability (ranging from 0.82 to 0.88 and 0.92 for FACT-G total) and sensitivity to change. The internal consistency of the subscales ranged from 0.69 to 0.82 and 0.89 for the FACT-G total. The measure also demonstrated convergent and divergent validity and was able to differentiate between known groups (e.g., stage of disease).

The responsiveness of the FACT-G has also been investigated. Minimally important differences (MIDs) have been derived for the FACT-G and some of the additional concerns subscales. For the physical and functional well-being subscales of the FACT-G, a change of 2–3 in raw score (MID) has been found to be associated with meaningful change in patient activity. Similar MIDs have also been determined for symptoms associated with kidney (Cella et al., 2006) and hepatobiliary cancers (Steel, Eton, Cella, Olek, & Carr, 2006). A change of 5–7 in the FACT-G total score may be associated with important health status changes (Cella, Hahn, & Dineen, 2002; Steel et al., 2006).

Normative data for the FACT-G have been published for a heterogeneous (US) cancer population (Brucker, Yost, Cashy, Webster, & Cella, 2005), as well as general (Australia, Austria, USA) adult population (Janda, DiSipio, Hurst, Cella, & Newman, 2009; Holzner et al., 2004; Brucker et al., 2005).

The FACT-G has been translated into more than 45 languages (Webster et al., 2003) and has also recently been adapted into a talking touch screen (Hahn et al., 2007) for use with low-literacy populations. Other developments have included the creation of item banks from the FACT-G subscales (e.g., fatigue (Lai, Cella, Chang, Bode, & Heinemann, 2003)) for potential use in computerized adaptive testing (CAT).

Cross-References

- ▶ Convergent Validity
- ▶ Divergent Validity
- ▶ Functional Assessment of Chronic Illness Therapy (FACIT)
- ▶ Health-Related Quality of Life (HRQOL)
- ▶ Minimal Important Difference (MID)
- ▶ Oncology
- ▶ Quality of Life
- ▶ Sensitivity to Change
- ▶ Test-Retest Reliability

References

Brady, M. J., Cella, D. F., Mo, F., Bonomi, A. E., Tulsky, D. S., Lloyd, S. R., et al. (1997). Reliability and validity of the Functional Assessment of Cancer Therapy-Breast (FACT-B) quality of life instrument. *Journal of Clinical Oncology, 15*, 974–986.

Brucker, P. S., Yost, K., Cashy, J., Webster, K., & Cella, D. (2005). General population and cancer patient norms for the Functional Assessment of Cancer Therapy-General (FACT-G). *Evaluation & the Health Professions, 28*(2), 192–211.

Cella, D. (1997). Manual of the Functional Assessment of Chronic Illness Therapy (FACIT) measurement system. Center on Outcomes, Research and Education (CORE), Evanston Northwestern Healthcare and Northwestern University, Evanston, IL, Version 4.

Cella, D. F., Bonomi, A. E., Lloyd, S. R., Tulsky, D. S., Kaplan, E., & Bonomi, P. (1995). Reliability and validity of the Functional Assessment of Cancer Therapy – Lung (FACT-L) quality of life instrument. *Lung Cancer, 12*, 199–220.

Cella, D., Hahn, E. A., & Dineen, K. (2002). Meaningful change in cancer-specific quality of life scores: Differences between improvement and worsening. *Quality of Life Research, 11*(3), 207–221.

Cella, D. F., Tulsky, D. S., Gray, G., Sarafian, B., Linn, E., Bonomi, A., et al. (1993). The Functional Assessment of Cancer Therapy scale: Development and validation of the general measure. *Journal of Clinical Oncology, 11*(3), 570–579.

Cella, D., Yount, S., Du, H., Dhanda, R., Gondek, K., Langefeld, K. J., et al. (2006). Development and validation of the Functional Assessment of Cancer Therapy-Kidney Symptom Index (FKSI). *Support Oncology, 4*(4), 191–199.

Diamond, C., Taylor, T. H., & Anton-Culver, H. (2010). Quality of life, characteristics and survival of patients with HIV and lymphoma. *Quality of Life Research, 19*(2), 149–155.

Hahn, E. A., Cella, D., Dobrez, D. G., Weiss, B. D., Du, H., Lai, J. S., et al. (2007). The impact of literacy on health-related quality of life measurement and outcomes in cancer outpatients. *Quality of Life Research, 16*(3), 495–507.

Heffernan, N., Cella, D., Webster, K., Odom, L., Marone, M., Passik, S., et al. (2002). Measuring health-related quality of life in patients with hepatobiliary cancers: The Functional Assessment of Cancer Therapy – Hepatobiliary (FACT-Hep) questionnaire. *Journal of Clinical Oncology, 20*(9), 2229–2239.

Holzner, B., Kemmler, G., Cella, D., De Paoli, C., Meraner, V., Kopp, M., et al. (2004). Normative data for functional assessment of cancer therapy–general scale and its use for the interpretation of quality of life scores in cancer survivors. *Acta Oncology, 43*(2), 153–160.

Janda, M., DiSipio, T., Hurst, C., Cella, D., & Newman, B. (2009). The Queensland Cancer Risk Study: General population norms for the Functional Assessment of Cancer Therapy-General (FACT-G). *Psychooncology, 18*(6), 606–614.

Lai, J. S., Cella, D., Chang, C. H., Bode, R. K., & Heinemann, A. W. (2003). Item banking to improve, shorten and computerize self-reported fatigue: An illustration of steps to create a core item bank from the FACIT-Fatigue Scale. *Quality of Life Research, 12*(5), 485–501.

Steel, J. L., Eton, D. T., Cella, D., Olek, M. C., & Carr, B. I. (2006). Clinically meaningful changes in health-related quality of life in patients diagnosed with hepatobiliary carcinoma. *Annals of Oncology, 17*(2), 304–312.

Taylor, S., Harley, C., Campbell, L. J., Bingham, L., Podmore, E. J., Newsham, A. C., et al. (2011). Discussion of emotional and social impact of cancer during outpatient oncology consultations. *Psychooncology, 20*(3), 242–251.

Ward, W. L., Hahn, E. A., Mo, F., Hernandez, L., Tulsky, D. S., & Cella, D. (1999). Reliability and validity of the Functional Assessment of Cancer Therapy-Colorectal (FACT-C) quality of life instrument. *Quality of Life Research, 8*(3), 181–195.

Webster, K., Cella, D., & Yost, K. (2003). The Functional Assessment of Chronic Illness Therapy (FACIT) measurement system: Properties, applications, and interpretation. *Health and Quality of Life Outcomes, 1*, 79.
Webster, K., Odom, L., Peterman, A., Lent, L., & Cella, D. (1999). The Functional Assessment of Chronic Illness Therapy (FACIT) measurement system: Validation of version 4 of the core questionnaire. *Quality of Life Research, 8*, 604.
Weitzner, M. A., Meyers, C. A., Gelke, C., Byrne, K., Cella, D. F., & Levin, V. A. (1995). The Functional Assessment of Cancer Therapy (FACT) scale: Development of a brain subscale and revalidation of the general version (FACT-G) in patients with primary brain tumors. *Cancer, 75*(5), 1151–1161.

Functional Assessment of Chronic Illness Therapy (FACIT)

▶ HIV in Malaysia

Functional Assessment of HIV Infection (FAHI)

▶ HIV in Malaysia

Functional Body Image

▶ Self-Worth and Measures of Body Image

Functional Colitis

▶ Irritable Bowel Syndrome

Functional Colonic Disease

▶ Irritable Bowel Syndrome

Functional Colopathy

▶ Irritable Bowel Syndrome

Functional Disability Scales

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Synonyms

Disability outcomes measures; Functional status measures

Definition

The number of people with various types of disabilities in the world is not exactly known, since systematic data regarding the prevalence of disabilities are not available, particularly from many developing countries. In addition, the widely varying definitions and criteria to define disability make it difficult to have homogeneous and reliable estimates (Brakel & Officer, 2008). Thus, data on various forms of disabilities, their determinants, and the impact and responses to interventions are still scarce. Although there is a growing trend toward standardization, it is observed that several scales and tools with different approaches are still currently used to generate prevalence estimates and to describe health-related states, such as self-identification, diagnosable conditions, impairment focuses, activities of daily living, and social participation (Brakel & Officer, 2008; Vrankrijker, 2003).

To define and better comprehend all aspects involving human's well-being, the World Health Organization developed the International Classification of Functioning, Disability and Health (ICF) with the aims to describe, classify, and compare functioning and disabilities for individuals and with various population levels (Brakel & Officer, 2008; World Health Organization, 2001). The ICF provides a consistent and comprehensive conceptualization of disabilities and a framework for its operationalization from various perspectives: the perspective of the bodily functions and structures and of the individuals

and societies, in terms of activity and participation levels. Within this context, disability is the ICF umbrella term for impairments, activity limitations, and social participation restrictions (Vrankrijker, 2003). The ICF also recognizes that activities and participation are strongly affected by environmental and personal factors. This transforms disability into a complex multidimensional experience defined as "difficulty in functioning at the body, personal, or societal levels, in one or more life domains, as experienced by an individual with a health condition in interaction with contextual factors" (Brakel & Officer, 2008).

Description

There are many functional disability scales directed to provide information by quantifying, qualifying, or describing characteristics that can assist scientists and clinicians in evaluating individuals' functionality. Although several excellent texts have been elaborated on general principles of statistical evaluations of instruments, few of them provided concise conclusions concerning the practical applications of instrument selection and evaluation to everyday issues encountered by researchers and clinicians in all areas of social and behavioral sciences (Switzer, Wisniewski, Belle, & Schultz, 1999). The following guidelines regarding the scientific criteria and practical attributes should be considered in selecting outcome research tools for measuring functional disabilities.

First of all, it is important to describe that functional status measures are grouped into those which are generic and designed for specific health conditions (Cohen & Marino, 2000). Generic outcome measures are designed to measure general aspects of disease and, therefore, are less accurate than disease-specific instruments. Although these instruments are useful for comparisons across populations and with normal age and gender values, most of the studies report comparisons between individuals with similar health status characteristics. Among the main generic instruments currently employed are the Barthel Index, Functional Independence Measure, Timed Up and Go Test, Nottingham Health Profile, and the Short Form-36 Health Survey Questionnaire.

Condition-specific measures are designed to be more sensitive to specific impairments or disabilities (Barak & Duncan, 2006; Cohen & Marino, 2000), and most of them are directed to describe the issues for the selection of specific outcome measures. Previous studies presented summaries of the specific instruments and describe their psychometric properties, advantages, and limitations (Salter et al., 2005). Regardless of the nature of the chosen disability scale, two broad types of considerations, which are central to decision-making regarding instrumentation, should consider both the psychometrics and the contexts (Dekker, Dallmeijer, & Lankhorst, 2005; Switzer et al., 1999).

When determining the value of any assessment, whether for research or clinical use, all selected outcome measures should have sound psychometric properties. The essential psychometric properties that should be analyzed are reliability, validity, responsiveness to changes, or sensitivity, sensibility, and minimal clinically important differences (MCID) (Barak & Duncan, 2006).

Briefly, reliability is concerned with the degree to which measures are consistent and can be replicated and refers to the extent to which a score is free of random errors. There are three basic types of reliability: rater, test-retest, and internal reliabilities, and researchers or clinicians should look for adequate properties of one or more types of reliability, depending upon the method and purpose of the measurement (Cohen & Marino, 2000; Portney & Watkins, 2000).

The validity of a measure is the extent to which it measures what it was intended and presumed to measure. The establishment of validity begins with the development of the scale and continues with ongoing usage of the scale. There are three major types of measurement validity: content, criterion, and construct (Barak & Duncan, 2006). Although validity is equally important, many instruments do not have their validities demonstrated, especially

regarding their criterion validity, which requires a gold standard instrument for comparisons which is impractical, if not difficult, due to the multidimensional characteristics related to human disabilities.

The responsiveness to changes is defined as the ability of an outcome measure to detect clinically important changes in the target behavior. Changes in the target functional status can be the result of improvements due to recovery and rehabilitation or decline, due to the worsening of impairments, or due to other factors. Sensibility refers to the overall appropriateness, importance, and ease of use of the instrument, while the MCID helps to define a threshold that is considered to be an important improvement (Barak & Duncan, 2006).

Although psychometric properties are clearly relevant when selecting a functional disability scale, the defined context characteristics are essential to obtain an appropriate measure. The context refers to factors exogenous to the assessment tools, such as the characteristics of the individuals to be assessed, the goals of the research endeavor, and the constraints on data gathering capabilities (Switzer et al., 1999). The main contextual issues which should be evaluated when choosing a functional disability scale are the population characteristics (age, gender, education levels, health status, recent life experiences), cultural contexts (ethnicity, cultural traditions, and norms), historical contexts (language, knowledge bases, beliefs and attitudes, political and historical events), research goals, and purpose of the outcome measures, or discriminative, predictive, or evaluative (Switzer et al.). An important attribute to be considered in grading outcome tools is the availability of appropriate cultural and language adaptations, since direct translation is a minimum standard and evidence of more comprehensive cultural and linguistic adaptations are required for higher grades (Andresen, 2000).

It is important to highlight that all instruments designed to determine functional disability levels are not comprehensive, due to the subjective dimensions of functioning and disabilities, defined by Ueda and Okawa as "subjective experiences," i.e., "a set of cognitive, emotional, and motivational states of mind of any person, but particularly of a person with a health condition and/or disability" (Ueda & Okawa, 2003). Subjective dimensions of functioning and disability, both positive and negative aspects, interact with the objective dimensions (body conditions, activity, participation, and environment) and their recognition to better help the understanding of people with disabilities (Ueda & Okawa, 2003).

A wide range of instruments are available for measuring functional disabilities. Clinical investigators and clinicians are increasingly concerned with the selection of appropriate outcome measures, because these measures will have an impact on detecting treatment effects. Although the selection of an appropriate instrument is a difficult process, the clinical relevance of the disability outcome measures can be optimized by incorporating the ICF framework (Barak & Duncan, 2006). The users of disability outcome measures will also need to be balanced among the recommended criteria to detect the better functional disability scale based upon the traditional psychometric properties and the pragmatic issues of these tools to appropriately evaluate a specific patient or client.

Cross-References

- ▶ ICF
- ▶ Physical Activity
- ▶ Reliability

References

Andresen, E. M. (2000). Criteria for assessing the tools of disability outcomes research. *Archives of Physical Medicine and Rehabilitation, 81*(suppl. 2), S15–S20.

Barak, S., & Duncan, P. W. (2006). Issues in selecting outcome measures to assess functional recovery after stroke. *NeuroRx, 3*(4), 505–524.

Cohen, M. E., & Marino, R. J. (2000). The tools of disability outcomes research functional status measures. *Archives of Physical Medicine and Rehabilitation, 81* (Suppl. 2), S21–S29.

Dekker, J., Dallmeijer, A. J., & Lankhorst, G. J. (2005). Clinimetrics in rehabilitation medicine: Current issues

in developing and applying measurement instruments. *Journal of Rehabilitation Medicine, 37*, 193–201.
Portney, L. G., & Watkins, M. P. (2000). *Foundations of clinical research: Applications to practice*. Upper Saddle River, NJ: Prentice-Hall.
Salter, K., Jutai, J. W., Teasell, R., Foley, N. C., Bitensky, J., & Bayley, M. (2005). Issues for selection of outcome measures in stroke rehabilitation: ICF activity. *Disability and Rehabilitation, 27*(6), 315–340.
Switzer, G. E., Wisniewski, S. R., Belle, S. H., & Schultz, M. A. D. (1999). Selecting, developing, and evaluating research instruments. *Social Psychiatry and Psychiatric Epidemiology, 34*, 399–409.
Ueda, S., & Okawa, Y. (2003). The subjective dimension of functioning and disability: What is it and what is it for? *Disability and Rehabilitation, 25*(11–12), 596–601.
Van Brakel, W. H., & Officer, A. (2008). Approaches and tools for measuring disability in low and middle-income countries. *Leprosy Review, 79*, 50–64.
Vrankrijker, M. (2003). The long way from the international classification of impairments, disabilities and handicaps to the international classification of functioning, disability and health (ICF). *Disability and Rehabilitation, 25*(11–12), 561–564.
World Health Organization. (2001). *International classification of functioning, disability and health: ICF*. Geneva, Switzerland: World Health Organization.

Functional Gastrointestinal Disorder

► Irritable Bowel Syndrome

Functional Health Status

► Health Status Measurement

Functional Independence Measure

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Synonyms

FIM™

Definition

The FIM™ is an 18-item measure of functional independence that yields a motor, cognitive, and total score.

Description

The FIM™ is one of the most frequently used outcome measures in stroke rehabilitation trials (Sangha et al., 2005) and studies of people with traumatic brain injury (TBI) (Nichol et al., 2001; Williams, Robertson & Greenwood, 2004). It is used in many other clinical populations including multiple sclerosis (Brosseau & Wolfson, 1994), spinal cord injury (Jackson et al., 2008), acute medical admissions (Buurman, van Munster, Korevaar, de Haan, & de Rooij, 2011), and general injuries (Polinder et al., 2010).

The Functional Independence Measure (based on the ► Barthel Index) was developed in the early 1980s as the central disability scale of the Uniform Data System for Medical Rehabilitation in the USA to provide a metric of the burden of care and rehabilitation outcomes (Keith, Granger, Hamilton & Sherwin, 1987). The FIM™ is administered by a trained observer. Eighteen items are used to rate a person's level of independence in self-care activities, mobility, locomotion, communication, sphincter control, and cognition. Each item is rated on a 7-level scale from total assistance (1) to completely independent (7). The 13 motor and 5 cognitive items are scored as two subscales, and these are summed to a total FIM score ranging from 18 to 126 with a higher score indicating greater independence. If a person cannot be tested on an item, they are given the lowest possible score. Information on licensing for the FIM™ is available from the Uniform Data System for Medical Rehabilitation http://www.udsmr.org/WebModules/FIM/Fim_About.aspx

Modifications of the FIM include the WeeFIM for children (Msall et al., 1994), the FONE FIM for telephone administration (Chang, Slaughter, Cartwright & Chan, 1997), and a self-report version (Hoenig et al., 1998). The Functional

Assessment Measure added 12 new items to the FIM (Hall, Hamilton, Gordon & Zasler, 1993), and an adaptation for Spinal Cord Injuries has been reported (Catz, Itzkovich, Agranov, Ring & Tamir, 1997). The 6-item AlphaFIM has been proposed for use in acute stroke care (Stillman, Granger, & Niewczyk, 2009).

Problematic ceiling effects (persons achieving the best possible score) have been reported in multiple sclerosis and stroke rehabilitation populations (Sharrack, Hughes, Soudain & Dunn,1999; Streppel & van Harten, 2002), trauma patients (Williamson et al., 2011), and spinal cord injury populations (Furlan, Noonan, Singh & Fehlings, 2011).

The FIM has been criticized as encouraging "behavioral compensation" of the unaffected upper limb in stroke (Winstein, 2004).

Reliability

A recent systematic review (Sivan, O'Connor, Makower, Levesley, & Bhakta, 2011) classified FIM-Motor test-retest and inter-rater reliability as "high/excellent" (defined as reliability coefficients >0.75). A review in 1996 (Ottenbacher, Hsu, Granger & Fiedler, 1996) found 11 reliability studies with a median inter-rater and test-retest reliability for the total FIM score of 0.95. For the subscales, the median reliability coefficient ranged from 0.78 for social cognition to 0.95 for self-care. The standard error of measurement for the total FIM has been reported as 4.7 points (Ottenbacher, Hsu, Granger, & Fiedler, 1996), which equates to a minimum detectable change (90 % confidence) of 11 points.

Validity

FIM^{TM} scores have been shown to correlate in a predictable manner with other scales measuring disability, with measures of related and unrelated constructs, and scores differ between known groups (McDowell, 2006; Finch, Brooks, Stratford & Mayo, 2002).

The amount of care required per day has been reported as 4.1 minutes per FIM total score point (Disler, Roy & Smith, 1993). A change of 1 FIM point reduced care time by an average of 3.4 min per day in persons with multiple sclerosis (Granger, Cotter, Hamilton, Fiedler & Hens, 1990). In persons with stroke, a change of one point reduced care time on average 2.2 min per day (Granger, Cotter, Hamilton, & Fiedler, 1993).

Black, Soltis, and Bartlett (1999) reported that total FIM scores at discharge predicted the discharge destination of stroke patients (cutoff score of 80 had sensitivity of 94 % and specificity of 65 %). Ween, Mernoff, and Alexander (2000) reported that for 224 people with stroke admitted to rehabilitation, a FIM score >70 and age <60 were predictors of home discharge. Although total FIM score at admission is associated with falls risk, scores cannot be used to accurately predict falls in geriatric inpatients – a cutoff of 80 points had sensitivity and specificity of 41.6 % (Petitpiere, Trombetti, Carroll, Michel, & Herrmann, 2010).

Rasch analysis on data from 2,546 patients with stroke in 6 European countries (Lundgren-Nilsson et al., 2005) and 647 people with a spinal cord injury in four European countries (Lawton et al., 2006) found that the 7-level scale had disordered thresholds for many items, item difficulty varied between countries, and there was differential item functioning (DIF) by country. They concluded that the use of parametric statistics on the raw scores within and between countries is inadvisable.

Another Rasch study of cross-diagnostic validity (Lundgren-Nilsson, Tennant, Grimby & Sunnerhagen, 2006) analyzed the FIM-motor data of 471 patients with stroke, spinal cord, and traumatic brain injury and found that the 7-category system was not valid, eating and bladder items did not fit the model, and there was differential item functioning by diagnosis. Disordered response thresholds and DIF have also been reported in a study of data from patients with stroke, MS, and TBI (Dallmeijer et al., 2005).

Head to Head Comparisons with Other Scales

Van der Putten, Hobart, Freeman, and Thompson (1999) reported similar responsiveness for the ▶ Barthel Index and FIM in patients with MS and stroke undergoing rehabilitation. Schepers, Ketelaar, Visser-Meily, Dekker, and Lindeman

(2006) reported similar responsiveness of the FIM, ▶ Barthel Index, Frenchay Activities Index, and Stroke-Adapted Sickness Impact Profile 30 in a stroke rehabilitation population. In a major trauma population, the FIM was less responsiveness than the Glasgow Outcome Scale (Williamson et al., 2011).

Strengths

- Extensively tested reliability and validity
- Very widely used
- Norms available

Limitations

- Ceiling effects
- Ordinal scale
- Lowest rating given if an item is not tested

References

Black, T. M., Soltis, T., & Bartlett, C. (1999). Using the Functional Independence Measure instrument to predict stroke rehabilitation outcomes. *Rehabilitation Nursing, 24*, 109–121.

Brosseau, L., & Wolfson, C. (1994). The inter-rater reliability and construct validity of the Functional Independence Measure for multiple sclerosis subjects. *Clinical Rehabilitation, 8*, 107–115.

Buurman, B. M., van Munster, B. C., Korevaar, J. C., de Haan, R. J., & de Rooij, S. E. (2011). Variability in measuring (instrumental) activities of daily living functioning and functional decline in hospitalized older medical patients: A systematic review. *Journal of Clinical Epidemiology, 64*, 619–627.

Catz, A., Itzkovich, M., Agranov, E., Ring, H., & Tamir, A. (1997). SCIM-spinal cord independence measure: A new disability scale for patients with spinal cord lesions. *Spinal Cord, 35*, 850–856.

Chang, W. C., Slaughter, S., Cartwright, D., & Chan, C. (1997). Evaluating the FONE FIM: Part 1. Construct validity. *Journal of Outcome Measurement, 1*, 192–218.

Dallmeijer, A. J., Dekker, J., Roorda, L. D., Knol, D. L., van Baalen, B., de Groot, V., Schepers, V. P., & Lankhorst, G. J. (2005). Differential item functioning of the Functional Independence Measure in higher performing neurological patients. *Journal of Rehabilitation Medicine, 37*, 346–352.

Disler, P. B., Roy, C. W., & Smith, B. P. (1993). Predicting hours of care needed. *Archives of Physical Medicine and Rehabilitation, 74*, 139–143.

Finch, E., Brooks, D., Stratford, P. W., & Mayo, N. E. (2002). *Physical rehabilitation outcome measures: A guide to enhanced clinical decision-making* (2nd ed.). Ontario, Canada: Canadian Physiotherapy Association.

Furlan, J. C., Noonan, V., Singh, A., & Fehlings, M. G. (2011). Assessment of disability in patients with acute traumatic spinal cord injury: A systematic review of the literature. *Journal of Neurotrauma, 28*, 1413–1430.

Granger, C. V., Cotter, A. C., Hamilton, B. B., & Fiedler, R. C. (1993). Functional assessment scales: A study of persons after stroke. *Archives of Physical Medicine and Rehabilitation, 74*, 133–138.

Granger, C. V., Cotter, A. C., Hamilton, B. B., Fiedler, R. C., & Hens, M. M. (1990). Functional assessment scales: A study of persons with multiple sclerosis. *Archives of Physical Medicine and Rehabilitation, 71*, 870–875.

Hall, K. M., Hamilton, B. B., Gordon, W. A., & Zasler, N. D. (1993). Characteristics and comparisons of functional assessment indices: Disability rating scale, Functional Independence Measure and functional assessment measure. *Journal of Head Trauma Rehabilitation, 8*(2), 60–74.

Hoenig, H., McIntyre, L., Sloane, R., Branch, L. G., Truncali, A., & Horner, R. D. (1998). The reliability of a self-reported measure of disease, impairment, and function in persons with spinal cord dysfunction. *Archives of Physical Medicine and Rehabilitation, 79*, 378–387.

Jackson, A. B., Carnel, C. T., Ditunno, J. F., Read, M. S., Boninger, M. L., Schmeler, M. R., Williams, S. R., & Donovan, W. H. (2008). Outcome measures for gait and ambulation in the spinal cord injury population. *Journal of Spinal Cord Medicine, 31*, 487–499.

Keith, R. A., Granger, C. V., Hamilton, B. B., & Sherwin, F. S. (1987). The Functional Independence Measure: A new tool for rehabilitation. In M. G. Eisenberg & R. C. Grzesiak (Eds.), *Advances in clinical rehabilitation* (pp. 6–18). New York: Springer.

Lawton, G., Lundgren-Nilsson, A., Biering-Sørensen, F., Tesio, L., Slade, A., Penta, M., Grimby, G., Ring, H., & Tennant, A. (2006). Cross-cultural validity of FIM in spinal cord injury. *Spinal Cord, 44*, 746–572.

Lundgren-Nilsson, A., Grimby, G., Ring, H., Tasio, L., Lawton, G., Slade, A., Penta, M., Tripolski, M., Biering-Sørensen, F., Carter, J., Marincek, C., Phillips, S., Simone, A., & Tennant, A. (2005). Cross-cultural validity of Functional Independence Measure items in stroke: A study using Rasch analysis. *Journal of Rehabilitation Medicine, 37*, 23–31.

Lundgren-Nilsson, A., Tennant, A., Grimby, G., & Sunnerhagen, K. S. (2006). Cross-diagnostic validity in a generic instrument: An example from the Functional Independence Measure in Scandinavia. *Health and Quality of Life Outcomes, 4*, 55.

McDowell, I. (2006). *Measuring health: A guide to rating scales and questionnaires* (3rd ed.). New York: Oxford University Press.

Msall, M. E., DiGaudio, K., Rogers, B. T., LaForest, S., Catanzaro, N. L., Campbell, J., Wilczenski, F., & Duffy, L. C. (1994). The Functional Independence Measure for Children (WeeFIM): Conceptual basis and pilot use in children with developmental disabilities. *Clinical Pediatrics, 33*, 421–430.

Nichol, A. D., Higgins, A. M., Gabbe, B. J., Murray, L. J., Cooper, D. J., & Cameron, P. A. (2001). Measuring functional and quality of life outcomes following major head injury: Common scales and checklists. *Injury, 42*, 281–287.

Ottenbacher, K. J., Hsu, Y., Granger, C. V., & Fiedler, R. C. (1996). The reliability of the Functional Independence Measure: A quantitative review. *Archives of Physical Medicine and Rehabilitation, 77*, 1226–1232.

Petitpierre, N. J., Trombetti, A., Carroll, I., Michel, J., & Herrmann, F. R. (2010). The FIM instrument to identify patients at risk of falling in geriatric wards: A 10-year retrospective study. *Age and Ageing, 39*, 326–331.

Polinder, S., Haagsma, J. S., Belt, E., Lyons, R. A., Erasmus, V., Lund, J., & van Beeck, E. F. (2010). A systematic review of studies measuring health-related quality of life of general injury populations. *BMC Public Health, 10*, 783.

Sangha, H., Lipson, D., Foley, N., Salter, K., Bhogal, S., Pohani, G., & Teasell, R. W. (2005). A comparison of the Barthel Index and the Functional Independence Measure as outcome measures in stroke rehabilitation: Patterns of disability scale usage in clinical trials. *International Journal of Rehabilitation Research, 28*, 135–139.

Schepers, V. P. M., Ketelaar, M., Visser-Meily, J. M. A., Dekker, J., & Lindeman, E. (2006). Responsiveness of functional health status measures frequently used in stroke research. *Disability and Rehabilitation, 28*, 1035–1040.

Sharrack, B., Hughes, R. A. C., Soudain, S., & Dunn, G. (1999). The psychometric properties of clinical rating scales used in multiple sclerosis. *Brain, 122*, 141–159.

Sivan, M., O'Connor, R. J., Makower, S., Levesley, M., & Bhakta, B. (2011). Systematic review of outcome measures used in the evaluation of robot-assisted upper limb exercise in stroke. *Journal of Rehabilitation Medicine, 43*, 181–189.

Stillman, G., Granger, C., & Niewczyk, P. (2009). Projecting function of stroke patients in rehabilitation using the AlphaFIM instrument in acute care. *PM & R, 1*, 234–239.

Streppel, K. R., & Van Harten, W. H. (2002). The Functional Independence Measure used in a Dutch rehabilitating stroke population; a pilot study to assess progress. *International Journal of Rehabilitation Research, 25*, 87–91.

Van der Putten, J. J. M. F., Hobart, J. C., Freeman, J. A., & Thompson, A. J. (1999). Measuring change in disability after inpatient rehabilitation: Comparison of the responsiveness of the Barthel Index and the Functional Independence Measure. *Journal of Neurology, Neurosurgery and Psychiatry, 66*, 480–484.

Ween, J. E., Mernoff, S. T., & Alexander, M. P. (2000). Recovery rates after stroke and their impact on outcome prediction. *Neurorehabilitation & Neural Repair, 14*, 229–235.

Williams, G., Robertson, V., & Greenwood, K. (2004). Measuring high-level mobility after traumatic brain injury. *American Journal of Physical Medicine and Rehabilitation, 83*, 910–920.

Williamson, O. D., Gabbe, B. J., Sutherland, A. M., Wolfe, R., Forbes, A. B., & Cameron, P. A. (2011). Comparing the responsiveness of functional outcome assessment measures for trauma registries. *Journal of Trauma-Injury Infection & Critical Care, 71*, 63–68.

Winstein, C. (2004). Why is the functional independence measure used to identify some rehabilitation needs in stroke survivors when there are better tools? *Physiotherapy Research International, 9*, 182–184.

Functional Index

▶ Disability Index

Functional Limitations

▶ Work Limitations

Functional Limitations Profile

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Synonyms

FLP

Definition

This 136-item instrument assesses difficulties in physical, psychological, and social functioning. The Functional Limitations Profile (FLP) is a British version of the Sickness Impact Profile,

translated into British English and rescored using British item weights as explained below.

Description

The Functional Limitations Profile focuses on the behaviors and feelings that people report as describing themselves *today* across 12 different categories of functioning and well-being including (1) ambulation, (2) body care and movement, (3) mobility, (4) household management, (5) recreation and pastimes, (6) social interaction, (7) emotional behavior, (8) alertness behavior, (9) sleep and rest, (10) eating, (11) communication, and (12) work.

The Functional Limitations Profile, based on the same theoretical development but with different psychometric properties from the Sickness Impact Profile, was developed to give a point-in-time estimate of sickness-related dysfunction. Items were generated by well and ill persons that were members of a health plan in the USA and general practice in the United Kingdom.

The focus on "today" is used to help ensure that all respondents are using the same reference point and recall period. For items that ask for change, i.e., "eating less than usual," the respondent is requested to think of their behavior or health on the day of the enquiry and compare it with what they have done usually prior to the day of enquiry. This prior period may vary for each respondent and contribute to their response concerning "today."

Measurement Model

There are 12 category scores, two dimension scores, and an overall FLP score are derived using British weights. These weights are not identical to those used for the Sickness Impact Profile, since they were derived from a British population.

Category scores. The percent score is calculated for each category by adding the scale values for each item with which the respondent agrees and considers due to his/her health (or ticked items) and dividing by the maximum possible dysfunction score for the FLP. This figure is then multiplied by 100 to obtain the FLP category score.

Dimension scores. Two dimension scores may be calculated. The physical dimension score is obtained by adding the scale values for each item with which the respondent agrees and considers due to his/her health (or ticked items) with the categories of AMBULATION, BODY CARE AND MOVEMENT, MOBILITY, AND HOUSEHOLD MANAGEMENT, dividing by the maximum possible dysfunction score for these categories (4355), and then multiplying by 100. The psychosocial dimension score is obtained by adding the scale values for each item ticked within RECREATION AND PASTIME, SOCIAL INTERACTION, EMOTION, ALERTNESS, AND SLEEP AND REST, dividing by the maximum possible dysfunction score for these categories (3667), and then multiplying by 100. The scores for the remaining categories are always calculated individually.

Overall FLP score. The overall score for the FLP is calculated by adding the scale values for each item with which the respondent agrees and considers due to his/her health (or ticked items) across all 12 categories and dividing by the maximum possible dysfunction score for the FLP (9933). This figure is then multiplied by 100 to obtain the FLP overall score. Each item within the 12 categories is listed on the following pages along with the scale values coded to one decimal as follows: (1) Only items with which the respondent agrees and considers due to his/her health (or ticked items) should be included in the calculations for FLP category, dimension, and overall score. (2) Following each item is the scale value or weight for that item, e.g., item 1 has a scale value of 5.4. (3) The maximum possible scale value is shown following the title of each category, e.g., the ambulation category has a maximum possible score of 100.6. (4) The maximum possible score for the physical dimension is 444.5 while the maximum possible score for the psychosocial dimension is 366.7. (5) The maximum possible score for the FLP is 9933 which is the denominator for calculating the percent score for the entire FLP.

Reliability. In an analysis of the 2-week test-retest reliability of the PQoL on well adults, the overall score showed an ICC of 0.84. Internal consistency of the categories was 0.80 or above.

The repeatability of the overall and domain scores over 2 days was tested on a small sample of 30 disabled patients attending a health clinic. Repeatability of individual items was not good but domain and overall score approached 90 % (Patrick & Peach, 1989). In a study of multiple sclerosis (MS), the reliability of FLP was assessed by comparing FLP physical dimension scores in the 30 patients who had not changed clinically between visits (Expanded Disability Status Scale (EDSS) change < 1.0, Incapacity Status Scale (ISS) change < 3.8). For this unchanged group, the mean difference was +0.56 (Standard Deviation (SD) 6.2); the 95 % confidence interval (CI) was −2.87 to +1.75 (Hutchinson & Hutchinson, 1996).

Sensitivity to change. *In the multiple sclerosis study*, sensitivity of the FLP for the 20 Multiple Sclerosis (MS) patients who had clinically changed between visits was assessed (EDSS =/> 1.0, ISS =/> 3.8). For this changed group, the mean difference was −8.0 (SD 9.21); 95 % CI was −12.3 to −3.69

Validity

Convergent and Discriminant (Known Groups)

In a sample of patients in intensive care, functional status correlated only moderately with ▶ perceived quality of life (Pearson's Correlation Coefficient (r) = 0.49, probability test statistic (p) < 0.01). Objective measures of patients' material and social resources did not predict satisfaction (Patrick et al., 1988). In an evaluation of the association between self-reported functional status and quality of life in adults with and without chronic conditions, the Perceived Quality of Life score (PQoL) was lowest for persons using wheelchairs and highest for older well adults. Scores decreased as ▶ Sickness Impact Profile (SIP) scores increased. Overall, being older, reporting better functional status, and having fewer depressive symptoms were significantly associated with higher quality of life (adjusted $R^2 = 0.60$). This pattern held for most subgroups, although the association was much lower for adults with Autoimmune Deficiency Syndrome (AIDS) and younger well adults where ceiling effects were observed in functional status. Functional status and perceived quality of life are highly associated but are distinct in many populations. Depressive symptoms and self-rated health are important mediators. This pattern of association supports the validity of the PQoL (Patrick et al., 2000).

Use

"Think of yourself today" which was the original intent of the SIP.

Discussion

This measure also incorporates the areas of dysfunction included in the SIP developed in the United States (Bergner et al., 1981) and the ▶ Functional Limitations Profile (FLP), a culturally adapted and UK weighted version of the SIP developed in the United Kingdom (Patrick & Peach, 1989). The PQoL can be correlated with SIP or FLP Category Scores to investigate the relationship between functional status and satisfaction with functioning (see Patrick et al., 2000 on development of the PQoL).

Questionnaire

AMBULATION ITEMS (MAXIMUM POSSIBLE SCORE = 1006).

The following statements describe walking and use of stairs. Remember, think of yourself today. *If "AGREE," PROBE*; Is this due to your health?

Item followed by weight

1. I walk shorter distances or often stop for a rest	–	(054)
2. I do not walk up or down hills	–	(064)
3. I only use stairs with a physical aid; for example, a handrail, stick, or crutches	–	(082)
4. I only go up and down stairs with assistance from someone else	–	(087)
5. I get about in a wheelchair	–	(121)
6. I do not walk at all	–	(126)
7. I walk by myself but with some difficulty; for example, I limp, wobble, stumble or I have a stiff leg	–	(071)
8. I only walk with help from someone else	–	(098)
9. I go up and down stairs more slowly; for example, one step at a time or I often have to stop	–	(062)

(*continued*)

10. I do not use stairs at all	– (106)
11. I get about only by using a walking frame, crutches, stick, walls, or hold on to furniture	– (096)
12. I walk more slowly	– (039)

BODY CARE AND MOVEMENT ITEMS (MAXIMUM POSSIBLE SCORE = 1927)

13. I make difficult movements with help; for example getting in or out of the bath or car	– (082)
14. I do not get in and out of bed or chairs without the help of a person or mechanic aid	– (100)
15. I only stand for short periods of time	– (067)
16. I do not keep my balance	– (093)
17. I move my hands or fingers with some difficulty or limitation	– (066)
18. I only stand up with someone's help	– (093)
19. I kneel, stoop, or bend down only by holding onto something	– (061)
20. I am in a restricted position all the time	– (124)
21. I am very clumsy	– (047)
22. I get in and out of bed or chairs by grasping something for support or by using a stick or walking frame	– (079)
23. I stay lying down most of the time	– (120)
24. I change position frequently	– (0513)
25. I hold onto something to move myself around in bed	– (082)
26. I do not bathe myself completely; for example, I need help with bathing	– (085)
27. I do not bathe myself at all, but am bathed by someone else	– (100)
28. I use a bedpan with help	– (107)
29. I have trouble putting on my shoes, socks, or stockings	– (054)
30. I do not have control of my bladder	– (122)
31. I do not fasten my clothing; for example, I require assistance with buttons, zips, or shoelaces	– (068)
32. I spend most of the time partly dressed or in pajamas	– (075)
33. I do not have control of my bowels	– (124)
34. I dress myself, but do so very slowly	– (043)
35. I only get dressed with someone's help	– (082)

MOBILITY ITEMS (MAXIMUM POSSIBLE SCORE = 0727)

36. I only get about in one building	– (076)
37. I stay in one room	– (101)
38. I stay in bed more	– (091)
39. I stay in bed most of the time	– (114)
40. I do not use public transport now	– (052)
41. I stay at home most of the time	– (079)
42. I only go out if there is a lavatory nearby	– (064)
43. I do not go into town	– (047)
44. I only stay away from home for short periods	– (046)
45. I do not get about in the dark or in places that are not lit unless I have someone to help	– (057)

HOUSEHOLD MANAGEMENT ITEMS (MAXIMUM POSSIBLE SCORE = 0695)

46. I only do housework or work around the house for short periods of time or I rest often	– (050)
47. I do less of the daily household chores than I would usually do	– (037)
48. I do not do any of the daily household chores that I would usually do	– (090)
49. I do not do any of the maintenance or repair work that I would usually do in my home or garden	– (075)
50. I do not do any of the shopping that I would usually do	– (084)
51. I do not do any of the cleaning that I would usually do	– (078)
52. I have difficulty using my hands; for example, turning taps, using kitchen gadgets, sewing, or doing repairs	– (078)
53. I do not do any of the clothes washing that I would usually do	– (075)
54. I do not do heavy work around the house	– (059)
55. I have given up taking care of personal or household business affairs; for example, paying bills, banking, or doing household accounts	– (069)

(MAXIMUM POSSIBLE PHYSICAL DIMENSION SCORE = 4355)

RECREATION AND PASTIME ITEMS (MAXIMUM POSSIBLE SCORE = 0383)

56. I spend shorter periods of time on my hobbies and recreation	– (032)
57. I go out less often to enjoy myself	– (027)
58. I am cutting down on some of my usual inactive pastimes; for example, I watch TV less, play cards less, or read less	– (050)
59. I am not doing any of my usual inactive pastimes; for example, I do not watch TV, play cards, or read	– (091)
60. I am doing more inactive pastimes instead of my other usual activities	– (043)

(*continued*)

(*continued*)

61. I take part in fewer community activities	– (025)
62. I am cutting down on some of my usual physical recreation or more active pastimes	– (034)
63. I am not doing any of my usual physical recreation or more active pastimes	– (081)

SOCIAL INTERACTION ITEMS (MAXIMUM POSSIBLE SCORE = 1289)

64. I go out less often to visit people	– (031)
65. I do not go out at all to visit people	– (091)
66. I show less interest in other people's problems; for example, I do not listen when they tell me about their problems; I do not offer to help	– (050)
67. I am often irritable with those around me; for example, I snap at people or criticize easily	– (064)
68. I show less affection	– (044)
69. I take part in fewer social activities than I used to; for example, I go to fewer parties or social events	– (025)
70. I am cutting down the length of visits with friends	– (031)
71. I avoid having visitors	– (073)
72. My sexual activity is decreased	– (064)
73. I often express concern over what might be happening to my health	– (044)
74. I talk less with other people	– (044)
75. I make many demands on other people; for example, I insist that they do things for me or tell them how to do things	– (076)
76. I stay alone much of the time	– (091)
77. I am disagreeable with my family; for example, I act spitefully or stubbornly	– (086)
78. I frequently get angry with my family; for example, I hit them, scream, or throw things at them	– (103)
79. I isolate myself as much as I can from the rest of my family	– (100)
80. I pay less attention to the children	– (059)
81. I refuse contact with my family; for example, I turn away from them	– (109)
82. I do not look after my children or family as well as I usually do	– (066)
83. I do not joke with members of my family as much as I usually do	– (038)

EMOTION ITEMS (MAXIMUM POSSIBLE SCORE = 0693)

84. I say how bad or useless I am; for example, that I am a burden on others	– (089)
85. I laugh or cry suddenly	– (058)

(*continued*)

86. I often moan and groan because of pain or discomfort	– (067)
87. I have attempted suicide	– (141)
88. I behave nervously or restlessly	– (048)
89. I keep rubbing or holding areas of my body that hurt or are uncomfortable	– (059)
90. I am irritable and impatient with myself; for example, I run myself down, I swear at myself, I blame myself for things that happen	– (079)
91. I talk hopelessly about the future	– (096)
92. I get sudden frights	– (056)

ALERTNESS ITEMS (MAXIMUM POSSIBLE SCORE = 0711)

93. I am confused and start to do more than one thing at a time	– (074)
94. I have more minor accidents; for example, I drop things, I trip and fall, or I bump into things	– (090)
95. I react slowly to things that are said or done	– (052)
96. I do not finish things I start	– (045)
97. I have difficulty in reasoning and solving problems; for example, making plans, making decisions, or learning new things	– (078)
98. I sometimes get confused; for example, I do not know where I am, who is around, or what day it is	– (115)
99. I forget a lot; for example, things that happened recently, where I put things, or to keep appointments	– (085)
100. I do not keep my attention on any activity for long	– (052)
101. I make more mistakes than usual	– (049)
102. I have difficulty doing things which involve thought and concentration	– (071)

SLEEP AND REST ITEMS (MAXIMUM POSSIBLE SCORE = 0591)

103. I spend much of the day lying down to rest	– (096)
104. I sit for much of the day	– (062)
105. I sleep or doze most of the time, day and night	– (111)
106. I lie down to rest more often during the day	– (072)
107. I sit around half asleep	– (084)
108. I sleep less at night; for example, I wake up easily, I do not fall asleep for a long time, or I keep waking up	– (086)
109. I sleep or doze more during the day	– (080)

(MAXIMUM POSSIBLE PSYCHOSOCIAL DIMENSION SCORE = 3667)

110. I eat much less than usual	–	(034)
111. I feed myself but only with specially prepared food or special utensils	–	(076)
112. I eat special or different food; for example, I follow a soft food, bland, low salt, low fat, or low sugar diet	–	(052)
113. I eat no food at all, but I take liquids	–	(113)
114. I just pick or nibble at my food	–	(039)
115. I drink less fluids	–	(033)
116. I feed myself with the help from someone else	–	(095)
117. I do not feed myself at all but have to be fed	–	(121)
118. I eat no food at all except by tubes or intravenous infusion	–	(143)

COMMUNICATION ITEMS (MAXIMUM POSSIBLE SCORE = 0685)

119. I have trouble writing or typing	–	(050)
120. I communicate mostly by nodding my head, pointing, or using sign language, or other gestures	–	(127)
121. My speech is understood only by a few people who know me well	–	(094)
122. I often lose control of my voice when I talk; for example, my voice gets louder or softer or changes unexpectedly	–	(059)
123. I do not write except to sign my name	–	(084)
124. I carry on a conversation only when very close to other people or looking directly at them	–	(059)
125. I speak with difficulty; for example, I get stuck for words, I stutter, I stammer, I slur my words	–	(076)
126. I am understood with difficulty	–	(089)
127. I do not speak clearly when I am under stress	–	(047)

WORK ITEMS (MAXIMUM POSSIBLE SCORE = 0520)

Do you usually do work other than managing your home? YES NO

IF YES, COMPLETE THE WORK SECTION BELOW STARTING WITH ITEM 129

IF NO, I USUALLY DO NOT WORK OTHER THAN MANAGING MY HOME, PLEASE COMPLETE ITEM 128:

Are you retired?	YES	NO
If you are retired, was your retirement due to your health?	YES	NO

(*continued*)

If you are not retired, but are not working, is this due to your health?	YES	NO
128. I do not work at all (INCLUDES RETIRED BECAUSE OF HEALTH)	–	(361)
129. I do part of my job at home	–	(040)
130. I am not getting as much work done as usual	–	(041)
131. I often get irritable with my workmates; for example, I snap at them or criticize them easily	–	(042)
132. I work shorter hours	–	(052)
133. I only do light work	–	(056)
134. I only work for short periods of time or often stop to rest	–	(065)
135. I work at my usual job but with some changes; for example, I use different tools or special aids or I swap jobs with someone else	–	(036)
136. I do not do my job as carefully and accurately as usual	–	(050)

(MAXIMUM POSSIBLE FLP SCORE = 10023)

Cross-References

- ▶ Convergent Validity
- ▶ Cronbach's Alpha
- ▶ Discriminant Validity
- ▶ Factor Analysis
- ▶ Human Needs
- ▶ Internal Consistency
- ▶ Known-Groups Validity
- ▶ Perceived Quality of Life
- ▶ Reliability
- ▶ Satisfaction with Life Scale (SWLS), an Overview
- ▶ Sickness Impact Profile (SIP)
- ▶ Subjective Well-Being
- ▶ Test-Retest Reliability

References

Bergner, M., Bobbitt, R. A., Carter, W. B., & Gilson, B. S. (1981). The sickness impact profile: Development and final revision of a health status measure. *Med Care, 19*(8), 787–805.

Charlton, J., Patrick, D., & Peach, H. (1983). Use of mutivariate measures of disability in health surveys. *Journal of Epidemiology and Community Health, 37*(4), 296–304.

Hutchinson, J., Burke, T., & Hutchinson, M. (1996). Neuropsychological assessment in multiple sclerosis: Methodological issues and concerns. *Mult Scler, 2* (2), 57–65. Review. PubMed PMID: 9345382.

Morgan, M., Patrick, D., & Charlton, J. (1984). Social networks and psychosocial support among disabled people. *Social Science & Medicine, 19*, 489–497.

Patrick, D. (1981a). Standardization of comparative health status measures: Using scales developed in America in an English speaking country. In *Health survey research methods: Third biennial conference* (Publication No. (PHS) 81–3269, pp. 216–220). Hyattsville, MD: U.S. Department of Health and Human Services.

Patrick, D. (Ed.). (1981b). *The longitudinal disability interview survey: Phase I report*. London: Social Medicine and Health Services Research Unit, St. Thomas's Hospital Medical School.

Patrick, D. (Ed.). (1982). *The longitudinal disability interview survey: Phase II report*. London: Social Medicine and Health Services Research Unit, St. Thomas's Hospital Medical School.

Patrick, D., Morgan, M., & Charlton, J. (1986). Psychosocial support and change in the health status of physically disabled people. *Social Science & Medicine, 22*, 1347–1354.

Patrick, D. L., Danis, M., Southerland, L. I., & Hong G. (1988). Quality of life following intensive care. *J Gen Intern Med, 3*(3), 218–23. PubMed PMID: 3379490.

Patrick, D., & Peach, H. (Eds.). (1989). *Disablement in the community*. Oxford: Oxford University Press.

Patrick, D., Sittampalam, Y., Somerville, S., Carter, W., & Bergner, M. (1985). A cross-cultural comparison of health status values. *American Journal of Public Health, 75*(12), 1402–1407.

Patrick, D. L., Kinne, S., Engelberg, R. A., & Pearlman, R. A. (2000). Functional status and perceived quality of life in adults with and without chronic conditions. *J Clin Epidemiol, 53*(8), 779–85. PubMed PMID: 10942859.

Peach, H. (1984). *The relationship between impairment and disability among disabled persons in the community* (Ph.D. thesis). University of London.

Wiggins, R. D. (1985). *A replicated study of the impact of interviewer variability in a community survey of the physically handicapped in an Inner London Borough* (Research Working Paper No. 24). London: Polytechnic of Central London.

Known Publications Using the Functional Limitations Profile by Date Order

Allison, S. S., & Yohannes, A. M. (1999). Consequences of chronic obstructive pulmonary disease in community-based patients. *Physiotherapy, 85*(12), 663–668.

Bardsley, M. J., Astell, S., McCallum, A., & Home, P. D. (1993). The performance of three measures of health status in an outpatient diabetes population. *Diabetic Medicine, 10*(7), 619–626.

Collins, S., Carr, A., & O'Keefe, D. (1998). Evaluation of the effectiveness of a chronic pain management programme. *Irish Journal of Psychology, 19*(2–3), 283–294.

Cooke, M. W., Marsh, J. L., Clark, M., Nakash, R., Jarvis, R. M., Hutton, J. L., et al. (2009). Treatment of severe ankle sprain: A pragmatic randomised controlled trial comparing the clinical effectiveness and cost-effectiveness of three types of mechanical ankle support with tubular bandage. The CAST trial. *Health Technology Assessment Winchester England, 13*(13), iii, ix–x, 1–121.

Crowley, D., & Kendall, N. A. S. (1999). Development and initial validation of a questionnaire for measuring fear-avoidance associated with pain: The fear-avoidance of pain scale. *Journal of Musculoskeletal Pain, 7*(3), 3–19.

Dorrian, A., Dempster, M., & Adair, P. (2009). Adjustment to inflammatory bowel disease: The relative influence of illness perceptions and coping. *Inflammatory Bowel Diseases, 15*(1), 47–55.

Epton, J., Harris, R., & Jenkinson, C. (2009). Quality of life in amyotrophic lateral sclerosis/motor neuron disease: A structured review. *Amyotrophic Lateral Sclerosis, 10*(1), 15–26.

Fitzpatrick, R., Newman, S., Lamb, R., & Shipley, M. (1989). A comparison of measures of health status in rheumatoid arthritis. *British Journal of Rheumatology, 28*(3), 201–206.

Fitzpatrick, R., Ziebland, S., Jenkinson, C., Mowat, A., & Mowat, A. (1992). Importance of sensitivity to change as a criterion for selecting health status measures. *Quality in Health Care: QHC, 1*(2), 89–93.

Garrow, A. P., Papageorgiou, A. C., Silman, A. J., Thomas, E., Jayson, M. I. V., & MacFarlane, G. J. (2000). Development and validation of a questionnaire to assess disabling foot pain. *Pain, 85*(1–2), 107–113.

Hutchinson, J., & Hutchinson, M. (1995). The Functional Limitations Profile may be a valid, reliable and sensitive measure of disability in multiple sclerosis. *Journal of Neurology, 242*(10), 650–657.

Jenkinson, C., Stradling, J., & Petersen, S. (1997). Comparison of three measures of quality of life outcome in the evaluation of continuous positive airways pressure therapy for sleep apnoea. *Journal of Sleep Research, 6*(3), 199–204.

Johnston, M., Foulkes, J., Johnston, D. W., Pollard, B., & Gudmundsdottir, H. (1999). Impact on patients and partners of inpatient and extended cardiac counseling and rehabilitation: A controlled trial. *Psychosomatic Medicine, 61*(2), 225–233.

Jones, C., Hussey, R., & Griffiths, R. D. (1993). A tool to measure the change in health status of selected adult patients before and after intensive care. *Clinical Intensive Care, 4*(4), 160–165.

Kose, N., & Otman, A. S. (2004). Comparison of the quality of life of patients with lumbar and cervical disc herniation. *Pain Clinic, 16*(3), 281–286.
LoGiudice, D., Kerse, N., Brown, K., Gibson, S. J., Burrows, C., Ames, D., et al. (1998). The psychosocial health status of carers of persons with dementia: A comparison with the chronically ill. *Quality of Life Research, 7*(4), 345–351.
LoGiudice, D., Waltrowicz, W., Brown, K., Burrows, C., Ames, D., & Flicker, L. (1999). Do memory clinics improve the quality of life of carers? A randomized pilot trial. *International Journal of Geriatric Psychiatry, 14*(8), 626–632.
Molloy, G. J., Johnston, M., Johnston, D. W., Pollard, B., Morrison, V., Bonetti, D., et al. (2008). Spousal caregiver confidence and recovery from ambulatory activity limitations in stroke survivors. *Health Psychology, 27*(2), 286–290.
Moyer, C. A., Sonnad, S. S., Garetz, S. L., Helman, J. I., & Chervin, R. D. (2001). Quality of life in obstructive sleep apnea: A systematic review of the literature. *Sleep Medicine, 2*(6), 477–491.
O'Neill, C., Normand, C., Cupples, M., & McKnight, A. (1996). A comparison of three measures of perceived distress: Results from a study of angina patients in general practice in Northern Ireland. *Journal of Epidemiology and Community Health, 50*(2), 202–206.
Shuldham, C., Goodman, H., Fleming, S., Tattersall, K., & Pryse-Hawkins, H. (2001). Anxiety, depression and functional capacity in older women with mitral valve stenosis. *International Journal of Nursing Practice, 7*(5), 322–328.
Sibley, A., Kersten, P., Ward, C. D., White, B., Mehta, R., & George, S. (2006). Measuring autonomy in disabled people: Validation of a new scale in a UK population. *Clinical Rehabilitation, 20*(9), 793–803.
Simpson, K. H., & Ward, J. (2004). A randomized, double-blind, crossover study of the use of transcutaneous spinal electroanalgesia in patients with pain from chronic critical limb ischemia. *Journal of Pain and Symptom Management, 28*(5), 511–516.
Somerville, S. M., Silver, R., & Patrick, D. L. (1983). Services for disabled people; what criteria should we use to assess disability? *Community Medicine, 5*(4), 302–310.
Stradling, J. R., Jenkinson, C., & Petersen, S. (1996). Quality of life before and after Nasal Continuous Positive Airway Pressure (NCPAP) treatment for Obstructive Sleep Apnoea (OSA). *Thorax, 51*(Suppl. 3), S65–S70.
Trigg, R., & Wood, V. A. (2003). The validation of the subjective index of physical and social outcome (SIPSO). *Clinical Rehabilitation, 17*(3), 283–289.
Weatherley-Jones, E., Nicholl, J. P., Thomas, K. J., Parry, G. J., McKendrick, M. W., Green, S. T., et al. (2004). A randomised, controlled, triple-blind trial of the efficacy of homeopathic treatment for chronic fatigue syndrome. *Journal of Psychosomatic Research, 56*(2), 189–197.
Williams, S. J. (1996). Measuring health status? A review of the sickness impact and functional limitations profiles. *Health Care Analysis, 4*(4), 273–283.
Williams, S. J., & Bury, M. R. (1989). Impairment, disability and handicap in chronic respiratory illness. *Social Science & Medicine, 29*(5), 609–616.
Witham, M. D., Crighton, L. J., Gillespie, N. D., Struthers, A. D., & McMurdo, M. E. T. (2010). The effects of vitamin D supplementation on physical function and quality of life in older patients with heart failure a randomized controlled trial. *Circulation. Heart Failure, 3*(2), 195–201.
Witham, M. D., Daykin, A. R., & McMurdo, M. E. T. (2008). Pilot study of an exercise intervention suitable for older heart failure patients with left ventricular systolic dysfunction. *European Journal of Cardiovascular Nursing, 7*(4), 303–306.
Witham, M. D., Fulton, R. L., Wilson, L., Leslie, C. A., & McMurdo, M. E. T. (2008). Validation of an individualised quality of life measure in older day hospital patients. *Health and Quality of Life Outcomes, 6*, 27. doi: 10.1186/1477-7525-6-27. PubMed PMID: 18423029; PubMed Central PMCID: PMC2373778.

Functional Literacy

▶ Reading Literacy Achievement

Functional Measurement

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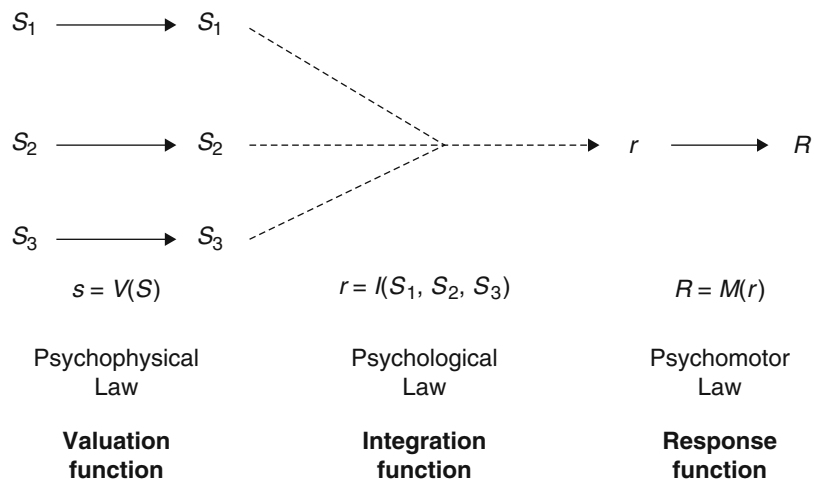
Synonyms

Information integration theory

Definition

Functional measurement is a method to establish the quality of measurement (rating) scales which is based on Information Integration Theory (Anderson, 1981). Information Integration



Functional Measurement, Fig. 1 Functional measurement diagram (Adapted from Anderson, 1981). Three linked functions V, I, and M lead from simultaneous observable stimuli S_i to an observable response R. Valuation function V or psychophysical law maps physical stimuli S_i into subjective counterparts s_i. Integration function I represents a psychological law which maps the subjective stimulus field into an implicit response r. The response function M or psychomotor law maps the implicit response r into an observable response R

Theory considers how complex information about multiple stimuli is integrated into a single impression, which people use when forming an overall appraisal. It is generally found that the integration process can well be modeled with simple arithmetic such as adding, averaging, and multiplying. Linearity of rating scales is derived from this result.

Description

People assessing their overall appraisal of complex experiences are most likely taking a multitude of aspects into account, for example, participants rating their overall ► quality of life on a scale may consider their satisfaction in several life domains to make such overall assessment. Information Integration Theory (Anderson, 1981) considers how such complex multitude of information is integrated into a single subjective internal response, which is subsequently translated into an overt response, such as a rating on a scale. Functional measurement derives from findings in the context of Information Integration Theory that logically can result only from psychological mechanisms that comply with linear scales. Functional measurement can best be explained using the functional measurement diagram (Anderson, 1981) that is given in Fig. 1.

According to Information Integration Theory, people who experience a multitude of stimuli S_i form a subjective internal impression of these as described by the valuation function. These impressions are put together into an appraisal or internal response using the integration function. Finally, this internal response is externalized into an observable response using the response function.

In functional measurement the integration function or the psychological law is crucial. In order to determine the integration function, three interlocked problems need to be overcome:

1. Measuring the psychological values of the stimuli
2. Measuring the psychological value of the response
3. Determining the integration function

Functional measurement deals with all three (Hofmans & Theuns, 2008).

In functional measurement experiments, participants are presented with multiple observable stimuli, and they are required to produce an

observable response, such as a rating on a scale. It has been found consistently in empirical studies that the integration function in a multitude of stimulus domains can well be modeled with simple arithmetic such as adding, averaging, and multiplying, all linear functions. As a consequence of these consistent findings, it is concluded that the psychological representation of the stimuli, the integration function, and the response scale all three are linear (Anderson, 1996). Hence, response scales can safely be considered linear scales.

In quality of life studies, the stimuli can be satisfaction levels in each of a collection of life domains; the response can be "quality of life," "satisfaction with life as a whole," "subjective well-being," etc. The integration function can be considered to represent the conceptualization of "quality of life" by the participant: the integration function describes how satisfaction in particular life domains contributes to the overall subjective experience of quality of life.

Typically, in functional measurement experiments on quality of life, participants are presented with a series of textual (or similar) descriptions of satisfaction levels in multiple life domains (Theuns, Hofmans, & Verresen, 2007; Theuns et al., 2010). Participants are then required to express their global assessment of each of the so described life situations on a quality of life rating scale. In studies where levels of satisfaction in life domains were manipulated to determine the integration function for subjective well-being, it has repeatedly been found that integration occurred mainly according to averaging and sometimes adding models. Averaging models have a distinctive feature, comparing to adding models, that satisfaction levels compensate across life domains, such that lesser satisfaction in the one domain can be compensated by a surplus satisfaction in some other domain.

Moreover, it was found that differential weighting occurs for particular high or low satisfaction levels in particular domains, meaning that particular thresholds for satisfaction in some domains exist such that satisfaction in other domains no longer compensates. For example, very poor health has been found to bear on subjective well-being no matter the level of satisfaction in other life domains. In a cross national study with students from Belgium, Poland, and Algeria, it was found that different integration models coexist in the 3 studied groups and that the prevalence of these strategies differs across groups. This would imply that different conceptualizations of "quality of life" coexist, but in different numbers across countries (Theuns, Baran, Van Vaerenberg, Hellenbosch, & Tiliouine, 2012).

References

Anderson, N. H. (1981). *Foundations of information integration theory*. New York: Academic Press.

Anderson, N. H. (1996). *A functional theory of cognition* (p. 500). Mahwah, NJ: Lawrence Erbaum Associates.

Hofmans, J., & Theuns, P. (2008). On the linearity of predefined and self-anchoring visual analogue scales. *The British journal of mathematical and statistical psychology, 61*(Pt 2), 401–413. doi:10.1348/000711007X206817.

Theuns, P., Hofmans, J., & Verresen, N. (2007). A functional measurement inquiry on the contribution of different life domains to overall subjective well-being. *Teorie & Modelli, 1–2*, 181–189.

Theuns, P., Verresen, N., Mairesse, O., Goossens, R., Michiels, L., Peeters, E., & Wastiau, M. (2010). An experimental approach to the joint effects of relations with partner, friends and parents on happiness. *Psicológica, 31*, 629–645.

Theuns, P., Baran, B., Van Vaerenberg, R., Hellenbosch, G., & Tiliouine, H. (2012). A cross-cultural experimental approach to the contribution of health, religion and personal relations to subjective satisfaction with life as a whole. *Psicológica, 33*(3), 591–608.

Functional Outcome Measure

▶ Disability Index

Functional Scale

▶ Disability Index

Functional Status Measures

► Functional Disability Scales

Functioning of the Individual

► Systemic Quality of Life Model (SQOL)

Fundamental Freedoms

► Human Rights

Fundamental Standards of Behavior

► Morality and Well-Being

Future Expectations and Functioning in Later Life

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Definition

Future expectations reflect generalized expectancies individuals hold for their future. These are cognitive and emotional self-representations individuals have about their future. Future expectations are shaped by sociodemographic characteristics, current physical and psychological functioning, and social environment and culture. Future expectations encompass a complex web of expectancies referring to various life domains, but these can be assimilated into positive and negative expectations. Positive and negative future expectations can be viewed as a specific manifestation of the generalized tendency of ► optimism and pessimism, respectively. However, they may fluctuate more frequently and therefore are not identical to these personality dispositions.

Description

Reciprocal Effects of Future Expectations and Functioning

Future expectations and functioning affect each other. Although future expectations are molded, among other things, by current physical, psychological, and social functioning, future expectations can also direct the efforts that individuals invest in health-related behaviors, thereby influencing future health and functioning outcomes (Levy, 2003; Sarkisian, Hays, & Mansgione, 2002). Future expectations may be paramount to functioning in old age. Beliefs that age-related decrements are preventable or modifiable call for attempts to achieve optimal functioning. On the other hand, beliefs that future decline is largely inevitable or irreversible are associated with inactivity and resignation. Accordingly, studies on possible selves show that hoped-for self-representations and feared future self-representations (visions of selves that people hope to achieve or fear becoming, respectively) may guide late-life health behaviors and ultimately may affect one's health (Frazier & Hooker, 2006).

The Interrelation Between Future Expectations in Later Life

On the face of it, positive and negative future expectations invariably represent opposite ends of the same continuum and thus should change together though in opposite directions. That is, when positive expectations become salient, negative expectations decrease and vice versa. However, under certain conditions, positive and negative evaluations may become separated, thus being affected by different factors and changing independently from one another. At other times they may be linked to each other

but may change in the same direction. These modes are compatible with evidence that the approach system can be activated solely of the avoidance system or that the systems can be co-inhibited or co-activated, reflecting neutrality or ambivalence, respectively (Cacioppo & Berntson, 1994). Similarly, findings show that incongruent aspects of ▶ subjective well-being, such as positive and ▶ negative affect, can be uncoupled, co-inhibited, or co-activated (Shmotkin, 2005).

The interrelation between positive and negative future expectations changes across the lifespan, especially during the second part of life. Shrira et al. (2011) found that general positive and negative expectations for life standards five years ahead become less associated or more independent of each other with increasing age. Palgi, Shrira, Ben-Ezra, Cohen-Fridel, & Bodner (2011) similarly found in a diary study that positive and negative expectations for the next day are less negatively correlated with each other among old people. These authors proposed that life experience makes older people develop more elaborated expectations regarding the future. It is possible that older people successfully hold in mind different aspects of a certain domain or different domains of life when they rate positive versus negative expectations. Thus, they can acknowledge that decline might be inevitable in certain aspects of a domain or in certain domains, yet maintenance, or even improvement, might be experienced in others (Shmotkin, 2011).

The idea that future expectations become more elaborated in late life is compatible with several theories. For example, the aintegration model (Lomranz, 1998) maintains that ▶ adaptation to aging involves a mental reorganization that includes increasing ability to accommodate inconsistent cognitive and emotional evaluations. Similar assumptions are included in the socioemotional selectivity theory (Charles & Carstensen, 2009). This theory holds that individuals change their priorities according to the limited time left. It further proposes that in the face of constrained time, old people savor their moments but also appreciate their temporal fleetingness. They realize not only what they have but also that they cannot have it forever. Thus, cognitive and emotional evaluations become more complex as life's fragility comes fully into awareness. Referring to another model suggested by Shmotkin (2005), positive future expectations can be seen as an important part of one's positive psychological environment, and such expectations are needed in order to regulate the effect of their negative counterparts. Negative future expectations on the other hand can be viewed as a part of one's image of actual or potential threats to one's life or one's physical and mental integrity entitled as the hostile-world scenario. As part of the hostile-world scenario, future negative expectations ensure alertness to potential dangers but are constantly regulated by positive expectation. The increased independence between positive and negative expectations ensures that late life is not overridden by a nightmarish imminence aging catastrophes yet at the same time not driven to the naiveté of a fool's paradise.

Relationship Between Future Expectations and Functioning in Later Life

The degree to which expectations of contrasting valences associate with functioning may change with aging. Accordingly, positive expectations (reflecting growth-oriented cognitions) are strongly related to physical and psychological functioning among young-old people, whereas negative expectations (reflecting maintenance-oriented cognitions) are negatively associated more strongly with functioning in older ages (Palgi et al., 2011; Shrira et al., 2011). Late-life changes in expectations-functioning relationships may be explained by an age-related shift in motivation. Up to early aging, motivation is targeted at future gains, growth, and self-improvement. As people enter old age, they shift their orientation toward functional maintenance and prevention of loss (Ebner, Freund, & Baltes, 2006). The motivational shift from gain enhancement to loss prevention might be reflected in the shift from a greater effect of positive to that of negative expectations on functioning.

When accounting for the interaction between positive and negative expectations, older individuals who express positive and negative expectations that are similarly low or similarly high show higher levels of functioning (Palgi et al., 2011; Shrira et al., 2011). In old age, a person who holds low positive and low negative expectations believes that no major changes are to occur. As there is greater motivation to maintain current functioning in older age than in younger age, such a belief should be associated with favorable functioning. Such a combination possibly reflects a greater confidence in resource preservation and late-life ▶ resilience. Even more intriguing is the combination of high positive and high negative expectations. Such a combination may represent greater mental complexity, which might be related to higher ▶ resilience in old age (Lomranz, 1998). It can reflect the acknowledgment and acceptance of inconsistency, ambivalence, and relativity that are known to assist the individual in adapting to intrapsychic and interpersonal complex situations that one commonly encounters during the aging process. Such a realistic equilibrium between what one hopes to achieve and what one fears of becoming possibly reflects an adaptive cautious ▶ optimism strategy. Benyamini (2005) similarly showed that old people who suffer from arthritis and who rate themselves high on both ▶ optimism and pessimism report significantly greater use of ▶ active coping strategies. The co-occurrence of two contradicting expectations, hoped-for and feared selves in the same domain, was also found to be adaptive in the possible-selves literature (Frazier & Hooker, 2006).

Failing to Rate Future Expectations

Nonresponse when asked about future expectation is a common phenomenon in old age (Shrira et al., 2011). Previous findings (Shrira et al., 2011) show on the one hand that old people who fail to report their expectations report the lowest physical, psychological, and social functioning. However, another study suggests that bypassing the notion of one's future is a reasonably realistic approach for old-old people (Palgi & Shmotkin, 2010). In view of these findings, a failure to explicitly address one's future could be interpreted as an unsettled anxiety of confronting one's aging and approaching death. Therefore, it is possible that failing to address future standards of living is an informative marker for imminent deterioration in vital domains and a possible form of psychological exhaustion. However, one can also view the decision not to rate future expectations as an adaptive reaction of older people suffering from many age-related losses to avoid pondering on a threatening future.

References

Benyamini, Y. (2005). Can high optimism and high pessimism co-exist? Findings from arthritis patients coping with pain. *Personality and Individual Differences, 38*, 1463–1473.

Cacioppo, J. T., & Berntson, G. G. (1994). Relationship between attitudes and evaluative space: A critical review, with emphasis on the separability of positive and negative substrates. *Psychological Bulletin, 115*, 401–423.

Charles, S. T., & Carstensen, L. L. (2009). Social and emotional aging. *Annual Review of Psychology, 61*, 383–409.

Ebner, N. C., Freund, A. M., & Baltes, P. B. (2006). Developmental changes in personal goal orientation from young to late adulthood: From striving for gains to maintenance and prevention of losses. *Psychology and Aging, 21*, 664–678.

Frazier, L. D., & Hooker, K. (2006). Possible selves in adult development: Linking theory and research. In C. Dunkel & J. Kerpelman (Eds.), *Possible selves: Research and application* (pp. 41–59). New York: Nova Science.

Levy, B. R. (2003). Mind matters: Cognitive and physical effects of aging self-stereotypes. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 58*, P203–P211.

Lomranz, J. (1998). An image of aging and the concept of aintegration: Personality, coping, and mental health implications. In J. Lomranz (Ed.), *Handbook of aging and mental health: An integrative approach* (pp. 217–250). New York: Plenum.

Palgi, Y., & Shmotkin, D. (2010). The predicament of time near the end of life: Time perspective trajectories of life satisfaction among the old-old. *Aging and Mental Health, 14*, 577–586.

Palgi, Y., Shrira, A., Ben-Ezra, M., Cohen-Fridel, S., & Bodner, E. (2011). The relationship between daily

optimism, daily pessimism, and affect differ in young and old age. *Personality and Individual Differences, 50*, 1294–1299.
Sarkisian, C. A., Hays, R. D., & Mangione, C. M. (2002). Do older adults expect to age successfully? The association between expectations regarding aging and beliefs regarding healthcare seeking among older adults. *Journal of American Geriatric Society, 50*, 1837–1843.
Shmotkin, D. (2005). Happiness in face of adversity: Reformulating the dynamic and modular bases of subjective well-being. *Review of General Psychology, 9*, 291–325.
Shmotkin, D. (2011). The pursuit of happiness: Alternative conceptions of subjective well-being. In L. W. Poon & J. Cohen-Mansfield (Eds.), *Understanding well-being in the oldest old* (pp. 27–45). New York: Cambridge University Press.
Shrira, A., Palgi, Y., Ben-Ezra, M., Spalter, T., Kavé, G., & Shmotkin, D. (2011). For better and for worse: The relationship between future expectations and functioning in the second half of life. *Journal of Gerontology: Psychological Sciences, 66B*, 195–203.

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