

Chapter 12

Sense of Coherence and Professional Career Development

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He who has a why to live for can bear almost any how

Friedrich Nietzsche

Abstract The sense of coherence (SOC) is a global life orientation. During the past decades, it has been demonstrated as a dynamic general health resource. SOC has three components: comprehensibility, manageability and meaningfulness. Comprehensibility refers to the degree to which the individual perceives stimuli as predictable, structured, ordered and making cognitive sense. Manageability refers to the individual's appraisal of internal and external resources to manage daily life stressors. Meaningfulness pertains to the individual's appraisal that life makes sense and that demands are worthy of energy and commitment. In recent years, the impact of SOC on career and career development has been empirically researched and discussed, and today SOC has a central position in the domain of career development research. Studies show that SOC is related to career thoughts and career development, and impacts on other career-related issues, as emphasised in this chapter. This chapter introduces the theoretical approaches of salutogenesis and SOC in the context of selected career-related issues. It demonstrates the relationship between SOC and career psychology, and focuses particularly on the interrelationship of SOC with career thoughts and career development. It also provides insights into related areas of research, presenting practical insights regarding SOC in career counselling as well as a conclusion and future research perspectives.

Keywords Sense of coherence · Life orientation · Comprehensibility · Manageability · Meaningfulness · Salutogenesis · Career development · Psychological attributes · Positive psychology · Wellbeing · Health · General resistance resources · Career decision-making

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Introduction

The discourse on healthy work environments has recently attracted interest in management sciences and industrial psychology (Rothmann and Cilliers 2007). During the past decade, many scholars have responded to the salutogenic question ‘What keeps people healthy?’ (Antonovsky 1979) as applied to various professional and organizational settings (Mayer and Krause 2011).

Salutogenesis is concerned with the dynamic relationship between health, stress and coping (Antonovsky 1979). Salutogenic factors include both personal and contextual determinants, whereby personal determinants include the sense of coherence (SOC) (Antonovsky 1979, 1987a, b, c), fortitude, internal locus of control (Strümpfer 1990) and resilience (McCubbin et al. 1998). Contextual determinants, on the other hand, include social integration and support (Beutel 1989), financial security and social status (Antonovsky et al. 1987), religion and the belief in God (Smith 2002), organizational management and identity (Riese 2005), as well as trust and behaviour (Rigotti and Mohr 2006). Personal and contextual determinants impact on careers and career development of individuals.

In the contemporary world of work, career development seems to be strongly influenced by psychological attributes that include individuals’ ability to adapt and deal proactively with work challenges in global and constantly changing work settings (Savickas 2011). Employees become more dependent on their psycho-social capacities, due to frequent career transitions, and the increasing demand for adaptability and individual agency in career decisions (Rossier et al. 2012). Salutogenesis and SOC are psycho-social career meta-capacities, which influence career wellbeing (Kidd 2008), career development and other career-related issues such as career thoughts, career decision status (Austin et al. 2010) and employment (Liukkonen et al. 2009). Work has been defined as a highly important part of life, comparable with family, leisure, community and religion (Harpaz and Fu 2002). The meaning of work is an important source of SOC, workplace wellbeing and mental health (Mayer 2011), as well as workplace spirituality. Salutogenesis as a concept of positive psychology has been emphasised as being interlinked with various career concepts and career wellbeing (Rothman 2011; Savickas et al. 2009).

In this chapter, basic aspects of salutogenesis and SOC are explained in terms of a psycho-social career meta-capacity. Selected career-related issues, such as career thought, career development, work-place wellbeing and work-place spirituality are highlighted.

Salutogenesis or ‘What Keeps People Healthy?’

The positive psychology movement emboldened the World Health Organization (WHO 1946) to define health as a social category, constructed through the relationship of body and psyche (Faltermaier 1994). Health depends on individual perceptions, coping strategies and the ability to manage stress in daily interactions. Thus,

health is not only a physical phenomenon, but rather a psycho-social construct within a certain sociocultural context and tradition. It is inter-related with ‘the subjective wellbeing and the health-oriented behaviour of a person’ (Bengel et al. 2001, p. 15).

Antonovsky (1979), a medical sociologist, revolutionised health research by posing the question: ‘What keeps people healthy?’ instead of investigating the causes of illness. This question is the foundation of salutogenesis, a theoretical model that defines health in a human being as an active, dynamic, self-regulating process (Bengel et al. 2001). In his theoretical approach to health, Antonovsky (1987a, p. 90) refers to the bio-psycho-social model and describes salutogenesis with a metaphor :

My fundamental philosophical assumption is that the river is the stream of life. None walks the shore safely. Moreover, it is clear to me that much of the river is polluted, literally and figuratively. There are forks in the river that lead to gentle streams or to dangerous rapids and whirlpools. My work has been devoted to confronting the question: ‘Wherever one is in the stream—the nature of which is determined by historical, social-cultural, and physical environmental conditions—what shapes one’s ability to swim well?’

Antonovsky’s theoretical approaches (1979) reject the traditional bio-medical model and its dichotomy separating health and illness. He describes the relationship of health and illness as a continuous variable, a ‘health-ease versus dis-ease continuum’ (Antonovsky 1979). Disease is thus associated with rigidity, emotional suffering, narcissism, exploitation of others and unconscious repulsion. Contrary to disease, health is associated with conscious coping, creative adaptation and growth, happiness, reciprocal interaction and self-love (Singer and Brähler 2007). One key concept in salutogenesis is the sense of coherence (SOC), introduced below.

Defining the Sense of Coherence

Antonovsky (1979, p. 123) defines SOC as follows:

A global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that one’s internal and external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected.

SOC is primarily a mental health concept that impacts on physical health (Wydler et al. 2000). It develops mainly during childhood (Antonovsky 1987a, b, c), but can be influenced and changed through certain powerful life experiences (Bahrs and Matthiessen 2007), counselling, therapeutic interventions and training (Krause and Mayer 2012). Targeted interventions can support the strengthening of SOC to ensure and improve an individual’s ability to respond to subsequent life challenges (Nilsson et al. 2003; Schnyder et al. 2000). Professional interventions, such as therapy, counselling or consulting, can support the development and improvement of SOC (Bahrs and Matthiessen 2007; Mayer 2011). Fostering managerial abilities and competences to cope with diverse work-related challenges (Hellriegel et al. 2007) can further promote SOC and contribute positively to increased managerial health, wellbeing and productivity at work.

Antonovsky (1985, p. 276) further complements the definition of SOC in a later publication:

[It is a] feeling of confidence that (1) the stimuli from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement.

Individuals with a strong SOC are usually more resistant to the negative effects of stress and anxiety, which could otherwise result in a suppressed immune system, leaving an individual more prone to illness (Adams et al. 2000). A strong SOC provides a person with the fundamental confidence that a situation will be resolved (Antonovsky 1990) and is associated with fewer subjective body complaints, somatoform symptoms and minor health-related problems (Schumacher et al. 2000). Recent research demonstrates that the SOC determines one's perceived (mental) health and wellbeing (Lindström and Eriksson 2006).

The more pronounced an individual's SOC, the healthier the person will feel and the quicker she/he will regain health or remain healthy. Individuals with a strong SOC are more likely to seek treatment and information, follow professional guidance and avoid behaviour that interferes with health, such as smoking, excessive drinking, unhealthy diet or a sedentary lifestyle (Kivimäki et al. 2000). SOC has been found to be associated with general indices of lifestyle (Forsberg et al. 2010) and career-issues (Rothmann 2011).

The SOC refers to consistency, congruence and harmony, affecting one's 'way of looking at the world' (Antonovsky 1979, p. 8), and is a general feeling of confidence that the individual's internal and external environments are predictable and that things will work out positively (Antonovsky 1987a). SOC supports the development and strengthening of resilience and a positive health state, particularly through three components, which are discussed below.

The Three Components of Sense of Coherence

The sense of coherence has three components. Firstly, the sense of comprehensibility is the cognitive component. It describes the expectation or the ability of a person to process familiar and unfamiliar stimuli as ordered, consistent, structured information, rather than chaotic, random, accidental or inexplicable (Antonovsky 1987a). This comprehensibility component results from experiences of consistency that support the classification, categorizing and structuring of information. The person scoring high in SOC expects that stimuli encountered in the future will be predictable, ordered and explicit. Comprehensibility exists when stimuli from the environment are perceived to make cognitive sense (Antonovsky 1990).

Secondly, the sense of manageability is the instrumental and behavioural component of SOC. A person with a strong sense of manageability is convinced that difficulties are solvable. The sense of manageability consists of confidence and 'the extent to which one perceives that resources are at one's disposal, which is adequate to

meet the demands posed by the stimuli that bombard one ‘ (Antonovsky 1987a, p. 17). This SOC component develops through the experience of one’s own resources, the belief that strains and stress can be kept in balance and managed, and that people can cope with the things happening in their lives. According to Antonovsky (1990) manageability occurs when both the individual and legitimate others, such as spouses, friends, professionals, formal authorities and spiritual figures, perceive the occurring stimuli as being under control.

In the work context, the employee’s overload-underload balance is directly linked with the manageability component. Individuals with a high sense of manageability are more likely to feel comfortable in managing life experiences and events that confront them daily. Such individuals have developed the capacity to cope with stressors, rather than to complain and grieve (Antonovsky 1987a).

Thirdly, the sense of meaningfulness is the motivational component of the sense of coherence and describes

The extent to which one feels that life makes sense emotionally, that at least some of the problems and demands posed by living are worth investing energy in, are worthy of commitment and engagement, are challenges that are ‘welcome’ rather than burdens that one would much rather do without (Antonovsky 1987a, p. 18).

Meaningfulness is fostered by the feeling of having influence on events and by the experience that these events are purposeful. It is considered the most important component, because without meaningfulness life is experienced as a burden (Bengel et al. 2001). Basson and Rothman (2002) assert that meaningfulness is experienced when stimuli are perceived as motivationally relevant. Thus, stimuli are welcomed as challenges worth engaging with and investing oneself in. Meaningfulness is significant to individuals actively involved in processes shaping their destiny and daily life experiences, and refers to the sense of importance (Antonovsky 1987a). Singer and Brähler (2007) point out that those individuals with a high sense of meaningfulness are more likely to be positive in the way they confront life experiences such as the death of a loved one, unsuccessful work performance or dismissal from work. Although they still experience these life events as strenuous, the attribution of sense lends motivation to cope with the situation.

The Four Appraisals of Sense of Coherence

SOC refers to four appraisals (Antonovsky 1979), which interlink SOC directly to aspects of successful living, such as effective work performance, effective interpersonal relationships, community involvement, religious expression and economic and political functioning (Strümpfer 1995). By interlinking SOC to work-related issues, SOC’s influence on careers and their development is obvious.

A stimulus is defined as a stressor in the first stage of appraisal (Antonovsky 1987a). Individuals with a strong SOC tend to react flexibly (Primary Appraisal I, flexibility). A strong SOC enables a person to judge a particular stimulus as neutral, when the same thing would cause tension in persons with a weak SOC. A person with a

strong SOC is apt to select a coping strategy that seems most appropriate for dealing with the stressor that confronts him/her (Antonovsky 1987a). Individuals with a strong SOC are more likely to view life events as having coherence (perception) and are influenced by their positive perception of stressful events without their conscious awareness (Amirkhan and Greaves 2003).

In the second stage of appraisal (Primary Appraisal II, cognition), a person with a strong SOC defines the encountered stressor as structured, or even as a welcome challenge, and has confidence that it can be managed successfully. A strong SOC allows a person to identify a stimulus as a stressor, while at the same time determining whether the stressor is threatening, favourable or irrelevant. Classifying the stressor as favourable or irrelevant means that tension is perceived, but simultaneously expected to cease without the activation of resources (Antonovsky 1979). The stressor is thus redefined as a non-stressor.

Individuals with a strong SOC accept setbacks and failures as normal and not necessarily indicative of their incompetence, or proof of a hostile world (Semmer 2003). Through comprehensibility and meaningfulness, negative experiences are put into perspective, interpreted as part of the larger picture of the world and as having meaning beyond the present situation (Muller and Rothmann 2009).

In the third stage of appraisal (Primary Appraisal III, behaviour), an individual with a strong SOC is capable of realising the nature of a problem and is eager to encounter it. The Primary Appraisal III shows that individuals with a strong SOC experience, define problems and conflicts in a more differentiated way than individuals with a low SOC (Mayer 2011). Perception differs between individuals with a strong SOC and those with a low SOC (Amirkhan and Greaves 2003), and the SOC, therefore, influences the appraisal of stress (Semmer 2003). Individuals with a strong SOC experience emotions as less diffuse, more focused and less paralysing than individuals with a low SOC (Faltermaier 1994, p. 53). Individuals with a strong SOC react flexibly to threatening situations with appropriate and directed feelings that can be influenced by actions. Amirkhan and Greaves (2003) point out that these individuals use more instrumental and fewer avoidant responses to cope with stressors in their life. They exploit resources more easily than individuals with a low SOC (Antonovsky 1987a) and see themselves as capable of influencing life. Finally, individuals with a strong SOC usually have stronger transcultural competences than individuals with a weak SOC (Mayer 2011).

The fourth stage is reappraisal (Primary Appraisal IV, reappraisal). In this stage, an individual with a strong SOC is open to feedback and to the possibility of correction (Antonovsky 1987b).

Viewing these four appraisals in the light of career development, it is obvious that a strong SOC contributes to career development in terms of supporting a person in recognising the world and work challenges on his/her way to career development and also welcoming challenges, which are experienced as structured, consistent and worth managing. Individuals who are aware of their resources and ways of activating them, are more prepared to address challenges within their careers than individuals who lack this awareness. Finally, individuals with a strong SOC, who are able to cope with feedback and see feedback as presenting options of changing, are more prepared to implement feedback-based changes than individuals with a weak SOC.

Sense of Coherence and General Resistance Resources as Psycho-social Career Meta-Capacities

Work can play an important role in supporting mental health and functional capacity (physical, mental and social) (Mayer 2011). Therefore, the development of career meta-capacities is, at the same time, crucial in fitting person to environment in a career context (Savickas and Porfeli 2012). Career meta-capacities are defined as the set of psychological career resources that individuals use proactively to plan and manage their career and its development. Individuals with a high SOC also influence their socio-occupational environments and self-regulate their behaviour for career success in the work place (Coetzee 2008). In Coetzee's framework for psychological career resources, people's career meta-competencies comprise career preferences, career values, career drivers, career enablers and career harmonisers. Career development is also influenced by a well-developed psychological career resources profile (Van der Heijde and Van der Heijden 2006).

The SOC's strength arises from adaptability and universal use (Lindström and Eriksson 2005). According to Antonovsky (1993, p. 972), individual health is largely determined by a single psychological factor, namely, the individual's general attitude toward the world and his/her own life. Individuals experiencing comparable external conditions display different states of health. These differences are determined by the individual's cognitive and motivational perspective on life. This life-orientation (sense of coherence), in turn, influences the strength of the individual to utilise available resources for maintaining health and wellbeing.

Antonovsky (1979) assumes that experiences characterised by consistency, balanced challenges and a feeling of being able to manage such experiences contribute to the feeling of coherence, as well as to the motivation to search for and construct coherence in different contexts. Coherence of experience depends on the individual's General Resistance Resources (GRRs) (Antonovsky 1979), which influence the sense of coherence and its development. GRRs are shaped by life experiences characterised by consistency, participation in shaping outcome, and the balance between underload and overload. Thus, when these resources are available the person has a better chance of dealing with life's challenges. The absence of GRRs can, in itself, become a stressor (Antonovsky 1979, p. 119).

Antonovsky (1987a, p. xiii) describes GRRs as 'making sense out of the countless stressors with which we are constantly bombarded' and identifies the following GRRs:

- Physical and biochemical, such as immune-suppressors and stimulators;
- Artefactual material GRRs, particularly wealth, that can buy health services and afford power, status and other services;
- Cognitive GRRs, particularly knowledge-intelligence, contingent on education, which includes skills and knowledge, for example, about avoiding HIV or carcinogens;
- Emotional GRR of ego identity;
- Coping strategies, as overall plans for overcoming stressors;

- Interpersonal-relational GRRs, such as social support and commitment; and
- Macro-socio-cultural GRRs of ready answers provided by one's cultural and social structure, which includes religion.

Individuals with the ability to activate GRRs are likely to construct a strong SOC and to find new resources, thereby gaining stronger resistance against stressors and generating health. GRRs serve as coping resources that protect a person from negative impacts of tensions associated with stressors. GRRs support 'the self-organisation and the self-renewal of the health system of an individual' (Mussmann et al. 1993, p. 9). Specifically, psychological career resources are viewed as supportive in career advancement (Coetzee and Bergh 2009).

Sense of Coherence and Careers in Organizational Contexts

Salutogenesis, in the global industry, recently attracted interest in industrial and organizational psychology research (e.g. Rothmann and Cilliers 2007). The prevalence, ill effects and difficult treatment of stress provide further credence for the organization to focus on developing techniques and an environment that fosters concepts such as sense of coherence (Antonovsky 1994). This equips the individual to withstand the various stressors arising from challenging work situations.

Work has significant meaning in the life of an employee who spends a significant amount of time at work and has to cope with success and crises (Siegrist 1997) that influence his/her career, conflictual interactions (Frone 2000), competition as well as other career issues (Converse et al. 2012). Experiences in the professional life usually impact on all other aspects of an individual's life (Richter et al. 1998). At the same time, even the development and the valuation of identity are connected with professional activity (Siegrist 1997), whereby the professional identity is often defined in terms of success and career (Mayer 2011).

In the contemporary work arena, the development of personal career-related capabilities and dispositions have become important. In the work context, individuals rely strongly on capabilities and dispositions to influence their careers effectively, and adjust their work behaviour to succeed in challenging, globalising work settings (Converse et al. 2012). Conflictual experiences in the workplace can become stressors for employees and impact strongly on the health and wellbeing of the individual, resulting in stress, which is linked to a host of diseases (Antonovsky 1979).

In addition, individual requirements, rapid technological development and intensified competition (Badura et al. 2001, p. 14–16), as well as a demand for a higher degree of participation and responsibility (Köhler 2004, p. 62), decentralization of production and services, outsourcing processes and employing virtual organizations, can lead to 'mental overload' (Bedner 2001, p. 73–76). Health promotion in organizations requires an integrated approach that includes individual and organizational characteristics, as well as external influences (Johanson et al. 2007, p. 84). All of these influence career development in contemporary work contexts.

A healthy organization is defined as promoting trustful relationships, positive feedback, common values and clear rules (Münch et al. 2003, p.18). Healthy organizations provide predictable requirements (comprehensibility), the possibility to respond to change and development (manageability), as well as the possibility to achieve individual and collective objectives (meaningfulness) (Rosenbrock 1996, p. 13).

Healthy organizations exhibit low levels of stress, high organizational commitment and job satisfaction, a low incidence of sickness and employee absenteeism, staff turnover below the national average, positive industrial relations and infrequent strikes. Safety and accident records are good and the fear of litigation is absent (Cartwright and Cooper 1994). Healthy organizations offer conflict management training, equal opportunities for employees and a climate conducive to working and good mental health (Johanson et al. 2007, p. 144). It provides a clear and founded structure of policies, procedures and systems that allow employees and managers to achieve personal and organizational goals, as opposed to an unhealthy work environment fraught with stress, hostility and authoritarianism (Disch 2002). In healthy organizations, career paths are clearly structured, open to any employee, and career development is supported.

Organizational studies have indicated that SOC is positively related to work engagement (Fourie et al. 2008), job satisfaction (Rothmann 2001), competence and life satisfaction (Kalimo and Vuori 1990), general wellbeing (Feldt 1997) and active coping with stressors (Redelinghuys and Rothmann 2005). SOC is also a good predictor of perceived job characteristics, a person's influence on work, and a person's supportiveness towards colleagues and superiors (Feldt et al. 2004). SOC influences the ability to mobilise and generate social resources in the workplace : SOC is viewed as having a significant effect on how managers perceive demands and resources at work (Fourie et al. 2008). In terms of managing careers, individuals with a low SOC tend to be motivated by extrinsic resources, such as salaries, while individuals with a strong SOC seem to be motivated by the 'intrinsic nature of the work', which they perceive as engaging and satisfying (Muller and Rothmann 2009, p. 3). The foundations of careers and their development, therefore, might vary among individuals with strong and/or low SOC.

A strong SOC supports wellbeing and health and is directly related to aspects of successful living, such as effective work performance, effective interpersonal relationships, community involvement, religious expression and economic and political functioning. The four SOC appraisals, namely, perception, cognition, behaviour and reappraisal (Semmer 2003), indicate that employees with a high SOC react flexibly (Appraisal I), encounter stressors and conflicts as structured and manageable (Appraisal II), are capable of realising the nature of a problem and are eager to encounter it (Appraisal III), and are open to feedback and the possibility of correction (Appraisal IV). Obviously, these four appraisals impact instantly on career development and career thoughts.

Sense of Coherence in Professional Careers and Career Development

Recently, the SOC has entered the domain of career development (Höge and Büssing 2004; Lustig and Strauser 2002), particularly demonstrating its health-related value. Many empirical studies have shown significant correlations between meaning and psychological wellbeing (e.g. Pearson and Sheffield 1974). At the same time, studies have indicated that the meaningfulness of work is highly important for employees' wellbeing (Schreuder and Coetzee 2011). According to Antonovsky (1987c), social valuation is the main source of meaningfulness at work. The sense of coherence, however, is decreased by the lack of work in societies, as well as the lack of social valuation (Löyttyniemi et al. 2004).

Studies in the field of career psychology and professional career development have emphasised that an individual's wellbeing is associated with stable employment in the labour market, good vocational education and respected work (Kalimo and Vuori 1990). Consistent career development is also valued as essential for the wellbeing of individuals in employment (Liukkonen et al. 2009).

At the same time, job insecurity is associated with negative effects on sense of coherence, particularly for professionals committed to their work (Kaufman 1982), and there appears to be a decrease of SOC among the population during a period of increasing unemployment (Nilsson et al. 2003). Löyttyniemi et al. (2004) maintain that the professional career in contemporary Finland is constructed between work and family, and that the sense of coherence, particularly with regard to manageability and meaningfulness, is clearly built upon a meaningful dialogue between family and profession: whereas an inharmonious combination of professional career and family can impact negatively on the construction of meaningfulness and on the sense of coherence. A strong SOC protects against psychosomatic symptoms and emotional exhaustion at work (Feldt 1997; Feldt et al. 2000) and stable employment supports the development of SOC in certain occupational fields (Feldt et al. 2005a, b).

In addition, the sense of coherence can be challenged by a work situation that does not allow career progress and is interpreted as professional failure (Löyttyniemi et al. 2004). The authors argue that in contemporary professional careers, sense of meaningfulness

Does not necessarily require a vision of linear and continuous career. Instead, meaningfulness is constructed with the 'tools' and 'materials' available in a way that makes it possible to envision an ambiguous, unpredictable, multiple careers—and gain social value. (Löyttyniemi et al. 2004, p. 937)

There is still a void in research with regard to SOC in contemporary work settings, which is based on the unpredictability of the work environment and the expected flexibility of the individual (Tomba et al. 2007), as well as on labour market careers and the stability of SOC (Liukkonen et al. 2009). Fixed-term employment has a negative impact on SOC. It has also been proven that changes in SOC are associated with employment trajectories and that particularly strong effects are seen in employees aged 30 years and older (Liukkonen et al. 2009).

Sense of Coherence, Career Decision-Making, Thoughts, Success and Wellbeing

Career decision-making is a stressful process (Reardon et al. 2000), because it requires decisions that involve various conflicting thoughts and emotions and might have multiple influences on a person's life (Sampson et al. 1996). When faced with a difficult career decision, the individual with a strong SOC is more likely to persevere in managing and resolving the career challenge (Antonovsky 1987). Conceptualising career decision-making as a stressful life event, SOC may be viewed as having a moderating effect on the career decision process (Reardon et al. 2000).

In recent research, it has been stated that career decision making depends on the person's level of positive psychology constructs (Snyder and Lopez 2009) and the depth and nature of one's psychological resources (Sampson 2006). Cilliers and Kossuth (2004) have suggested that particularly salutogenic functioning impacts on positive and negative decision making.

SOC has a significant and positive relationship with career decision-making self-efficacy (Carielli 2004). It supports the individual in not perceiving educational barriers as barriers, but rather as challenging and welcome stimuli. Furthermore, SOC is significantly related to coping with educational barriers (Carielli 2004).

SOC is correlated with career thoughts (Carielli 2004). Career thoughts are viewed as functional and dysfunctional factors that influence an individual's career decision-making process and vocational development (Lustig and Strauser 2008). SOC is related to career thought processing, and dysfunctional career thoughts are associated with a low self-worth and low subjective wellbeing (Lustig and Strauser 2008) as well as with a low SOC (Lustig and Strauser 2002).

Austin and Cilliers (2011) have found that there is a significant psychometric relationship between career thinking (negative and positive career thoughts and salutogenic functioning i.e. loss of control and SOC). In the same study, the authors (Austin and Cilliers 2011, p. 19) suggest that the SOC

Acts as a facilitator of effective career thinking: the higher the person's functioning on comprehension, meaningfulness and manageability as salutogenic characteristics, the easier it will be for that person to make decisions leading to positive career outcomes.

Other authors highlight that individuals demonstrating a stronger SOC present lower levels of dysfunctional career thinking, and that a stronger SOC is associated with less confusion regarding career choice (Austin et al. 2010).

In addition, SOC seems to modify subjective wellbeing and is related to higher decision latitude in the workplace (Nasermoadelli et al. 2003).

Individuals with a higher SOC may require less support and make career decisions more effectively than individuals with a lower SOC. Several studies have shown that there is a positive relationship between SOC and functional career thoughts (Lustig et al. 2000). A person with a high SOC is

[more] likely to believe that the difficult process of resolving their career indecision is worth the time and effort, that career information is understandable with effort, and that he has the capacity to cognitively and emotionally handle making an effective career decision' (Lustig and Strauser 2008, p. 141).

Individuals with a stronger SOC have lower levels of dysfunctional career thoughts than individuals with a weaker SOC and are, therefore, better prepared to deal with career decision-making processes (Lustig and Strauser 2002, 2008). Austin et al. (2010) emphasise that a stronger SOC increases the resoluteness and independence of the individual's career choice. These individuals will spend less time and fewer emotional resources when making a career decision. At the same time, an 'ineffective' career decision could entail an increase in dysfunctional career thoughts (Sampson et al. 2004).

Individuals with a strong SOC react differently in a work environment to individuals with a weak SOC: individuals with a strong SOC rather value humanistic values, diverse work environments and transcultural competences at work, while individuals with a weak SOC seem to value social support (Mayer 2011). In addition, with regard to international and global work contexts, managers with a high SOC are more aware of the importance of intercultural competences, mention these competences more often as being important to their work and personal development, and judge an intercultural environment as positive and stimulating (Mayer 2011).

The basic values of individuals with strong and weak SOC are expected to impact on career thoughts, career development and career success of individuals and within organizations.

Career success refers to real or objective, and perceived or subjective accomplishments of individuals in their work lives (Judge et al. 1995). The career success of an employee in an organization is linked with the sense of wellbeing at work (Rothmann 2011). In addition, individuals' personal career experiences, career desires and their self-awareness are becoming important in the contemporary workplace, due to their strong interlinkages with organizational health and wellbeing.

Career wellbeing—defined as individuals' career experiences as expressed by their positive and negative feelings about their careers (Kidd 2008)—is driven by career experiences 'which lead to positive and negative evaluations (thoughts) and feelings about the career' (Schreuder and Coetzee 2011, p. 68). Experiences of wellbeing are influenced by the individual's sense of coherence, which is related to the career anchors that again have implications for the career decision-making process (De Villiers 2009). Career anchors are viewed as descriptive and predictive tools that serve to guide, constrain, stabilise and integrate the person's career (Schein 1978). De Villiers (2009) concludes that a balanced professional and private life, personal lifestyle needs, family concerns, security and stability, entrepreneurial creativity and personal development are important career anchors, which relate to employee wellbeing. There is a relationship between SOC and career anchors with regard to female contract workers who are particularly in need of job security and steady employment, while allowing flexible working arrangements and challenging assignments at the same time for a feeling of wellbeing. Employee wellness and career anchors are further influenced by variables such as race, gender, age, personal attributes, marital status and educational level (Coetzee and Schreuder 2008).

Practical Implications for Career Counselling and Guidance

Sense of coherence impacts on professional careers and career development in various ways. Antonovsky (1987) maintains that an individual's SOC is determined mainly in early childhood and particularly through experiences characterised by consistency and a balanced life, as well as experiences of comprehensibility, manageability and meaningfulness. Antonovsky (1997) emphasises that changes in SOC are very rare and are bound to dramatic changes in life patterns. However, studies also provide evidence that SOC changes over time (Smith et al. 2003) and can also vary widely in the context of dramatic life experiences and trauma (Snekkevik et al. 2003). Other authors (Krause and Mayer 2012) emphasise that SOC can also be developed through long-term interventions and an enduring change in life circumstances, as well as through training, counselling and therapy. Other authors highlight the positive effect that group training can have on SOC development (Franke and Witte 2009), and Petzold (2010) describes a self-learning approach to strengthen SOC.

In counselling and therapies, the individual's SOC can be strengthened by providing the individual with experiences that enhance comprehensibility, manageability and meaningfulness through specific interventions, but also through the counselling relationship. Krause and Mayer (2012) suggest that in salutogenic training sessions, selected resources need strengthening, such as self-worth, belonging, emotional intelligence, communication competences as well as conflict management and transformation competences, inter- and transcultural competences, stress management and, finally, the development of health-related movement and diet. Developing these resources can lead to improved comprehensibility, manageability and meaningfulness, and helps to strengthen the ability of the individual to structure and understand the living and working environment, to practise manageability actively, for example, in decision-making and conflict transformation in the work environment, as well as integrating meaningfulness in terms of belonging (Krause and Mayer 2012). Mayer and Boness (2013) emphasise that, particularly in the management context, counselling and self-management in the workplace need to draw attention to aspects of meaningfulness in terms of spirituality and the development of a 'healthy organisational culture'. The importance of spirituality in the work environment and the development of meaningfulness have also been stated with regard to the development of professional careers (Schreuder and Coetzee 2011). Thus, strengthening work spirituality and meaningfulness seem to be key to developing SOC and a successful professional career.

It has been suggested (Mayer and Krause 2012; Nilsson et al. 2003; Schnyder et al. 2000) that therapies and consultancy should focus on assets like SOC to ensure and strengthen an individual's ability to respond to subsequent life challenges, such as career decisions.

Particularly during the past two decades, there has been increasing emphasis on the need for interventions in career counselling (Strauser and Lustig 2003). Regarding professional counselling and consultancy practice, career counsellors need to structure counselling in such a way that the client understands the process, its aims and himself/herself within the counselling setting (comprehensibility). Thereby, career

counselling should always focus on the resources of the clients to promote salutogenic counselling (Krause 2003a, p. 187). The client needs to participate actively in the decision-making process and should not feel overwhelmed or underestimated (manageability). Finally, professional career counselling should also focus on the individual's life-orientation, the client's purpose in life and within the professional arena (meaningfulness), and integrate the individual life concepts with regard to career planning and decision making.

Krause (2003a, p. 198–199) explains that counselling should contribute to the following:

- Developing and promoting self-reflection—recognition and use of individual strength;
- Using health-promoting development of communication skills, conflict management and resolution strategies;
- Developing and promoting physical experiences and physical consciousness—perception of own and others' physical attributes, pride in one's own body; and
- Developing a consciousness of healthy nutrition.

All four aspects are also important in developing a successful career within a professional field or an organization (Mayer 2011). Sense of coherence should become an important variable in career counselling (Joachim et al. 2003; Landsverk and Kane 1998), which should be strengthened through resource-orientation of the counsellor, systemic counselling approaches, empathy as well as the creating of support and belonging (Mayer 2011). Sense of coherence should also be developed through mentorships and stuartships within organizations, which could, in parallel, contribute to individual career development within the organisation (Mayer 2011).

With regard to an individual's career development and career decision making, the counselling process should emphasise and promote the individual's understanding, and recognise the level of manageability and the role of meaningfulness with regard to the profession. In career counselling, the counsellor needs to challenge the client's understanding of the world, his/her ways of managing professional and career-related aspects and his/her constructions of the world with respect to a sense of coherence (Lustig and Strauser 2008). Thereby, systemic counselling approaches can assist in elucidating, evaluating and restructuring the client's beliefs about profession, career and career decision-making processes. Since systemic counselling approaches follow a humanistic paradigm, are often solution-oriented, salutogenetic, resource-focused and growth-oriented (Mayer 2011; Krause 2003b), they could contribute strongly to career counselling approaches.

Additionally, in professional and career counselling sessions, the life-orientation questionnaire could be used and evaluated to provide the client as well as the counsellor with an idea of the client's SOC (Mayer 2011). The evaluation of SOC components could be a starting point for both clients and counsellors to develop aims for the counselling sessions. The SOC evaluation could support the counsellor's choice of counselling interventions and his/her priorities for the client's development with regard to SOC and career. Recently, the model of Mental Health in Transcultural Organizations (MEHTO) has been developed to promote SOC in organizational

contexts through counselling, training, mentoring and facilitation, which contribute to the individual as well as to the organizational sense of coherence and, thereby, impact on career development in individual and organizational contexts.

Conclusion, Future Perspectives and Directions

This chapter is aimed at introducing a sense of coherence as an important concept of salutogenesis as well as a newly recognised concept in career psychology. Research into SOC and career has recognised the importance of the concept in career decision-making processes, career development and other career-related aspects. The three components of SOC, comprehensibility, manageability and meaningfulness, are interlinked with creating individual and organisational meaningfulness and careers.

With regard to career counselling, SOC should become a recognised concept to promote salutogenic counselling, which can influence career decision making and career development in a positive and constructive way.

Future research in salutogenesis and careers should focus on the following:

- Sense of coherence and the influence of its three components on career decision making and career development
- The impact of salutogenic counselling in career counselling, as well as
- The impact of salutogenic career counselling interventions and their impact on career decision making and career development

Chapter Summary

This chapter introduced the theoretical approaches of salutogenesis and sense of coherence (SOC) and emphasised the impact of SOC on career and career development. It demonstrated the relationship of SOC and career psychology, particularly focusing on SOC, career thoughts and career development. It also provided practical insights into SOC in career counselling and guidance.

References

- Adams, T. B., Bezner, J. R., Drabbs, M. E., Zambarano, R. J., & Steinhardt, M. A. (2000). Conceptualization and measurement of the spiritual and psychological dimensions of wellness in a college population. *Journal of American College Health, 48*, 165–173.
- Amirkhan, J. H., & Greaves, H. (2003). Sense of coherence and stress: The mechanics of a healthy disposition. *Psychology and Health, 18*(1), 31–62.
- Antonovsky, A. (1979). *Health, stress and coping*. San Francisco: Jossey-Bass.
- Antonovsky, A. (1985). The life circle, mental health and the sense of coherence. Israel. *Journal of Psychiatry and Related Sciences, 22*, 273–280.

- Antonovsky, A. (1987a). Health promoting factors at work: The sense of coherence. In R. Kalimo, M. A. El-Batawi & C. L. Cooper (Eds.), *Psychosocial factors at work and their relation to health* (pp. 153–167). Geneva, Switzerland: World Health Organization.
- Antonovsky, A. (1987b). The salutogenic perspective: Toward a new view of health and illness. *Advances. The Journal of Mind-Body Health*, 4, 47–55.
- Antonovsky, A. (1987c). *Unravelling the mystery of health: How people manage stress and stay well*. San Francisco: Jossey-Bass.
- Antonovsky, A. (1990). A somewhat personal odyssey in studying the stress process. *Stress Medicine*, 6, 71–80.
- Antonovsky, A. (1993). Complexity, conflict, chaos, coherence, coercion and civility. *Social Science Medicine*, 37, 969–981.
- Antonovsky, A. (1994). The sense of coherence: An historical and future perspective. In H. I. McCubbin, E. A. Thompson, A. I. Thompson & J. E. Fromer (Eds.), *Sense of coherence and resiliency* (pp. 3–20). Madison: University of Wisconsin.
- Antonovsky, A. (1997). Salutogenese. *Zur Entmystifizierung der Gesundheit*. Tübingen: dgvt-Verlag
- Antonovsky, A., Hankin, Y., & Stone, D. (1987). Patterns of drinking in a small development town in Israel. *British Journal of Addiction*, 82, 293–303.
- Austin, K., & Cilliers, F. (2011). The psychometric relationship between career thinking and salutogenic functioning amongst unemployed adults. *South African Journal of Industrial Psychology*, 37(1), Art. 969, 11. <http://dx.doi.org/10.4102/sajip.v37i1.969>.
- Austin, K., Dahl, D., & Wagner, B. (2010). The roles of negative career thoughts and sense of coherence in predicting career decision status. *Canadian Journal of Counseling*, 44, 1–24.
- Badura, B., Litsch, M., & Vetter, C. (2001). *Fehlzeiten-Report 2000– Zahlen, Daten, Analysen aus allen Branchen der Wirtschaft*. Heidelberg: Springer Medizin.
- Bahrs, O., & Matthiessen, P. F. (2007). *Gesundheitsfördernde Praxen. Die Chancen einer salutogenetischen Orientierung in der hausärztlichen Praxis*. Bern: Hans Huber.
- Basson, M., & Rothman, S. (2002). Sense of coherence, coping, and burnout of pharmacist. *South African Journal of Economics and Management Services*, 5, 35–62.
- Bedner, K. (2001). *Gesundheitsschutz und Gesundheitsförderung in Betrieben*. Mering: Rainer Hampp.
- Bengel, J., Strittmatter, R., & Willmann, H. (2001). *Was erhält Menschen gesund? Antonovskys Modell der Salutogenese—diskussionsstand und stellenwert. (Forschung und Praxis der Gesundheitsförderung, Band 6)*. Köln: Bundeszentral für gesundheitliche Aufklärung.
- Beutel, M. (1989). Was schützt Gesundheit? Zum Forschungsstand und der Bedeutung von personalen Ressourcen in der Bewältigung von Alltagsbelastungen und Lebensereignissen. *Psychotherapie, Psychosomatik, Medizinische Psychologie*, 39, 452–462.
- Carielli, D. (2004). *Sense of coherence, perception of educational barriers and career decision-making self-efficacy in students with learning disabilities. Doctoral Thesis*. New York: Graduate School of Education of Fordham University.
- Cartwright, S., & Cooper, C. L. (1994). *Managing workplace stress*. Thousand Oaks: Sage.
- Cilliers, F., & Kossuth, S. P. (2004). The reliability and factor structure of three measures of salutogenic functioning. *South African Journal of Labour Relations*, 28(2), 59–76.
- Coetzee, M., (2008). Psychological career resources of working adults: A South African survey. *South African Journal of Industrial Psychology*, 34(2), 10–20.
- Coetzee, M., & Bergh, Z. C. (2009). Psychological career resources and subjective work experiences of working adults: An exploratory study. *Southern African Business Review*, 13(2), 1–31.
- Coetzee, M., & Schreuder, D. (2008). A multi-cultural investigation of students' career anchors at a South African higher education institution. *South African Journal of Labour Relations*, 32(2), 1–21.
- Converse, P. D., Pathak, J., DePaul-Haddock, A. M., Gotlib, T., & Merbedone, M. (2012). Controlling your environment and yourself: Implications for career success. *Journal of Vocational Behaviour*, 80, 148–159.
- De Villiers, M. (2009). The relationship between employee wellness and career anchors. Department of Industrial and Organisational Psychology. Pretoria: Masters thesis.

- Disch, J. (2002). Healthy work environments for all nurses. *Journal of Professional Nursing, 16*, 16–28.
- Faltermaier, T. (1994). *Gesundheitsbewusstsein und Gesundheitshandeln. Über den Umgang mit Gesundheit im Alltag*. Weinheim: Psychologie Verlags Union.
- Feldt, T. (1997). The role of sense of coherence in wellbeing at work: Analysis of main and moderator effects. *Work Stress, 11*, 134–147.
- Feldt, T., Kinnunen, U., & Mauno, S. (2000). A mediational model of sense of coherence in the work context: A one-year follow-up study. *Journal of Organisational Behaviour, 21*, 461–476.
- Feldt, T., Kivimäki, M., Rantala, A., & Tolvanen, A. (2004). Sense of coherence and work characteristics: A cross-lagged structural equation model among managers. *Journal of Occupational and Organizational Psychology, 77*, 323–342.
- Feldt, T., Kokko, K., Kinnunen, U., & Pulkkinen, L. (2005a). The role of family background, school success, and career orientation in the development of sense of coherence. *European Psychologist, 10*(4), 298–308.
- Feldt, T., Leskinen, E., & Kinnunen, U. (2005b). Structural invariance and stability of sense of coherence: A longitudinal analysis of two groups with different employment experiences. *Work Stress, 19*(1), 68–83.
- Forsberg, K. A., Björkman, T., Sandman, P. O., & Sandlund, M. (2010). Influence of a lifestyle intervention among persons with a psychiatric disability: A cluster randomised controlled trial on symptoms, quality of life and sense of coherence. *Journal of Clinical Nursing, 19*(11–12), 1519–1528.
- Fourie, L., Rothmann, S., & Van de Vijver, A. J. R. (2008). A model of work wellness for non-professional counsellors in South Africa. *Stress and Health, 24*(1), 35–47.
- Franke, A., & Witte, M. (2009). *Das HEDE-Training®. Manual zur Gesundheitsförderung auf Basis der Salutogenese*. Bern: Huber.
- Frone, M. R. (2000). Work-family conflict and employee psychiatric disorders: the national comorbidity survey. *Journal of Applied Psychology, 85* (6), 888–895.
- Harpaz, I., & Fu, X. (2002). The structure of the meaning of work: A relative stability amidst change. *Human Relations, 55*(6), 639–667.
- Hellriegel, D., Jackson, S. E., Slocum, J., Staude, G., Amos, T., Klopper, H. H., Louw, L., & Oosthuizen, T. (2007). *Management*. 2nd edn. Cape Town: Oxford Southern Africa.
- Höge, T., & Büssing, A. (2004). The impact sense of coherence and negative affectivity on the work stressor-strain relationship. *Journal of Occupational Health Psychology, 9*(3), 195–205.
- Joachim, B., Lyon, D. D., & Farrell, S. P. (2003). Augmenting treatment of obsessive-compulsive disorder with Antonovsky's sense of coherence theory. *Perspectives in Psychiatric Care, 39*(4), 163–168.
- Johanson, U., Ahonen, G., & Roslender, R. (2007). *Work, health and management control*. Stockholm: Thomson Fakta.
- Judge, T. A., Cable, D. M., Boudreau, J. W., & Bretz, R. D. (1995). An empirical investigation of the predictors of career success. *Personnel Psychology, 48*, 485–519.
- Kalimo, R., & Vuori, J. (1990). Work and the sense of coherence—Resources for competence and life satisfaction. *Behavioral Medicine, 16*, 76–89.
- Kaufman, H. G. (1982). *Professionals in search of work: Coping with the stress of job loss and underemployment*. New York: John Wiley.
- Kidd, J. M. (2008). Exploring components of career wellbeing and the emotions associated with significant career experiences. *Journal of Career Development, 35*(2), 166–186.
- Kivimäki, M., Elovainio, M., & Vahtera, J. (2000). Workplace bullying and sickness absence in hospital staff. *Occupational and Environmental Medicine, 57*, 656–660.
- Köhler, O. (2004). *Komponenten einer gesundheitsorientierten Unternehmensstruktur – Eine interdisziplinäre Betrachtung zur Ggestaltung der Arbeit im Betrieb*. Germany: Masters thesis.
- Krause, C. (2003a). Gesundheitsberatung. In C. Krause, B. Fittkau, R. Fuhr & H.-U. Thiel (Eds.), *Pädagogische Beratung. Grundlagen und Praxisanwendung* (pp. 187–204). Paderborn: Ferdinand Schöningh.

- Krause, C. (2003b). Systemische Beratungsansätze. In C. Krause, B. Fittkau, R. Fuhr & H.-U. Thiel (Eds.), *Pädagogische Beratung. Grundlagen und Praxisanwendung* (pp. 127–134). Paderborn: Ferdinand Schöningh.
- Krause, C., & Mayer, C.-H. (2012). *Gesundheitsressourcen erkennen und fördern. Ein Trainingsprogramm für pädagogische Fachkräfte*. Göttingen: V&R.
- Landsverk, S. S., & Kane, C. F. (1998). Antonovsky's sense of coherence: Theoretical basis of psychoeducation in schizophrenia. *Issues in Mental Health Nursing*, 19, 419–443.
- Lindström, B., & Eriksson, M. (2005). Salutogenesis. *Journal of Epidemiology and Community Health*, 59(6), 440–442.
- Lindström, B., & Eriksson, M. (2006). Contextualizing salutogenesis and Antonovsky in public health development. *Health Promotion International*, 21(3), 238–244.
- Liukkonen, V., Virtanen, P., Vahtera, J., Suominen, S., Sillanmäki, L., & Koskenvuo, M. (2009). Employment trajectories and changes in sense of coherence. *European Journal of Public Health*, 20(3), 293–298.
- Löytyniemi, V., Virtanen, P., & Rantalaiho, L. (2004). Work and family as constituents of sense of coherence. *Qualitative health research*, 14(7), 924–941.
- Lustig, D., & Strauser, D. (2002). The relationship between sense of coherence and career thoughts. *Career Development Quarterly*, 51, 2–11.
- Lustig, D., & Strauser, D. (2008). The impact of sense of coherence on career thoughts for individuals with disabilities. *Rehabilitation Counseling Bulletin*, 51(3), 139–147.
- Lustig, D., Rosenthal, D., Strauser, D., & Haynes, K. (2000). The relationship of sense of coherence to life satisfaction for students with disabilities. *Rehabilitation Counseling Bulletin*, 43, 134–141.
- Mayer, C.-H. (2011). *The meaning of sense of coherence in transcultural management. Internationale Hochschulschriften Series*. Münster: Waxmann.
- Mayer, C.-H., & Boness, C. M. (2013). *Creating mental health across cultures. Coaching and training for managers*. Lengerich: Pabst.
- Mayer, C.-H., & Krause, C. (2011). Editorial. Promoting mental health and salutogenesis in transcultural organizational and work contexts. In C. H. Mayer, & C. Krause (Guest Eds.). Promoting mental health and salutogenesis in transcultural organisational and work contexts. *International Review of Psychiatry*, 23(6), 495–501.
- Mayer, C.-H., & Krause, C. (2012). Salutogenesis in Beratung und Psychotherapie. *Praxis Klinische Verhaltenstherapie und Rehabilitation*, 26(2), 91–95.
- McCubbin, H. I., Thompson, E. A., Thompson, A. I., & Fromer, J. E. (1998). *Stress, coping and health in families. Sense of coherence and resiliency*. Thousand Oaks: Sage.
- Muller, Y., & Rothmann, S. (2009). Sense of coherence and employees' perception of helping and restraining factors in an organization. *South African Journal of Industrial Psychology*, 35(1), 1–10.
- Münch, E., Walter, U., & Badura, B. (2003). *Führungsaufgabe Gesundheitsmanagement* (2nd edn). Berlin: Edition Sigma.
- Mussmann, C., Kraft, U., Thalmann, K., & Muheim, M. (1993). *Die Gesundheit gesunder Personen. Eine qualitative Studie. Bericht Nr. 2*. Zürich: Technische Hochschule, Institut für Arbeitspsychologie.
- Nasermoaddeli, A., Sekine, M., Hamanishi, S., & Kagamimori, S. (2003). Associations between sense of coherence and psychological work characteristics with changes in quality of life in Japanese Civil Servants: A 1-year follow-up study. *Industrial Health*, 41, 236–241.
- Nilsson, B., Holmgren, L., Stegmayr, B., & Westman, G. (2003). Sense of coherence – stability over time and relation to health, disease, and psychosocial changes in a general population: A longitudinal study. *Scandinavian Journal of Public Health*, 31, 297–304.
- Pearson, P. R., & Sheffield, B. F. (1974). Purpose in life and the Eysenck Personality Inventory. *Journal of Clinical Psychology*, 30, 562–564.
- Petzold, T. D. (2010). *Praxisbuch Salutogenese. Warum Gesundheit ansteckend ist*. München: Südwest.

- Reardon, R., Lenz, J., Sampson, J., & Peterson, G. (2000). Career development and planning: Comprehensive approach. Pacific Grove: Brooks/Cole.
- Redelinguys, F. J., & Rothmann, S. (2005). Koherensiesin, coping, uitbranding en begeestering van predikante. *Tydskrif vir Geesteswetenskappe*, 45(4), 466–477.
- Richter, P., Pohlandt, A., & Hemmann, E. (1998). Belastung, Beanspruchung und Gesundheit: Die handlungs- und tätigkeitspsychologische Perspektive. In J. Margraf, J. Siegrist & S. Neumer (Eds.), *Gesundheits- oder Krankheitstheorie? Saluto- versus pathogenetische Ansätze im Gesundheitswesen* (pp. 203–224). Berlin: Heidelberg: Springer.
- Riese, J. (2005). Salutogenesis in social systems: Self, identity, and robustness of the organization. Proceedings of the European Academy of Management Conference (EURAM), Munich. Retrieved from: <http://www.sfb637.uni-bremen.de/pubdb/repository/SFB637-A2-05-001-IC.pdf> (5 January 2013)
- Rigotti, T., & Mohr, G. (2006). Trau—Schau—Wem? Vertrauen in die Organisation als salutogenetischer Katalysator. In T. Wehner, & P. Richter (Eds.), *Salutogenese in der Arbeit*. Themenheft. *Wirtschaftspsychologie*, 2/3, 22–29.
- Rosenbrock, R. (1996). *Arbeit und Gesundheit – Elemente und Perspektiven betrieblicher Gesundheitsförderung, Veröffentlichungsreihe der Arbeitsgruppe Public Health*. Berlin: Wirtschaftszentrum Berlin für Sozialforschung.
- Rossier, J., Zecca, G., Stauffer, S. D., Maggiori, C., & Dauwalder, J. (2012). Career Adapt-Abilities Scale in a French-speaking Swiss sample: Psychometric properties and relationships to personality and work engagement. *Journal of Vocational Behaviour*, 80, 734–743.
- Rothmann, S. (2001). Sense of coherence, locus of control, self-efficacy and job satisfaction. *Journal of Economic and Management Sciences*, 5, 41–65.
- Rothmann, S. (2011). Career wellbeing. In A. M. G. Schreuder, & M. Coetzee (Eds.) *Careers. An organisational perspective* (pp. 237–280). Cape Town: Juta.
- Rothmann, S., & Cilliers, F. V. N. (2007). Present challenges and some critical issues for research in industrial/organisational psychology in South Africa. *South African Journal of Industrial Psychology*, 33(1), 8–17.
- Sampson, J. P. (2006). Promoting continuous improvement in delivering career resources and services. Inaugural Professional Lecture, University of Derby. Retrieved from <http://www.derby.ac.uk/cegs/> (15 January 2013)
- Sampson, J. P., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996). *Career thoughts inventory: Professional manual*. Odessa: Psychological Assessment Resources.
- Sampson, J. P. Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. G. (2004). *Career counseling & services*. Toronto: Brooks/Cole.
- Savickas, M. L. (2011). New questions for vocational psychology: Premises, paradigms, and practices. *Journal of Career Assessment*, 19(3), 251–258.
- Savickas, M. L., & Porfeli, E. J. (2012). Career adapt-abilities scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80, 661–673.
- Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J. P., Duarte, M. E., & Guichard, J. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior*, 75, 239–250.
- Schein, E. H. (1978). *Career dynamics: Matching individual and organisational needs*. Reading: Addison-Wesley.
- Schnyder, U., Büchi, S., Sensky, T., & Klaghofer, R. (2000). Antonovsky's sense of coherence: Trait or state? *Psychotherapy and Psychosomatics*, 69, 296–302.
- Schreuder, A. M. G., & Coetzee, M. (Eds.) (2011). *Careers. An organisational perspective*. 4th edn. Cape Town: Juta.
- Schumacher, J., Wilz, G., Gunzelmann, T., & Brähler, E. (2000). Die Sense of Coherence Scale von Antonovsky. Teststatistische Überprüfung in einer Bevölkerungsstichprobe und Konstruktion einer Kurzskaala. *Psychotherapie, Psychosomatik, Medizinische Psychologie*, 50(12), 472–482.
- Semmer, N. (2003). Individual differences, work stress and health. In M. J. Schabracq, J. A. M. Winnubst & C. L. Cooper (Eds.), *Handbook of work and health psychology* (pp. 83–120). New York: Wiley.

- Siegrist, J. (1997). Selbstregulation, Emotion und Gesundheit—Versuch einer sozialwissenschaftlichen Grundlegung. In F. Lamprecht & R. Johnen (Eds.), *Salutogenese: Ein neues Konzept in der Psychosomatik?* (pp. 99–10). Frankfurt/Main: VAS—Verlag für akademische Schriften.
- Singer, S., & Brähler, E. (2007). *Die "Sense of Coherence Scale". Testhandbuch zur deutschen Version*. Göttingen: Vandenhoeck & Ruprecht.
- Smith, D. F. (2002). Functional salutogenic mechanisms of the brain. *Perspectives in Biology and Medicine*, 45(3), 319–328.
- Smith, P. M., Breslin, F. C., & Beaton, D. E. (2003). Questioning the stability of sense of coherence: The impact of socioeconomic status and working conditions in the Canadian population. *Social Psychiatry and Psychiatric Epidemiology*, 38, 475–484.
- Snekkevik, H., Anke, A. G., Stanghelle, J. K., & Fugl-Meyer, A. R. (2003). Is sense of coherence stable after multiple trauma? *Clinical Rehabilitation*, 17(4), 443–453.
- Snyder, C. R., Feldman, D. B., Taylor, J. D., Schroeder, L. L., & Adams, V. H. (2000). The roles of hopeful thinking in preventing problems and enhancing strengths. *Applied and Preventative Psychology*, 9, 249–270.
- Strauser, D. R., & Lustig, D. C. (2003). The moderating effect of sense of coherence on work adjustment: Implications for career and employment interventions. *Journal of Employment Counseling*, 40, 129–140.
- Strümpfer, D. J. W. (1990). Salutogenesis: A new paradigm. *South African Journal of Psychology*, 20, 45–52.
- Strümpfer, D. J. W. (1995). The origins of health and strength: From 'salutogenesis' to 'fortigenesis'. *South African Journal of Psychology*, 25, 81–89.
- Tompa, E., Scott-Marshall, H., Dolinschi Rtrevithick, S., & Bhattacharyya, S. (2007). Precarious employment experiences and their health consequences: Towards a theoretical framework. *Work*, 28, 209–224.
- Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalisation of employability. *Human Resource Management*, 45(3), 449–476.
- World Health Organization. (1946). *Constitution*. Geneva: World Health Organization.
- Wydler, H., Kolip, P., & Abel, T. (2000). *Salutogenese und Kohärenzgefühl. Grundlagen, Empirie und Praxis eines gesundheitswissenschaftlichen Konzepts*. Weinheim: Juventa.