

Strengthening sense of coherence: opportunities for theory building in health promotion

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Summary

Sense of coherence (SOC) reflects a coping capacity of people to deal with everyday life stressors and consists of three elements: comprehensibility, manageability and meaningfulness. SOC is often considered to be a stable entity that is developed in young adulthood and stabilizes around the age of 30. Recent studies have questioned this stability of SOC and some studies report on interventions that have been successful in strengthening SOC in adult populations. Currently, however, there is no clear understanding of the mechanisms underlying SOC. As a consequence, it is a challenge to determine what is needed in health promotion activities to strengthen SOC. This article aims to explore the mechanisms underlying SOC as these insights may underpin future health promotion efforts. An exploration of the salutogenic model suggests two important mechanisms: the behavioural and the perceptual. The behavioural mechanism highlights the possibility to empower people to use their resources in stressful situations. The perceptual mechanism suggests that, in order for people to deal with life stressors, it is essential that they are able to reflect on their understanding of the stressful situation and the resources that are available. Based on these mechanisms, we suggest that both empowerment and reflection processes, which are interdependent, may be relevant for health promotion activities that aim to strengthen SOC. The successful application of resources to deal with stressors is not only likely to have a positive influence on health, but also creates consistent and meaningful life experiences that can positively reinforce SOC levels.

Key words: salutogenesis, health promotion programmes, empowerment

INTRODUCTION

Sense of coherence (SOC) is a core construct of the salutogenic model that focuses on the origins of health and well-being rather than disease. Antonovsky defined SOC as ‘a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of

confidence that (1) the stimuli, deriving from one’s internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement’ (Antonovsky, 1987, p. 19).

These three elements reflect the comprehensibility, manageability and meaningfulness component of SOC.

People with a strong SOC seem to be better able to deal with the stressors of everyday life and to use the resources at their disposal to counter these stressors (Surtees *et al.*, 2006; Lindmark *et al.*, 2011). This coping capacity may bring about a better health status for individuals with a higher SOC. Although the evidence for the effect of SOC on health is yet incomplete, it seems that groups low in SOC are especially vulnerable to the hardships in life (Surtees *et al.*, 2007), leading to poorer lifestyle choices (Wainwright *et al.*, 2008), reduced mental health and quality of life (Flensburg-Madsen *et al.*, 2005; Eriksson and Lindström, 2007), increased disease incidence (Poppus *et al.*, 2006; Kouvonen *et al.*, 2008) and even increased mortality risk (Surtees *et al.*, 2003; Super *et al.*, 2014). These initial results suggest that health promotion efforts may benefit from strengthening SOC.

Antonovsky (Antonovsky, 1979) considered SOC to be a stable entity that is formed in young adulthood and that stabilizes around the age of 30, forming a personality disposition that influences the way in which people see the world. According to salutogenic theory, SOC develops in childhood and early adulthood when children or adolescents have life experiences that are characterized by an underload–overload balance, consistency and socially valued decision-making. Later, Antonovsky (Antonovsky, 1987) adjusted his theory and stated that SOC was more stable in adulthood among those with a high SOC than among those with a low SOC. Several studies have confirmed the idea that SOC is a stable entity (Feldt *et al.*, 2000; Schnyder *et al.*, 2000) and that a high SOC determines the stable development of SOC (Hakanen *et al.*, 2007; Feldt *et al.*, 2011). Nonetheless, some studies suggest that the age-divide proposed by Antonovsky needs to be revised (Feldt *et al.*, 2003; Feldt *et al.*, 2011) and that, under certain conditions, SOC can be subject to change in adulthood (Schnyder *et al.*, 2000), also among those with a high SOC (Feldt *et al.*, 2011).

In addition, several studies have shown that interventions can influence SOC levels (Weissbecker *et al.*, 2002; Vastamäki *et al.*, 2009; Forsberg *et al.*, 2010; Sarid *et al.*, 2010; Kähönen *et al.*, 2012; Skodova and Lajciakova, 2013). For example, Kähönen *et al.* conducted a study among Finnish employees aged 31–51 years with burnout-symptoms and compared two different interventions that were similar in their aim to reflect on the participant's personal values, goals, beliefs and patterns of behaviour (Kähönen *et al.*, 2012). After a period of 9 months, both intervention groups showed a significant increase in SOC, when compared with the control group. Forsberg *et al.* implemented a 12-month lifestyle intervention programme

among persons with psychiatric disabilities aged 22–71 years and demonstrated that structured activities with sufficient level of challenge contributed to a significant increase in SOC, in comparison with the control group (Forsberg *et al.*, 2010). Even though the number of studies that explicitly aimed to increase SOC is limited, the results suggest that changes are possible, even in adulthood.

Considering these results, it may be interesting to explore the idea to strengthen SOC in health promotion activities. However, the abovementioned interventions that aimed to strengthen SOC provide a limited theoretical framework for their intervention activities both in general and in light of the salutogenic theory, and the authors do not reflect on the mechanisms underlying the changes in SOC levels. As there is currently no clear understanding of the mechanisms underlying SOC, it is a challenge to determine what is needed in health promotion activities to strengthen SOC. The overall aim of this article is to contribute to a better understanding of the mechanisms underlying SOC as this may help to underpin these efforts. To identify opportunities for strengthening SOC, we start this article by taking a closer look at the salutogenic model.

THE SALUTOGENIC MODEL

The salutogenic model (see Figure 1) illustrates the interplay between SOC, life experiences, generalized resistance resources (GRRs) and the health ease/dis-ease continuum (Antonovsky, 1987, 1996).

Antonovsky viewed health as a continuum, which he labelled the health ease/dis-ease continuum (Antonovsky, 1987). People can move along this continuum between the two extremes of ‘total absence of health’ and ‘total health’ (Antonovsky, 1987). This movement along the health ease/dis-ease continuum is initiated by the stressors that people encounter in everyday life. If people deal successfully with the stressors they can maintain their health status or move towards ‘health-ease’, whereas unsuccessful coping with the stressors can lead to breakdown and a movement towards ‘dis-ease’ (Antonovsky, 1987).

GRRs are resources within an individual (e.g. attitudes, self-efficacy beliefs, knowledge) or in their environment (e.g. social support, cultural stability) that can be used to counter the stressors of everyday life (Lindström and Eriksson, 2010). If the GRRs are applied successfully, this can prevent that the tension from the stressors develops into stress and, as a consequence, can lead to the maintenance of or movement towards ‘health-ease’ (Antonovsky, 1987). When the GRRs are not applied (successfully), the state of tension may increase leading to breakdown and a movement towards ‘dis-ease’. Mobilized GRRs help

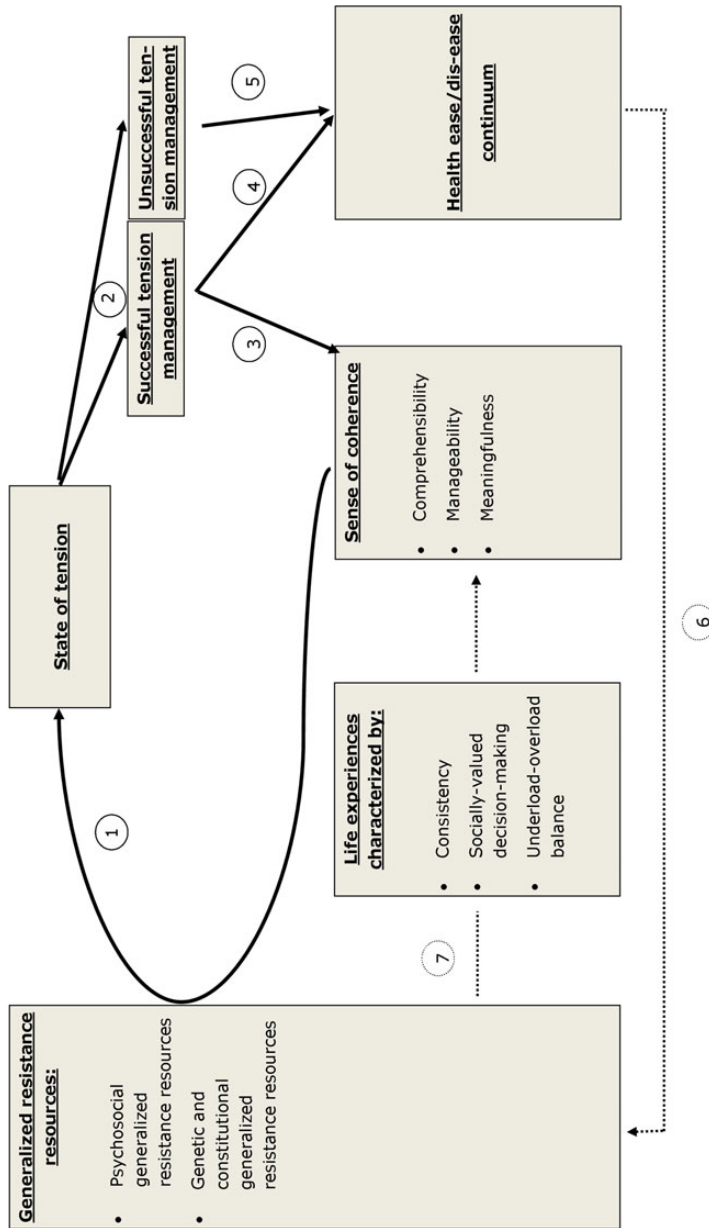


Fig. 1: A simplified reproduction of the salutogenic model (adapted from Antonovsky, 1979, pp. 184–185).

individuals to deal with stressors by (i) avoiding stressors; (ii) defining them as non-stressors and (iii) managing the stressors. A good health status may facilitate the acquisition of other GRRs as well (Antonovsky, 1979).

SOC has a vital role in orienting a person regarding a specific stressor and the GRRs that might be available to deal with everyday life stressors. People with a higher SOC see the world as more comprehensible, manageable and meaningful and are, therefore, better able to understand the stressor, to identify GRRs to deal with the stressor and to accept the challenge to deal with the stressor (Wainwright *et al.*, 2007). Antonovsky (Antonovsky, 1987) hypothesized that SOC may develop in childhood and young adulthood under certain conditions (i.e. consistency, underload–overload balance and socially valued decision-making). These conditions arise when sufficient GRRs are present, as they provide an individual with sets of meaningful and coherent life experiences (Eriksson, 2007; Lindström and Eriksson, 2010). The GRRs are, therefore, essential for the development of SOC.

In sum, SOC has a central position in the salutogenic model and strengthening people's SOC would increase people's ability to impose structure on stressful situations and to search for resources that could help them to overcome these stressors. SOC may be developed when people experience meaningful and coherent life experiences which can be created when GRRs are applied to deal with everyday life stressors. Yet, to select and apply the GRRs to produce these life experiences requires a strong SOC. So, the development of SOC is a complex, interactive and interdependent process and hence the question arises what the focus could be of health promotion efforts aiming to strengthen SOC.

STRENGTHENING SOC IN HEALTH PROMOTION—THEORETICAL DIRECTIONS

Two mechanisms for strengthening SOC

If we take a closer look at the salutogenic model, we can identify two opportunities for strengthening SOC. The first opportunity can be found in the 'circle' including successful tension management (see Figure 1, arrows 1–3). That is, if people can be assisted in their search for appropriate GRRs that can be applied to deal with the stressor (arrows 1 and 2), this can positively influence their SOC (arrow 3). This is the direct effect of successful tension management on SOC. A second opportunity can be found in the 'circle' including the life experiences that positively influence SOC (see Figure 1, arrows 6 and 7). This means that SOC can be strengthened if people can learn to see (everyday life) stressful situations as consistent, with a load balance and as socially valuable (arrow 7). As noted

previously, GRRs play a vital role in creating these life experiences and a good health status facilitates the acquisition of other GRRs (arrow 6). This second circle can, therefore, be labelled an indirect effect of successful tension management on SOC. Important to note is that, following the salutogenic framework, these circles are closely interdependent and interactive. Hence, they cannot be considered separately. A sufficient level of comprehensibility, manageability and meaningfulness is required to orient a person towards a specific stressor and to feel self-efficacious to deal with these stressors (see Figure 1, arrow 1). Simultaneously, successful tension management directly or indirectly influences the level of comprehensibility, manageability and meaningfulness.

Support for these two opportunities for improving SOC can also be found in a study conducted by Amirkhan and Greaves (Amirkhan and Greaves, 2003). The authors studied three possible mechanisms underlying the relationship between SOC and health. The first mechanism addresses the perceptual process underlying SOC. 'SOC tints perception in such a way that those with strong dispositions simply see stressors as more benign, and hence are less stressed by them' (Amirkhan and Greaves, 2003, p. 33). The second mechanism refers to the cognitive process underlying SOC such as expectancy and judgement. According to Amirkhan and Greaves (Amirkhan and Greaves, 2003), these second-order cognitions include evaluations of causes and effect, and different courses of actions that can be taken. These judgements influence 'the emotional and pathogenic impact' of stressful or difficult situations (Amirkhan and Greaves, 2003, p. 34). The third possible mechanism underlying SOC, according to the authors, exerts its influence through behavioural patterns. People's actions may be influenced by their level of SOC as people can choose different coping strategies.

The study conducted by Amirkhan and Greaves (Amirkhan and Greaves, 2003) found support for the behavioural and perceptual mechanism underlying SOC. Based on these findings, Kähönen *et al.* suggested that these mechanisms also offer starting points for health promotion activities that aim to strengthening SOC (Kähönen *et al.*, 2012). The first mechanism, the behavioural one, brings up the possibility to intervene in behavioural responses to stressful situations towards a more efficacious coping style. The second mechanism, the perceptual one, refers to the view people hold of stressful situations and suggests that people may be 'trained' to see the world as more comprehensible, manageable and meaningful. Although these mechanisms may hold relevant for health promotion practices, no suggestions are offered on how these opportunities for strengthening SOC can be addressed in health promotion activities.

Empowerment and reflection

In light of the above, we have identified two processes that may be relevant for health promotion activities that aim to strengthen SOC, as they address the behavioural and the perceptual mechanisms: empowerment and reflection. The first process, empowerment, is specifically focused on the behavioural mechanism as identified by Amirkhan and Greaves (Amirkhan and Greaves, 2003) and the first circle of the salutogenic model (see Figure 1, arrows 1–3). In order to strengthen SOC, health promotion activities could focus on enabling people to identify appropriate GRRs that can be used to combat or avoid the stressors. As previously stated, enabling people to use their GRRs to deal with stressors may lead to increased levels of SOC. In addition, health can be positively affected when people behave more adaptive in stressful situations, for example by seeking help from the social environment to overcome certain problems (Commers *et al.*, 2007). As Antonovsky (Antonovsky, 1979) puts forward, having plenty of GRR's available does not necessarily produce health, people actively have to use the GRRs to deal with the stressors. The concept of empowerment is important in relation to this process of enabling people to utilize their GRRs. 'Empowerment, in its essence, refers to reacting to environmental stimuli in a way that is functional with respect to the desired outcomes of those whose health or quality of life is in question' (Commers *et al.*, 2007, p. 84).

The second process that we have identified, addresses more specifically the perceptual mechanism and the second circle of the salutogenic model (see Figure 1, arrows 6 and 7). In order to be able to select appropriate GRRs to deal with stressors, people need to sufficiently understand the situation at hand and be able to identify the resources that can be used to deal with specific stressors. This is also captured in the definition of SOC (i.e. comprehensibility, manageability and meaningfulness). What is essential in the definition is that it concerns *perceived* meaningfulness, manageability and comprehensibility. According to Antonovsky (Antonovsky, 1987), it is not merely the actual stimuli, the actual resources and the actual challenges that are of importance. Also relevant are the ideas an individual has about these stimuli, resources and challenges. In this light, SOC can be considered to reflect a pair of glasses or a frame through which we see the world around us. Influenced by the perceptions we have of the environment and ourselves we think, choose, and act. Hence, the interaction of the individual with the environment is very important for behaviour (Gana, 2001; Eriksson and Lindström, 2008; Lezwijn *et al.*, 2011). Health promotion activities aiming to strengthen SOC need to pay attention to this frame through which people perceive the world

because this frame may be either supportive of or impede the health promotion efforts to empower people deal with stressors. Addressing this perceptual mechanism (i.e. the feeling of comprehensibility, manageability and meaningfulness) requires a process of reflective learning in which people are becoming aware of their beliefs and assumptions. Reflective learning has been defined as 'An active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and further conclusions to which it tends' (Dewey, 1933 in: Henderson *et al.*, 2004, pp. 357–358). The reflection on assumptions, values and goals is also referred to as second-order learning (van Mierlo *et al.*, 2010), experiential learning (Kolb, 1984) or transformative learning (Mezirow, 1996). If people can review certain situations in a different light and learn to define the situations differently, this may help them to identify the appropriate GRRs to deal with the stressors in everyday life. This, in turn, can create life experiences that can contribute to strengthening SOC.

All in all, it can be argued that health professionals should aim to increase the ability of people to identify appropriate GRRs to solve stressful situations. People should be *empowered* to use the GRRs and as such create consistent and meaningful life experiences, which subsequently can develop their SOC further. However, this process may fail when insufficient attention is paid to the ability of people to understand the stressful situation, to identify GRRs in their environment or themselves, and the ability to feel that dealing with stressors is a meaningful process. Health professionals should, therefore, facilitate *reflection* as to pay attention to people's understanding of (everyday life) stressful situations with a specific focus on consistency, load balance and socially valuable decision-making. Both processes (i.e. empowerment and reflection) are important for the development of SOC, are closely interdependent and can be considered reinforcing or interactive processes.

Empowerment and reflection in health promotion

Currently, health promotion activities are often based on behaviour (change) models such as the Theory of Planned Behaviour (Ajzen, 1985) or the Health Belief Model (Janz and Becker, 1984). Efforts to change behaviour are directed at the beliefs that people hold about the consequences of the behaviour, the perceived social norm, self-efficacy to perform the behaviour, the perceived susceptibility, the severity of the threat etc. These targets are, according to the salutogenic model, the resources that exist within the individual (e.g. self-efficacy beliefs or attitudes). However, as noted previously, having sufficient resources at one's disposal does not guarantee that these are used to

move to a more healthy state. Hence, regardless of the good attitudes, beliefs or intentions, people may not perform the required behaviours to move to a more healthy state (van Woerkum and Bouwman, 2014). In salutogenic terms, people may perceive the situations as incomprehensible, unmanageable or not meaningful and as such are unable to identify and use the resources to move to a more healthy state, even though they may possess sufficient resources to do so. Addressing these issues in health promotion requires that health professionals engage in a different health promotion approach that is not focused on changing beliefs, knowledge or intentions, but rather focus on empowering people to mobilize and reflect on the resources they already have available. This critical reflection in stressful situations should also focus on the environment in which people live, because the interaction of the individual with the environment is important for their health and quality of life. People's perception of the stressor, of the available GRRs and of the meaningfulness of the challenge is dependent on the environment in which they live and the opportunities and barriers that arise from this environment to lead a healthy life. In turn, when people manage to deal with the stressor successfully, this may lead to improved levels of SOC through positive life experiences, increasing their comprehensibility, manageability and meaningfulness. This makes the interplay between GRRs, SOC, life experiences, reflection, empowerment and health a complex and interdependent process.

Several studies, which report on interventions that have been successful in increasing SOC, seem to include some activities that target the process of empowerment and reflection. For example, it can be argued that the study conducted by Kähönen *et al.* (Kähönen *et al.*, 2012)—focusing on the participant's personal values, goals beliefs and patterns of behaviour—included activities that facilitated the reflection of participants on their SOC. The authors state (Kähönen *et al.*, 2012): 'A common issue in both group methods was to investigate the balance between work, social life and personal hobbies. In terms of general resistance resources, these three dimension support each other, meaning that if someone faces serious conflicts in his occupational domain, a functional social life and important personal hobbies may be enough to prevent burnout' (p. 525). The researchers seem to have tried to facilitate the reflection of the participants on their resources as to enable them to use them as GRRs in case they encounter severe stressors that may lead to a burnout.

One promising method that has shown to be successful in engaging people in a reflection on their perceptions of how they see and experience the world, is the Mindfulness-based Stress Reduction (MBSR) programme. Mindfulness has

been defined as 'The awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmental to the unfolding of experience moment by moment' (Kabat-Zinn, 2003, p. 145). Interventions based on mindfulness may help people to deal with difficult situations by focusing on the present in a non-judgemental way, rather than being carried away by emotions and worrying about possible problems of the future. This openness towards the present may enhance the understanding of the situation (i.e. comprehensibility), may create awareness of possible resources (i.e. manageability) and increase the feeling that the situation is worthy of investment and engagement (i.e. meaningfulness). In a study among women with fibromyalgia, patients that followed an 8-week MBSR programme had a significantly higher SOC after the intervention than the control group (Weissbecker *et al.*, 2002).

Recently, Ley and Rato Barrio developed and evaluated a psychosocial health programme among women suffering from violence in a rural area of Guatemala (Ley and Rato Barrio, 2013). Through movement, games and sport they aimed to strengthen SOC by promoting resources and facilitating positive and significant experiences (Ley and Rato Barrio, 2013). In their intervention objectives they explicitly state that they aimed to facilitate the 're-evaluation of experiences' and the 'analysis of different points of view and alternatives [. . .]' (p. 1374). These objectives seem to address both processes of *reflection* and of *empowerment*. The SOC of the women was significantly higher at the end of the programme which included different activities such as role-play, games, storytelling and dramatization. This suggests that a focus on reflection and on empowerment may be effective in strengthening SOC. However, none of the abovementioned studies have investigated the mechanisms underlying the changes in SOC, nor did they discuss how the intervention activities may have contributed to increased levels of SOC.

DISCUSSION AND CONCLUSION

Based on our exploration of the salutogenic model, we suggest that two processes may need to be included in health promotion activities in order to strengthen SOC. The first process is focused on empowering people to identify appropriate GRRs to deal with everyday life stressors. The second process is focused on encouraging people to reflect on the stressful situations to make them able to understand the stressor they are facing, to identify the GRRs that can be used to deal with the stressor and to feel that dealing with the stressor can be meaningful. These two processes are closely interlinked and cannot be considered separately. Health professionals who use

behaviour (change) models to design health promotion activities may not induce these important processes when they focus too much on changing the cognitions (i.e. knowledge, self-efficacy beliefs, attitudes etc.) of the target population.

This article is a first attempt to identify processes in health promotion activities that may strengthen SOC. Future research may instigate researchers to identify additional strategies that can be employed to strengthen SOC that have not been previously identified. Furthermore, there is still uncertainty with regard to the underlying mechanisms in the relation between SOC and health. Studies investigating these mechanisms can also instigate new thoughts on possibilities of strengthening SOC in health promotion activities, similar to the study by Amirkhan and Greaves (Amirkhan and Greaves, 2003). Finally, interventions based on empowerment and reflection processes can fuel further development of the salutogenic model and the strategies to strengthen SOC. Combining this knowledge in a complete theoretical framework can underpin health promotion activities.

In this article, we have discussed the complexity of the salutogenic model with its interplay between the ease/dis-ease continuum, GRRs, SOC and life experiences, and its relevance for health promotion activities. In this account of the salutogenic model, we did not highlight so-called specific resistance resources (SRRs) which reflect newly engaged resources that can be activated to deal with a specific stressor (Mittelmarm, 2013). Antonovsky in his work mainly focused on the role of GRRs, but he stated 'This is not to deny the importance of specific resistance resources. They are many and are often useful in particular situations of tension' (Antonovsky, 1979, p. 99). Health promotion activities can aim to make these SRRs available to people and communities, to help people to deal with specific stressors in specific situations. However, there is very limited research on the role of SRRs and GRRs in dealing with everyday life stressors and how available GRRs and SRRs interact to form a plethora of resources that people can activate to deal with a stressor.

The two processes identified in this article to strengthen SOC also relate to the coping mechanisms discussed by Folkman (Folkman, 2013). In her chapter on the interrelation between stress, coping and hope, she discusses the three kinds of coping within stress and coping theory: problem-focused coping, emotion-focused coping and meaning-focused coping. Problem-focused coping (i.e. managing the problem or cause of distress) seems to relate strongly to the empowerment processes articulated in this article, as both address the process of identifying the cause of the distress and managing it. In addition, meaning-focused coping (i.e. adapting deeply held values and

beliefs) seems to relate strongly to the reflection processes for strengthening SOC. Meaning-focused coping is elementary to dealing with stressors in very stressful situations, especially when a person's life goals are no longer tenable. Identifying meaningful and realistic goals is important to regain a sense of control and purpose, to restore hope and to allow people to identify their GRRs to reach those 'new' goals (Folkman, 2013). Reflection seems to be integral to meaning-focused coping, to adopt these more realistic goals and priorities and to regain a sense of meaningfulness or hope. Nonetheless, there is currently very little research on the role of reflection or meaning-focused coping to overcome distress and to increase well-being (Lee *et al.*, 2006). Finally, emotion-focused coping (i.e. regulating negative emotions) is implicitly addressed in both processes of empowerment and reflection. That is, by focusing on empowerment and reflection processes in health promotion activities, the comprehensibility, manageability and meaningfulness of situations are increased that is likely to offer opportunities for coping with emotions. What is interesting to note from Folkman's observations is that the three types of coping 'work in tandem' (Folkman, 1997, 2013, p. 120) and are very interactive. This is in line with our argument that the processes of empowerment and reflection are interdependent. The question where to start when aiming to strengthen SOC in health promotion activities remains a difficult one, due to this interdependence.

Some reservations should be considered when health professionals attempt to spark a reflection process in a target group. The reflection process is one that may be difficult to steer. This means that, although the professional may be able to induce the reflection process, it is not guaranteed that the process leads to the desired goal. In addition, specific skills are needed to enable such a reflection process and it may be difficult to start such a process simultaneously in a large population. As Koelen and Lindström state: '[. . .] professionals themselves need to be empowered' (Koelen and Lindström, 2005, p. S14).

In addition, it can be argued that for a person to reflect on his or her assumptions, beliefs, values etc. a minimum level of individual cognitive skills is required. Similarly, it can be argued that people may lack enough motivation to engage in reflection. This argument holds true for interventions explicitly aiming to change people's frame. The MBSR programme is an example of such an intervention. The MBSR programme includes weekly mindfulness sessions of two to three hours, which explicitly requires people to be motivated to finish the programme. In addition, the content of the programme requires people to possess a minimum level of reflection skills. However, less effortful and more implicit strategies may induce the same

reflection process. One interesting line of research is the idea that sport (or other activities) may, under specific conditions, produce life experiences that induce implicit reflection and that, eventually, may enhance people's SOC (Løndal, 2010; Ley and Rato Barrio, 2013). More research is needed with a specific focus on how SOC can be developed and the implicit or explicit reflective processes that may contribute to this development.

Following the previous observation that engaging in reflection requires a minimum level of individual cognitive skills and motivation, health promotion activities that aim to increase reflection run the risk of blaming-the-victim. Individuals who are unable or unwilling to engage in reflection might be held responsible for moving towards disease. However, individuals are part of a social, ecological and political environment that interact in a series of complex processes (Antonovsky, 1987; Naaldenberg et al., 2009). That means that people's choices, thoughts and actions arise from their interaction with other people and the environment. Hence, if people are unable to 'manage their health', this arises from this complex interaction and cannot be ascribed solely to individual inability or lack of motivation to live healthy. A shift is therefore needed in health promotion, away from a biomedical focus on behaviour, towards a focus on the underlying determinants in the social, ecological and political environment (Watt, 2007). Critical consciousness of people and communities is essential in addressing these social determinants. Critical consciousness has been defined as 'The ability of individuals to take perspective on their immediate cultural, social, and political environment, to engage in critical dialogue with it, bringing to bear fundamental moral commitments including concerns for justice and equity, and to define their own place with respect to surrounding reality' (Mustakova-Possardt, 1998, p. 13). An example of an intervention, which focused on increasing critical consciousness and social mobilization of local communities, is a HIV/AIDS community-based programme in South Africa studied by Hatcher et al. (Hatcher et al., 2011). The authors argue that the programme contributed to a process, which was analytical, constructive and mobilizing, meaning that the programme encouraged participants to reflect on their current situation, to develop strategies for improving the situation, and to mobilize collective change. For example, the participants were encouraged to critically analyse cultural and gender norms around HIV as to help them view problems as rooted in the structures surrounding them, and not as personal failures. This analytical, constructive and mobilizing process shows similarities with the three elements of SOC, yet, through this intervention, the focus was not solely on individual (behaviour) change but it also addressed the

environment in which people lived by stimulating collective action. Other interventions mentioned throughout this manuscript that aimed to increase SOC all contained intervention activities that were directed at the individual, without directly addressing the environment in which people lived and the social determinants there within (Weissbecker et al., 2002; Vastamäki et al., 2009; Forsberg et al., 2010; Sarid et al., 2010; Kähönen et al., 2012; Skodova and Lajciakova, 2013). The question remains to what extent the increased levels of SOC through these individually oriented interventions lead to improvements in health and quality of life. Further research is needed that evaluates the role of empowerment and reflection process in community-based health promotion efforts in which the social, ecological and political environment are subject of critical dialogue as well.

In relation to the environment in which people live it is also important to consider the availability of the resources therein. In order to strengthen SOC, health promotion efforts do not only need to consider the reflection and empowerment processes that seem important in supporting people to deal with everyday life challenges. An important task of health promotion is also to create healthy and supportive settings in which there are plenty of resources available to deal with the stressors (Kickbusch, 2003; Dooris, 2006). In salutogenic terms, the presence of GRRs is vital both in creating life experiences that strengthen SOC, as well as in engaging with these GRRs to move towards health (Antonovsky, 1987). Creating supportive or salutogenic environments fits well with the idea of empowerment, as one of the processes that seems important in strengthening SOC. In addition, in line with the previous paragraph, overlooking the importance of creating healthy settings might lead to stigmatization and victim blaming, as individuals might be held responsible if they are unable to manage their health, even though the resources to do so are lacking.

It is true that there is increased attention for empowerment processes in health promotion. For example, Koelen and Lindström discussed individual empowerment from a salutogenic perspective (Koelen and Lindström, 2005). They state that 'The role of the professional is to support and provide options that enable people to make sound choices, to point to the key determinants of health, to make people aware of them and enable people to use them' (p. S13). Based on the salutogenic model, it can be argued that this empowerment process cannot succeed without a focus on reflective learning. In order to prevent that tension develops into stress, requires that people have a, at least a minimum, feeling of comprehensibility, manageability and meaningfulness. Reflection, aimed at enhancing these three SOC components, then becomes a

necessary condition for empowering people to deal with the stressor. Although reflection may be a difficult process to ignite through health promotion activities, efforts to induce reflexive learning may become self-reinforcing. That is, health promotion activities that succeed in empowering people to deal with everyday life stressors can strengthen SOC which subsequently may be utilized again in new situations to combat new stressors.

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