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Perspectives

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Future directions for the concept of salutogenesis: a position article

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Summary

Aaron Antonovsky advanced the concept of salutogenesis almost four decades ago (Antonovsky, *Health, Stress and Coping*. Jossey-Bass, San Francisco, CA, 1979; *Unravelling the Mystery of Health*. Jossey-Bass, San Francisco, CA, 1987). Salutogenesis posits that life experiences shape the sense of coherence (SOC)

that helps to mobilize resources to cope with stressors and manage tension successfully (determining one's movement on the health Ease/Dis-ease continuum). Antonovsky considered the three-dimensional SOC (i.e. comprehensibility, manageability, meaningfulness) as the key answer to his question about the origin of health. The field of health promotion has adopted the concept of salutogenesis as reflected in the international *Handbook of Salutogenesis* (Mittelmark et al., The Handbook of Salutogenesis. Springer, New York, 2016). However, health promotion mostly builds on the more vague, general salutogenic orientation that implies the need to foster resources and capacities to promote health and wellbeing. To strengthen the knowledge base of salutogenesis, the Global Working Group on Salutogenesis (GWG-Sal) of the International Union of Health Promotion and Education produced the *Handbook of Salutogenesis*. During the creation of the handbook and the regular meetings of the GWG-Sal, the working group identified four key conceptual issues to be advanced: (i) the overall salutogenic model of health; (ii) the SOC concept; (iii) the design of salutogenic interventions and change processes in complex systems; (iv) the application of salutogenesis beyond health sector. For each of these areas, we first highlight Antonovsky's original contribution and then present suggestions for future development. These ideas will help guide GWG-Sal's work to strengthen salutogenesis as a theory base for health promotion.

Key words: salutogenesis, sense of coherence, positive health, salutogenic interventions

INTRODUCTION

The concept of salutogenesis was advanced almost four decades ago (Antonovsky, 1979, 1987). However, Antonovsky's legacy has still not fully enabled health promotion to respond to one of its core criticisms (i.e. the lack of a unifying theory to operationalize health promotion discourse, values and principles). To move forward with the concept of salutogenesis as the scientific base of health promotion, we identified key avenues for future development in this area. Salutogenesis has been adopted in health promotion research and practice. The most recent example is the international *Handbook of Salutogenesis* (Mittelmark *et al.*, 2016) which includes 87 authors from many countries. This work was initiated by the Global Working Group on Salutogenesis (GWG-Sal) of the International Union of Health Promotion and Education. It synthesizes worldwide knowledge in this area. As described in this handbook, salutogenesis has mainly been applied in three ways [(Mittelmark *et al.*, 2016), pp. 7–14)]. The first is the use of the overall salutogenic model of health as introduced by Antonovsky himself. This model posits that life experiences shape the sense of coherence (SOC) that helps to mobilize resources to cope with stressors and manage tension successfully (determining one's movement on the health Ease/Dis-ease continuum). The second application involves the use of the more restricted concept and measurement of SOC as the core element of the salutogenic model of health. The third application is the exploration of a salutogenic orientation focusing on resources leading to positive outcomes rather than focusing on disease and underlying risk factors.

The SOC has gained attention, particularly in empirical research. Antonovsky considered the three-dimensional SOC (i.e. comprehensibility, manageability, meaningfulness) as the key answer to his question about the origin of health. The original SOC scale allowed for the practical measurement of the concept. It has been translated into nearly 50 languages and applied in hundreds of studies (Eriksson, 2007, 2016). The salutogenic orientation implies the need to foster resources and capacities to increase health (Lindström and Eriksson, 2009; Roy *et al.*, 2015, 2018). This orientation has therefore been adopted in health promotion even though it goes beyond the original iteration of the salutogenic model of health.

The formal salutogenic model of health (Antonovsky, 1979) has received little attention in research and practice. This may be partly because it is complex and difficult to test empirically. More importantly from a health promotion perspective, the salutogenic model included only a partial analysis of the experience of health. As shown below, it lacks a pathway in which resources directly lead to positive health development.

FUTURE DIRECTIONS FOR THE CONCEPT OF SALUTOGENESIS

During the writing of the international *Handbook of Salutogenesis* (Mittelmark *et al.*, 2016) and the regular meetings of the GWG-Sal, authors and members of the working group identified conceptual issues to be advanced for the study and application of salutogenesis. To move forward with the concept of salutogenesis as a sound scientific base, we propose to:

1. advance the overall salutogenic model of health,
2. advance the concept of SOC,
3. define and design salutogenic interventions and change processes in complex systems and
4. apply salutogenesis beyond health sector.

With respect to Antonovsky's work, this article follows his posthumously published proposal (Antonovsky, 1996) of using salutogenesis as a theory to guide health promotion. For each of these areas, the article first highlights Antonovsky's original contribution and then presents directions for future development. Given the breadth of these four areas, we had to limit the literature review to articles that either support the need for advancement of the concept of salutogenesis or point to promising future directions. This article is intended to trigger follow-up articles in the future providing in-depth literature reviews for each area.

Advance the overall salutogenic model of health

The salutogenic model of health needs an additional positive health continuum and a path of positive health development linking resources to this new continuum.

An additional positive health continuum

Antonovsky presented his full salutogenic model of health in his seminal work entitled *Health, Stress and Coping*. This model includes many elements and sub-elements which are connected by 18 relationships, making it difficult to apply in research and practice. Despite this, the model makes fundamental contributions to the field of public health. First, it shows how diverse psychological, physical and biochemical stressors can be successfully managed by a range of cultural, psychosocial, genetic and constitutional general resistance resources (GRRs). Second, it introduces the SOC as a general orientation to life that promotes the ability to mobilize GRRs and SRRs (specific resistance resources). Third, this model introduced the ground-breaking idea of a health ease/dis-ease continuum instead of focusing on disease and diagnoses as dichotomous outcomes (ill/not ill). This definition overlaps with the 1948 WHO definition of health as both acknowledge that health is more than the absence of disease. But there also are differences. The WHO defines health in a positive way as a state of complete physical, mental and social wellbeing. Antonovsky defined the positive (Antonovsky, 1987) end of its ease/dis-ease continuum still in a negative way, i.e. *the absence* of pain, functional limitation, acute or chronic prognosis and health-related action implications. Meanwhile, a broader literature on positive health has emerged and moves beyond wellbeing by highlighting the importance of, for example, developing personal potential, well-functioning, self-fulfilment, pursuing purpose in life, social attractiveness, thriving and contributing to society (Commers, 2002; Pelikan, 2007, 2009; Lindström and Eriksson, 2010a,b). Considering these developments, and as Antonovsky was open to other ease/dis-ease continua, we recommend the addition of a positive health continuum to his original model.

A path of positive health development

Second, in addressing his question of 'the origin of health', Antonovsky started out with the assumption of life being challenging and health being continuously threatened by ubiquitous stressors. This basic assumption is reflected in his metaphor of life being about surviving the 'dangerous' or 'polluted' river of life. However, beyond survival, health promotion is about thriving and enabling people to increase control over their health (WHO, 1986). The Ottawa Charter considers health as a resource for everyday life (i.e. a positive concept emphasizing capacities rather than vulnerabilities) and not as the end in itself. Further, the Ottawa Charter states that health is created and lived by people within their everyday life settings (i.e. where they learn, work, play, love). Although these everyday activities certainly can include difficult or sometimes even threatening experiences, they also include many resourceful encounters with oneself, others and the environment. Resources not only immediately help people to cope better with stress (and surviving). Also over time, personal and environmental resources can help with recovery and healing (Todahl *et al.*, 2014; Sakallaris *et al.*, 2015; Parkin, 2016; Boscherini, 2017), even from early life adversities in adult populations (Dube and Rishi, 2017). Beyond healing and recovery, resources can directly promote health, wellbeing and thriving—even in the absence of current or previous adversarial life situations.

Thus, we propose to add direct paths of positive health development to the salutogenic model to show how GRRs and SRRs can lead to positive health. This fits with the concept of 'salutary factors' mentioned by Antonovsky in his ultimate publication (1996). This suggestion is in line with the Health Development Model (Bauer *et al.*, 2006) which proposes pathogenesis and salutogenesis as two complementary perspectives on health development (Pelikan and Halbmayer, 1999; Pelikan, 2007, 2009). It is also consistent with proposals for a full salutogenic model including a path of positive health development in context of work (Brauchli *et al.*, 2015; Jenny et al., 2016) and organizations (Bauer and Jenny, 2012).

Regarding the advancement of the overall salutogenic model of health, it will be key to consider the suggestions summarized in the *Handbook of Salutogenesis* (Mittelmark *et al.*, 2016). The development of an additional health development continuum can also build on existing work in the fields of mental health (Keys, 2014), nutrition (Swan *et al.*, 2015) and healthcare (Pelikan, 2007, 2009, 2016). This extension of the salutogenic model of health will support health promotion researchers and practitioners in their focus on positive aspects of health experience. It incorporates the global move toward positive health and human and planetary flourishing, as expressed in the United Nations sustainable development goals (United Nations, 2016). We believe that such an expanded salutogenic model of health that includes both a negative, pathogenic path of stressors leading to disease outcomes, a salutogenic coping path of GRR and SRR helping to overcome adversarial life situations and a direct positive salutogenic path from resources to positive health outcomes can cover the full human health experience and thus can be universally applied. Certainly, the relative importance of these paths will differ across populations with diverse life circumstances, but also within individuals over the life course and different life events.

Advance the concept of SOC

Advancing the concept of SOC requires us to both revisit its conceptualization and measurement and to understand how it develops early during the life course.

The concept and measurement of SOC

Antonovsky's 29-item Orientation to Life Questionnaire (OLQ) is the basis for almost all scholars on the SOC. In longer and shorter forms and in various permutations, the self-administered closed-ended OLQ with its ladder-scale response frame has been translated into several languages. In decades of international research, the OLQ is observed to be valid and reliable [(Mittelmark *et al.*, 2016), pp. 97–106]. While the many translations of the OLQ and the research that has used it have given confidence that the SOC construct is measurable, the substance of the SOC construct has yet to be explored. This may be because the OLQ was the tool developed by Antonovsky to measure the SOC, and it is relatively easy to use in survey research. Researchers seem to have not felt a pressing need to explore the SOC from other scholarly perspectives. Yet researchers' almost myopic focus on the OLQ approach to the study of the SOC might not be what Antonovsky himself wished for. He called for SOC research using other methodological approaches than his own. He hoped for research that would better explicate the SOC components. These are elusive within the OLQ, due to its mostly single factor structure. Also of value would be the re-examination of Antonovsky's original qualitative data, to examine the replicability of his analysis and findings. There is also a lack of qualitative data gathered by independent investigators, and collected, analysed and interpreted using the same theoretical frameworks Antonovsky used in developing the OLQ: the salutogenic model of health, and Facet Theory (Guttman and Greenbaum, 1998), even if this field is slowly growing (Super *et al.*, 2018; Swan *et al.*, 2018). Even further, one could conceive of truly alternative approaches to conceptualizing the SOC and its measurement, for example grounded approaches starting with in-depth first-person life histories.

Origin of SOC: understanding salutogenic processes in early life

There is a need to construct a multidisciplinary framework on the early genesis of the salutogenic process. This will help to construct a model for this development that can be empirically studied. Currently, salutogenic framing is rarely used in maternity care research and authors (Sinclair and Stockdale, 2011; Perez-Botella *et al.*, 2015) have advocated for the use of this framework in antenatal (Sinclair and Stockdale, 2011), intrapartum (Smith *et al.*, 2014) and overall maternity care (Perez-Botella *et al.*, 2015). This section explores how positive health can be initiated in humans and proposes a framework for the early development of salutogenic factors in intrauterine life. According to Antonovsky, the SOC develops through the interplay between external and internal resources, ideally creating a coherent manageable and structured life course, and an ability to maintain such a development even in the context of negative life conditions. Part of the SOC is hypothesized to relate to the *coping style* of the individual, and one's earliest life experiences, among other GRRs (Silventoinen *et al.*, 2014). The proposition has been advanced that in pregnancy, during birth and early childhood, the interplay with the mother, the environment and other significant carers, builds SOC in the foetus, the neonate and the infant. This is in the form of *comprehension of* 'what is going on' (even *in utero*), the start of *management of* life experiences and events through developing constructive behaviours, and experiencing the fundamental *meaningfulness* in intimate human relationships (Hansson *et al.*, 2008).

Pregnancy, birth and the neonatal period are highly sensitive stages where the biological and psychological

interactions between the parent and the foetus/neonate create a dynamic interactive system. Until a few weeks after birth, these interactions are almost the entire experiential context for the foetus/infant. The particular interactions between each parent/neonate dyad trigger complex neuro-hormonal, epigenetic and psychosocial processes that set pathways for future physical, emotional, spiritual and psychosocial wellbeing or ill health for the baby, throughout the life course and for some factors, trans-generationally (Buss *et al.*, 2012). Evidence from neuroscience, neuropsychology and epigenetics is beginning to identify these complex adaptive systems phenomena, although much is still unknown (Hansson *et al.*, 2008; Dahlen *et al.*, 2013).

From a pathological perspective, the vulnerability of the developing human brain is well described in neuroscience, suggesting permanent damage can be induced under deleterious external conditions. It is one of the best documented scientific facts that stress, toxic substances (e.g. alcohol, smoking, lead poisoning) and other trauma can affect the development of the human brain and cause neurobiological damage (Adams Chapman, 2006; Rutherford *et al.*, 2013; Kuzniewicz *et al.*, 2014; Niemelä *et al.*, 2016). However, lately many neuropsychiatric conditions also can find their aetiology in such risk exposure (Stein *et al.*, 2014). Severe stress during pregnancy and in critical developmental stages can be devastating for the future capacity of individuals (Buss *et al.*, 2012). More controversially, it has been suggested that some genes can code for sociopathic behaviours, and that early or later life events could trigger such genes into activity through epigenetic processes.

However, less has been published on the potential impact of nurture and affection on the suppression of epigenetic triggers in such cases, or the expression of positive genetic states. There is some evidence that caring and affective relationships in the early years, with parents or other significant adults, can suppress the genetic expression of psychopathology (Silventoinen *et al.*, 2014). Given the evidence on epigenetic triggers for the foetus during pregnancy and birth, it is possible that positive psycho-hormonal interactions between the mother and the foetus/early neonate during pregnancy, birth and early postnatal period could trigger positive epigenetic changes in the neonate.

Define and design salutogenic intervention and change processes in complex systems

Originally, salutogenesis was formulated as a description of health-related processes, and not as a guide for intervention. However, Antonovsky's last paper addressed (Antonovsky, 1996) the potential of the salutogenic model as a theory to guide health promotion. Antonovsky recommended that health promotion should focus on (i) the health ease/dis-ease continuum (rather than a dichotomous classification), (ii) salutary factors (rather than risk factors), (iii) the entire person (rather than the disease) and (iv) the development of health promotion programmes that strengthen the SOC.

Looking at Antonovsky's first recommendation, many practitioners and researchers have applied the salutogenic orientation to the design and evaluation of health promotion interventions, especially in everyday settings and in the healthcare system [(Mittelmark *et al.*, 2016), pp. 153–346]. Accordingly, they build on and strengthen GRRs and SRRs at levels from the individual to the society. However, regarding his second recommendation of strengthening the SOC through health promotion, there is currently no intervention theory that enjoys wide use [even though there are attempts, such as in Pijpker *et al.* (2018) and Super *et al.* (2018)]. Thus, we suggest development of an intervention theory formulated as an extension of the salutogenic model. The starting point might be the SOC. Antonovsky states that one's SOC (Antonovsky, 1996) is shaped by three kinds of life experiences: consistency (strengthening comprehensibility), underload–overload balance (strengthening manageability) and participation in socially valued decision making (strengthening meaningfulness). This also implies further development of how these kind of life experiences can be measured (quantitative and qualitative) in different settings and on different system levels beyond the SOC questionnaire as such measurement can be used as the basis for interventions.

For an intervention theory, shaping the three kind of life experiences implies that the intervention process itself, and the changes induced by the intervention in the social system should aim for experiences of consistency, load balance and participation in decision making (Super *et al.*, 2016). Specifically, interventions should be designed to enable communities to create shared life visions and to be part of decision making (meaningfulness); develop shared mental models about the change process and desired outcomes (comprehensibility); enable communities to identify life demands (e.g. stressors, challenges) and GRRs that need to be balanced (manageability) as well as life opportunities (e.g. assets, learning situations) that stimulate health development.

Considering the five action areas described in the Ottawa Charter (WHO, 1986), the following additional intervention strategies could represent powerful triggers to shift the system equilibrium in the direction of health and good life:

- Emphasize the joint promotion of a corpus of health literacy and life skills to create competent citizens able to take control over their health and to play their role as active participants in the exercise of citizenship (develop personal skills)
- Position health promotion competencies as an essential framework to re-orient professional leadership toward salutogenesis, empowerment, participation and incorporation of new knowledge and ideas to improve practice and respond to emerging challenges (reorient health services)
- Prioritize local strategies oriented to support and improve community cohesion and enabling citizens, professionals and policy makers to hang together and to define shared visions (strengthen community action)
- Focus on living conditions in everyday environments and settings (create supportive environments)
- Build advocacy competency (Shilton *et al.*, 2013) in order to enable citizens, including vulnerable groups, and health professionals to influence political decision making (build healthy public policy).

The empirical development and testing of such salutogenic intervention theories and strategies will require to clarify how they lead to changes in the structure and processes of a social system. The continuous observation, measurement and reflection of induced change can itself strengthen the change process and the SOC of involved stakeholders (Inauen *et al.*, 2012). Measuring salutogenic change should be grounded in both a scientific theory and the logic of social systems.

Apply salutogenesis beyond health: the role of collective SOC in intergroup relations

In these times of increasing social diversity within societies and global migration, understanding and improving intergroup relations is a meaningful challenge (Bosetti *et al.*, 2012). It could be a key for promoting social health within and between groups. Toward, the concept of SOC is broadening from the individual to the collective level (i.e. from the person to the organization and social systems; Sagy and Antonovsky, 1996, 1998). This is a priority for GWG-Sal's theory building and research, with a focused effort on the study of the relationship between SOC at the group level and the nature of intergroup relations.

Antonovsky's salutogenic model focus on the individual ability to cope with stressors and stay healthy. However, Antonovsky also emphasized that in the face of collective stressors, the strength of a social group's SOC is decisive in a person's tension management (Antonovsky, 1987). This idea that the concept of SOC should be broadened to wider levels was further developed by Sagy and Antonovsky (Sagy and Antonovsky, 1998). They suggested a new concept by shifting the original definition of the SOC from a *individual global orientation of the world* to a defined collective of the family. Sagy *et al.* continue to develop and explore new concepts of SOC of specific in-groups and at the larger supra-system (Sagy *et al.*, 1996; Bowen et al., 1998; Braun-Levensohn and Sagy, 2011; Sagy and Mana, 2017).

In these new ways of broadening the concept from the individual to the collective, any specific in-group can be measured by the same three dimensions as the individual SOC. The in-group comprehensibility relates to the perception that life in one's in-group is predictable, safe and secure and that one's in-group is a place which is known and understood. In-group manageability relates to the perception that one's in-group can assist its members, is available to them and meets their demands and needs. In-group meaningfulness relates to the perception that the in-group gives meaning to its members, provides challenges and is worthy of investment and engagement (Sagy and Mana, 2017).

Studies have found relationships between SOC at the group level, and individual health and resilience. For example, family SOC was found to explain the ability to better cope with retirement and stay healthy (more than individual SOC; Sagy and Antonovsky, 1996, 1998). Family SOC was also found to be related to the ability of maltreated children to better cope with their state and stay well (Sagy and Dotan, 2001). SOC at the community level has been related to better coping with stressful events like bomb attacks (Sagy and Braun-Lewensohn, 2009; Peled *et al.*, 2013) or natural disaster (Braun-Lewensohn, 2014). Sense of community coherence was identified as a support to effective coping during adolescence when facing stress and was related to lower levels of risky behaviours (Elfassi *et al.*, 2016).

A strong community SOC can, however, have negative effects for others (Antonovsky, 1987). Recent studies explored the relationships between sense of community coherence and intergroup relationships. Findings from various social contexts, including Palestinian Muslims and Christians (Mana *et al.*, 2016), Serbs and Albanians in Kosovo (Telaku and Sagy, 2017), and Ultra-Orthodox and national religious Jews in Israel (Somech and Sagy, 2018) revealed similar patterns. Stronger sense of community coherence was related to lower legitimization, more anger and lower empathy toward the out-group collective narratives. Strong sense of community coherence was also found to

be related to a tendency to reject the *other*. SOC of the national group was also found to be related with lower levels of legitimization of the *other* in the context of the Israeli–Palestinian conflict (Mana *et al.*, 2016).

It appears that perceptions of one's own group as comprehensible, manageable and meaningful, in the context of intergroup conflict situations, reinforces group cohesion and promotes their own health (Braun-Lewensohn *et al.*, 2013). At the same time, it strengthens their feelings and attitudes toward separation, differentiation and superiority over the *other* group in conflict zones. Thus, it could lead to discriminatory attitudes (Sagy and Mana, 2017). Based on these studies, we suggest examining SOC at the collective, organizational and system level and intergroup relations in different social contexts. In times of increasing migration, together with a rising sense of anxiety toward *strangers*, we suggest exploring the national SOC in a variety of conflict situations. Such research may contribute to develop interventions to improve intergroup relations and increase empathy toward the *others* (Sagy, 2017).

CONCLUSION

The aim of this position article is to present key avenues for future directions to develop salutogenesis theory and research. In summary, these future developments should consider the following four key issues.

1. The original salutogenic model of health needs to be advanced by adding an additional positive health continuum and a direct path of positive health development operating independently of stressors. This expansion of the theory and of the model will support health promotion researchers and practitioners in efforts to address the full spectrum of the human health experience.
2. For a better understanding of the SOC, we encourage alternative approaches to the conceptualization and measurement of the SOC, including qualitative research. A high priority is to develop better understanding of the origins of SOC in the earliest life years. In addition, the idea to re-examine the original data analysed by Antonovsky is being explored. Would we, in the modern context, interpret his interviews in a similar way, or would additional insight into the SOC emerge?
3. To purposefully design salutogenic interventions and change processes, we suggest the development of explicit salutogenic intervention theories that build on and integrate key elements of salutogenesis, including strengthening resources, promoting coherent (i.e. comprehensible, manageable, meaningful) life experiences and positive health outcomes.
4. It would be fruitful to apply salutogenesis beyond traditional, individual health issues, as other fields can profit from this concept and as we can learn from such fields for health research. The case of SOC in intergroup relations demonstrates that we need to more fully examine the differential benefits and potential harm of SOC on the individual, group and intergroup as well as organizational and system levels.

All those working with the concept of salutogenesis are called upon to consider these issues, and to join the community of salutogenesis scholars through membership in the interdisciplinary *Society for Theory and Research on Salutogenesis* (www.stars-society.org).

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