

GLOSSARY

Salutogenesis

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The editor of the journal has taken the initiative to develop glossaries on central concepts in health promotion. The aim of this paper is to explain and clarify the key concepts of the salutogenic theory sense of coherence coined by Aaron Antonovsky. The explanations and interpretations are the result of an analysis of the scientific evidence base of the first 25 years of salutogenic research, described and discussed in an ongoing project on a systematic review by the above authors. The contemporary evidence shows the salutogenic approach could have a more central position in public health and health promotion research and practice. Furthermore, it could contribute to the solution of some of the most urgent public health problems of our time such as the question of mental health promotion. Finally, it could create a solid theoretical framework for health promotion.

in, to find a meaning to move in a health promoting direction, also having the capacity to do so—that is, comprehensibility, meaningfulness, and the manageability, to use Antonovsky's own terms. Antonovsky also distinctly stated the salutogenesis was not limited by the disciplinary borders of one profession but rather an interdisciplinary approach and a question of bringing coherence between disciplines and realise what connects them. Furthermore, it is not only a question of the person but an interaction between people and the structures of society—that is, the human resources and the conditions of the living context. Salutogenesis, the origin of health, is a stress resource orientated concept, which focuses on resources, maintains and improves the movement towards health. It gives the answer why people despite stressful situations and hardships stay well. The theory can be applied at an individual, a group, and a societal level. It is the opposite of the pathogenic concept where the focus is on the obstacles and deficits.^{1 2}

It is 25 years since the American-Israeli medical sociologist, Antonovsky introduced the salutogenic framework to the scientific world.¹⁻³ According to Antonovsky's original idea it was more important to focus on peoples' resources and capacity to create health than the classic focus on risks, ill health, and disease. The key elements in the salutogenic development are, firstly, the orientation towards problem solving and, secondly, the capacity to use the resources available. Over the years the salutogenesis has become an established concept in public health and health promotion. There are now more than 500 articles on the topic available in the established databases of public health. However, there is an apparent need to provide a more comprehensive understanding of this extensive research in areas like medicine/psychiatry/psychology, public health/health science, sociology, nursing, social work, and education. An extensive review of the research area after Antonovsky's sudden death in 1994 is presently being processed by the authors.⁴ This glossary, focusing on the key concepts, is a part of the review.

GENERAL RESISTANCE RESOURCES

The other key factors are the resources available to make such a movement possible. Antonovsky used the term general resistance resources (GRRs) that could be found within people as resources bound to their person and capacity but also to their immediate and distant environment as of both material and non-material qualities from the person to the whole society. The key factor is not what is available but to be able to use and re-use them for the intended purpose. The GRRs provide a person with sets of meaningful and coherent life experiences thanks to the resources at the person's disposal. The GRRs are of both genetic and constitutional and psychosocial character such as material, knowledge/intelligence, ego identity, coping strategy (rational, flexible, far sighted), social support, ties, commitment (continuance, cohesion, control), cultural stability, magic, religion/philosophy/art (a stable set of answers), and a preventive health orientation.^{1 2}

It was thought that people develop their SOC through the whole life span but mainly in the first decades of life when people learn how to deal with life in general. The beauty of the conceptual world of the salutogenesis is its dynamic and flexible approach and the persistent focus on ability and capacity to manage. In comparison with concepts like coping or resilience (where the conditions and mechanisms are more rigid and contextual) the salutogenesis has its strength of adaptability and universal use. It is a major life orientation always focusing on problem solving.

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SALUTOGENESIS: HEALTH AS A MOVEMENT

According to Antonovsky health was seen as a movement in a continuum on an axis between total ill health (dis-ease) and total health (ease). The ability to comprehend the whole situation and the capacity to use the resources available was called sense of coherence (SOC). This capacity was a combination of peoples' ability to assess and understand the situation they were

THE LIFE ORIENTATION QUESTIONNAIRE: SENSE OF COHERENCE

SOC reflects a person's view of life and capacity to respond to stressful situations. It is a global orientation to view the life as structured, manageable, and meaningful or coherent. It is a personal way of thinking, being, and acting, with an inner trust, which leads people to identify, benefit, use, and re-use the resources at their disposal. SOC consists of three elements: comprehensibility, manageability, and meaningfulness. The original definition by Antonovsky:

"a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement." (page 19)²

Comprehensibility refers to the extent to which you perceive the stimuli that confront you, deriving from the internal and external environments, as making cognitive sense as information that is ordered, consistent, structured, and clear. The person scoring high on the sense of comprehensibility expects that stimuli they encounter in the future will be predictable, ordered, and explicit. This is the cognitive component of the SOC.²

Manageability is the extent to which a person perceives that resources are at their disposal that are adequate to meet the demands posed by the stimuli that bombards them. "At a person's disposal" refers to resources under the person's own control or to resources controlled by legitimate others. This is the instrumental/behavioural component of the SOC.^{1, 2}

Meaningfulness refers to the extent to which a person feels that life makes sense emotionally, that problems and demands are worth investing energy in, are worthy of commitment and engagement, seen as challenges rather than burdens. This is the motivational component of the SOC.^{1, 2}

The life orientation questionnaire (SOC) is the original name of the instrument to measure SOC—that is, the SOC questionnaire—and consists of 29 items. A shorter form of 13 items (SOC-13) was later developed by Antonovsky.²

THE VALIDITY AND RELIABILITY OF THE SOC SCALE

The face validity of the SOC scale seems to be acceptable.⁴ Up to 1993 the SOC questionnaire had been used in at least 14 languages.⁵ However, there are additional translations in at least 19 languages. In all, the SOC questionnaire has been used in at least 33 languages in 32 countries all over the world comprising of both Western countries and countries such as Thailand, China, Japan, and South Africa. The SOC scale seems to be a cross culturally applicable instrument.⁴

The consensual validity of the SOC scale seems to be moderate.⁴ Most of the studies used one of the original scales (SOC-29, SOC-13). However, until 1993 there were only a few attempts to modify the SOC questionnaire.⁵ At present the situation has changed completely. Besides the original SOC questionnaire consisting of 29 items and the shorter version

of 13 items there are several alternative instruments available. At least 15 different versions exist with different scoring alternatives⁴ including two versions of the family sense of coherence scale,^{6–10} a questionnaire especially adjusted for children,^{11–13} and the sense of school coherence instrument.^{14, 15}

The factorial structure of the scale in the three dimensions is not completely clear.⁴ Studies on whether the SOC scales actually correlate with the theoretical construction principles present different results. Factor analysis has in some studies confirmed the one factor solution proposed by Antonovsky,^{16–20} while in others the analyses have failed to confirm this.^{21–24} SOC seems rather to be a multidimensional concept than a unidimensional one.⁴

The correlation with health in general ranges from slight to good, using instruments such as the general health questionnaire,^{25, 26} health index,^{27, 28} Hopkin's symptom checklist,^{29, 30} or mental health inventory^{31, 32} explaining at highest 66% of the variance in SOC.⁴

The comparatively high negative correlation with anxiety and depression is striking, as is the positive correlation with optimism and self esteem. The moderate correlation with instruments measuring life events show that SOC is related to changes in the individual environment. Presently a large number of studies on the relation between SOC and quality of life and wellbeing is to be found.⁴ In general, they show that a high SOC is related to a high quality of life. Furthermore, SOC seems to be connected with attitudes and behaviours.⁴

Examining the longitudinal studies the findings show a comparatively high predictability but also divergent results are reported. SOC seems to be comparatively stable over time, at least for people with an initial high SOC, but not as stable as Antonovsky assumed. The variation in means over time shows small differences. No differences or very small ones are reported in a three to five year perspective.^{33–37} A similar result emerges in a 10 year follow up study among Finnish employees.³⁸ Furthermore, SOC tends to increase with age over the whole life span. Sex differences appear. Women usually score lower on SOC than men, however, the differences are small. Perhaps the differences could be explained by social factors in the society rather than by biological sexual differences.⁴

PRACTICAL APPLICATIONS OF THE CONCEPT

The SOC questionnaire seems to be applicable across cultures measuring people's ability to maintain health despite stress.⁴ Some authors propose that the SOC questionnaire could be used as a screening instrument aimed at identifying people at risk of developing a low SOC. Perhaps there is some justification for this, but there is still the problem of interpretation of the individual position on the health/ease and dis-ease continuum. It is not clear where SOC ceases to protect the movement towards the healthy end. We still lack

Policy implications

One of the most fundamental documents for the international health promotion movement is the WHO Ottawa Charter. This document can be given a salutogenic interpretation consolidating the basic principles of health promotion into one theoretical framework. This has been shown in the European Masters for Health Promotion (EUMAHP) project and its final report where SOC also is used as a learning principle. Another fundamental issue is the close connection between SOC and mental wellbeing. One of the biggest challenges to contemporary public health and health promotion is the effect of stress on mental health. The potential and evidence of the effectiveness of the salutogenic model regarding this is presently underestimated in practice.

What the paper adds

The aim of this paper is to explain and clarify the key concepts of the salutogenic theory sense of coherence (SOC) coined by Aaron Antonovsky. The explanations and interpretations are the result of an analysis of the scientific evidence base of the first 25 years of salutogenic research, described and discussed in an ongoing project on a systematic review by the authors.

this knowledge.⁴ In contrast, the SOC concept could be implemented as a systematic orientation and perspective in daily activities and professional practice—that is, creating empowering dialogues to enforce the strengths of people.³⁹

The SOC concept has been used in interventions such as clinical supervision of nurses,^{40–41} ethical discussion groups,⁴² group intervention programmes for patients hypersensitive to electricity,⁴³ and nursing interventions on cancer patients.⁴⁴ The result shows that SOC is affected by interventions, at least in a short term perspective. In Sweden the Child and Adolescent Health Centre at Lund University has adopted a salutogenic approach in the treatment of young people at risk for developing mental disorders (personal communication Professor Kjell Hansson 2004). However, the long term sustainability of this improvement of the SOC is unclear.⁴

Antonovsky stated the SOC could be used in conflict solution.⁴⁵ How SOC could be implemented as a core factor for conflict solution has not been applied in practice as yet. One of the most fundamental documents for the international health promotion movement is the WHO Ottawa Charter.⁴⁶ This principal document can be given a salutogenic interpretation consolidating the basic principles of health promotion into one theoretical framework. This has been shown in the European Masters for Health Promotion (EUMAHP) project and its final report where SOC also is used as a learning principle.⁴⁷ Another fundamental issue is the close connection between SOC and mental wellbeing. One of the biggest challenges to contemporary public health and health promotion is the effect of stress on mental health. The potential and evidence of the effectiveness of the salutogenic model regarding this is presently underestimated in practice.⁴⁸

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REFERENCES

- Antonovsky A. *Health, stress and coping*. San Francisco: Jossey-Bass, 1979.
- Antonovsky A. *Unraveling the mystery of health. How people manage stress and stay well*. San Francisco: Jossey-Bass, 1987.
- Lindström B, Eriksson M. Professor Aaron Antonovsky (1923–1994): the father of the salutogenesis. *J Epidemiol Community Health* 2005;**59**:511.
- Eriksson M, Lindström B. Validity of Antonovsky's sense of coherence scale: a systematic review. *J Epidemiol Community Health* 2005;**59**:460–6.
- Antonovsky A. The structure and properties of the sense of coherence scale. *Soc Sci Med* 1993;**36**:725–33.
- Hoehn-Anderson K. The relationship between family sense of coherence and family quality of life after illness diagnosis. Collective and consensus views. In: McCubbin HI, Thompson TE, Thompson AI, et al, eds. *Stress, coping, and health in families. Sense of coherence and resiliency*. Thousand Oaks, CA: Sage, 1998:169–87.
- Sagy S, Antonovsky A. The family sense of coherence and the retirement transition. *Journal of Marriage and Family* 1992;**54**:983–94.
- Sagy S. Effects of personal, family, and community characteristics on emotional reactions in a stress situation. *Youth and Society* 1998;**29**:311–30.
- Sagy S, Dotan N. Coping resources of maltreated children in the family: a salutogenic approach. *Child Abuse Negl* 2001;**25**:1463–80.
- Sagy S. Moderating factors explaining stress reactions: comparing chronic-without-acute-stress and chronic-with-acute-stress situations. *J Psychol* 2002;**136**:407–19.
- Margalit M, Efrati M. Loneliness, coherence and companionship among children with learning disorder. *Educational Psychology* 1996;**16**:69–80.
- Margalit M, Raviv A, Ankonina DB. Coping and coherence among parents with disabled children. *Journal of Clinical Child Psychology* 1992;**21**:202–9.
- Vinson JA. Children with asthma: initial development of the child resilience model. *Pediatric Nursing* 2002;**28**:149–58.
- Bowen GL, Richman JM, Brewster A, et al. Sense of school coherence, perceptions of danger at school, and teacher support among youth at risk of school failure. *Child and Adolescent Social Work Journal* 1998;**15**:273–86.
- Nash JK. Neighborhood effects on sense of school coherence and educational behavior in students at risk of school failure. *Children and Schools* 2002;**24**:73–89.
- Frenz AW, Carey MP, Jorgensen RS. Psychometric evaluation of Antonovsky's sense of coherence scale. *Psychological Assessment* 1993;**5**:145–53.
- Gana K. Is sense of coherence a mediator between adversity and psychological well-being in adults? *Stress and Health* 2001;**17**:77–83.
- Feldt T. Sense of coherence. Structure, stability and health promoting role in working life. Jyväskylä studies in education, psychology and social research. [Doctoral thesis] Jyväskylä: University of Jyväskylä, 2000.
- Büchi S, Sensky T, Allard S, et al. Sense of coherence—a protective factor for depression in rheumatoid arthritis. *J Rheumatol* 1998;**25**:869–75.
- Flannery R, Perry C, Penk WE, et al. Validating Antonovsky's sense of coherence scale. *J Clin Psychol* 1994;**50**:575–7.
- Larsson G, Kallenberg K. Dimensional analysis of sense of coherence using structural equation modelling. *European Journal of Personality* 1999;**13**:51–61.
- Dudek B, Makowska Z. Psychometric characteristics of the orientation to life questionnaire for measuring the sense of coherence. *Polish Psychological Bulletin* 1993;**24**:309–18.
- Fiorentino LM. Sense of coherence and the stress-illness relationship among employees: a prospective study. In: McCubbin HI, Thompson TE, Thompson AI, et al, eds. *Stress, coping, and health in families. Sense of coherence and resiliency*. Thousand Oaks, CA: Sage, 1998:91–106.
- Germano D, Misajon R, Cummins RA. Quality of life and sense of coherence in people with arthritis. *Journal of Clinical Psychology in Medical Settings* 2001;**8**:253–61.
- Gibson LM, Cook MJ. Neuroticism and sense of coherence. *Psychol Rep* 1996;**79**:343–9.
- Snekkevik H, Anke AG, Stanghelle JK, et al. Is sense of coherence stable after multiple trauma? *Clinical Rehabilitation* 2003;**17**:443–53.
- Forsberg C, Björvell H, Cedermarck B. Well-being and its relation to coping ability in patients with colo-rectal and gastric cancer before and after surgery. *Scandinavian Journal of Caring Science* 1996;**10**:35–44.
- Cederfjäll C, Langius-Eklöf A, Lidman K, et al. Gender differences in perceived health-related quality of life among patients with HIV infection. *AIDS Patient Care and STDS* 2001;**15**:31–9.
- Ingram KM, Corning AF, Schmid LD. The relationship of victimization experiences to psychological well-being among homeless women and low-income housed women. *Journal of Counseling Psychology* 1996;**43**:218–27.
- Friborg O, Hjemdal O, Rosenvinge JH, et al. A new rating scale for adult resilience: what are the central protective resources behind healthy adjustment? *International Journal of Methods in Psychiatric Research* 2003;**12**:65–76.
- Cohen O, Savaya R. Sense of coherence and adjustment to divorce among Muslim Arab citizens of Israel. *European Journal of Personality* 2003;**17**:309–26.
- Florian V, Dangoor N. Personal and familial adaptation of women with severe physical disabilities: A further validation of the double ABCX model. *Journal of Marriage and Family* 1994;**56**:735–46.
- Nilsson B, Holmgren L, Stegmayr B, et al. Sense of coherence—stability over time and relation to health, disease, and psychosocial changes in a general population: a longitudinal study. *Scand J Public Health* 2003;**31**:297–304.
- Kivimäki M, Feldt T, Vahtera J, et al. Sense of coherence and health: evidence from two cross-lagged longitudinal samples. *Soc Sci Med* 2000;**50**:583–97.
- Virtanen P, Koivisto A-M. Wellbeing of professionals at entry into the labour market: a follow up survey of medicine and architecture students. *J Epidemiol Community Health* 2001;**55**:831–5.
- Suominen S, Helenius H, Blomberg H, et al. Sense of coherence as a predictor of subjective state of health. Results of 4 years of follow-up of adults. *J Psychosom Res* 2001;**50**:77–86.
- Kuuppelomäki M, Utraiainen P. A 3 year follow-up study of health care students' sense of coherence and related smoking, drinking and physical exercise factors. *Int J Nurs Stud* 2003;**40**:383–8.
- Kalimo R, Pakkin K, Mutanen P, et al. Staying well or burning out at work: work characteristics and personal resources as long-term predictors. *Work and Stress* 2003;**17**:109–22.
- Malterud K, Hollnagel H. Encouraging the strengths of women patients. A case study from general practice on empowering dialogues. *Scand J Public Health* 1999;**27**:254–9.
- Berg A, Hallberg IR. Effects of systematic clinical supervision on psychiatric nurses' sense of coherence, creativity, work-related strain, job satisfaction and view of the effects from clinical supervision: a pre-post test design. *Journal of Psychiatric and Mental Health Nursing* 1999;**6**:371–81.
- Pålsson M-BE, Hallberg IR, Norberg A, et al. Systematic clinical supervision and its effects for nurses handling demanding care situations. Interviews with Swedish district nurses and hospital nurses in cancer care. *Cancer Nurs* 1994;**17**:385–94.
- Forsgårde M, Westman B, Nygren L. Ethical discussion groups as an intervention to improve the climate in interprofessional work with the elderly and disabled. *Journal of Interprofessional Care* 2000;**14**:351–61.
- Hillert L, Savlin P, Berg AL, et al. Environmental illness—effectiveness of a salutogenic group-intervention programme. *Scand J Public Health* 2002;**30**:166–75.
- Delbar V, Benor DE. Impact of a nursing intervention on cancer patients' ability to cope. *Journal of Psychosocial Oncology* 2001;**19**:57–75.
- Antonovsky A. Complexity, conflict, chaos, coherence, coercion and civility. *Soc Sci Med* 1993;**37**:969–81.
- WHO. *The Ottawa charter*. Geneva: WHO, 1986.
- Davios JK, Hall C, Linwood E. *European Masters in Health Promotion (EUMAHP): phase 2: programme delivery final report to the European Commission (DG SANCO)*. Brighton: IHDR, Faculty of Health, University of Brighton (in press).
- Lindström B, Eriksson M. 'The salutogenic perspective—the next generation of mental health promotion?' In: *Promoting mental health: concepts emerging evidence practice*. Geneva: WHO (in press).