

Sense of coherence and chronic illnesses: Scope for research in India

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ABSTRACT

The theory of salutogenesis focusses on how individuals move in the direction of health rather than illness. Within this is the concept of sense of coherence (SOC) that refers to a stable disposition which creates coping resources and a sense of health preservation. With the help of a widely validated SOC scale, a range of studies evidenced that a strong SOC was associated with psychological well-being, healthy behaviors, and good health. Although the cross-cultural nature of SOC is supported, there is limited research exploring SOC in Asian cultures. Understanding how people orient themselves toward health and leveraging this in the development of health interventions within the unique cultural context of India is necessary. The current paper will review the theory of salutogenesis and SOC concept, the measurement of SOC, the relationship between SOC, chronic illnesses, and culture, concluding with suggestions for possible areas of SOC research in India.

Key words: Culture, health promotion, India, psychological adaptation, sense of coherence

INTRODUCTION

What generates health? What makes us move in the direction of health? These simple and original questions created the foundation for a new way of thinking in health research leading to the theory of salutogenesis. Proposed by Antonovsky,^[1] salutogenesis focusses on “the origins of health,” (*salut* means health, *genesis* means origin), i.e., how people move toward health rather than what makes them fall ill. That is, in the health continuum, what makes people move toward “ease” rather than “disease.” Embedded within this theory is the concept of sense of coherence (SOC) which, according to Antonovsky,^[2] is a stable disposition which generates coping resources and the sense of health

preservation. It is the central concept in the salutogenetic model that explains the relationship between life stress and health. A global, pervasive, stable yet dynamic disposition, the SOC construct has three elements, namely:

1. *Comprehensibility* (a belief that events occur in an orderly, predictable manner, and a feeling that one can make sense of their life events as well as predict what may happen in the future),
2. *Manageability* (a belief that events are within one’s control and that one has the resources (e.g., skills, support) needed to handle them), and
3. *Meaningfulness* (a belief that things in one’s life are satisfying, interesting and worthy of caring).

An individual who has a strong SOC will more likely perceive a stressful life event or situation in a positive manner and, consequently, select the suitable coping strategy in order to maintain well-being.

Research has indicated a strong relationship between SOC and health. It is evidenced that people who develop a strong SOC also choose healthy behaviors and lifestyles,^[3] and are also able to cope with chronic illnesses,^[4] and

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better mental health outcomes.^[5] These findings, in turn, spurred the development of interventions to boost people's level of SOC in order to improve their health outcomes e.g.,^[6] In this paper, we introduce the assessment of SOC, examine how SOC is associated with chronic illnesses, as well as discuss the role of culture in one's level of SOC when confronted by a chronic illness. We will conclude the paper by describing potential areas of research in India within this topic.

MEASURING SENSE OF COHERENCE

SOC was initially discovered through qualitative, semi-structured interviews with individuals who had been exposed to extremely severe stress.^[1,2] Based on these interviews, Antonovsky^[2] constructed a questionnaire called the SOC scale or Orientation to Life Questionnaire which measures people's optimistic or pessimistic responses to a life event. The scale consists of 29 items that measure how people perceive life and, when in stressful situations, how do they recognize and utilize their coping resources to preserve and improve their health. The SOC scale consists of three dimensions: Comprehensibility (4 items), manageability (5 items), and meaningfulness (4 items). The SOC scale also has a short-form version with 13 items.^[2] In a systematic review of the validity of the SOC-29 and SOC-13, Eriksson and Lindström^[5] reported that both scales were reliable, valid, and stable. The authors also found that the SOC scales were considered to be cross-culturally applicable with it being used in 44 countries, in over 50 languages with 15 different versions.

The philosophical question trying to respond to what creates health as well as to having a proven method to measure this raised the interest in SOC in the world of science. This generated many debates and questions in medical sociology, psychology, and medicine extending to healthcare and public health. In this way, research in chronic illnesses such as diabetes, cancer, cardiac diseases explored how a SOC helps individuals respond positively to their health, thus improve their health outcomes.

SENSE OF COHERENCE AND CHRONIC ILLNESSES

A strong SOC is associated with good health, particularly because people who develop a strong SOC have a tendency to choose positive life behaviors, i.e., they use less tobacco and alcohol, engage in more physical activity, and choose better food habits and they manage stress and negative life events better.^[7-10] Research in SOC has also found that individuals with a strong SOC manage better if diagnosed with an acute

or chronic disease such as diabetes, cardiovascular disease, chronic lung disease, and cancer.^[11-15]

Findings from the Helsinki Heart Study demonstrated that the impact of the SOC on coronary heart disease (CHD) differs depending on occupation such that those in white-collar work environment who had a weak SOC reported high CHD incidence.^[16] Similar findings were reported by the European Prospective Investigation into Cancer (EPIC)-Norfolk study in the UK which showed that a strong SOC was associated with a reduced rate of stroke incidence after adjustment for age, sex, social class, education, pre-existing myocardial infarction, diabetes, hypertension treatment, family history of stroke, cigarette smoking, systolic blood pressure, obesity, hostility, and depression.^[15] This effect was not observed in a blue collar work environment. In accordance with research findings of a strong SOC being related to health behaviors reported that a strong SOC was associated with lesser chances of being totally non-adherent and higher chances of being adherent.^[17] Further, studies have found that a strong SOC was predictive of better health-related quality of life (HRQoL) among patients undergoing coronary artery bypass graft surgery and angioplasty.^[18,19]

Research in diabetes has reported similar relationships between SOC and diabetes and diabetes-related psychological outcomes. For example, Cohen and Kanter found a strong SOC was related to a lower level of psychological distress and better glycemic control, adherence, and self-care behaviors.^[11] A weak SOC, in general, was found to be indicative of higher morbidity and mortality. Further, Leksell *et al.* reported that persons with a combination of a strong SOC and the ability to manage daily life perceived their health was better, experienced less burden of diabetes, and had better glycemic control than individuals with weak SOC.^[14] Similar results were reported in a study with diabetic patients who were insulin dependent where a strong SOC was associated with a more effective coping ability such that they were more able to accept the consequences of diabetes.^[20] With regard to psychological outcomes of diabetes, Shiu reported that individuals with strong SOC had lower levels of fear of hypoglycemia.^[21]

Interestingly, the relationship between SOC and cancer focussed mainly on psychological outcomes. For example, a strong SOC was found to be associated with better quality of life,^[12,22] better adjustment to breast cancer,^[23] higher levels of hope and psychological well-being, reduced distress,^[24] and positive emotional perceptions, better perceived general health, and better mental well-being

among cancer patients.^[25] Further, in a longitudinal study investigating the effect of SOC on cancer incidence, Poppius *et al.* interviewed Finnish male participants at 8 and 12 years after the first measurement of SOC.^[26] The authors found that participants with a weak SOC had a higher incidence of cancer (rate ratio = 1.52) compared to those who had a strong SOC. However, this effect weakened in the 12-year follow-up (rate ratio = 1.14).

Research suggests, however, that one's appraisal of life stress such as chronic illnesses are culturally embedded. In other words, culture plays a role in various characteristics and perceptions of stressors such as the type of stressor, how it is appraised, and what coping strategy an individual may choose.^[27] Therefore, it is important to understand the role of culture in the development of a SOC and, in turn, how that is related to adjusting to chronic illnesses.

ROLE OF CULTURE IN SENSE OF COHERENCE

SOC, according to Antonovsky,^[2] is a cross-cultural concept. That is, an individual from any culture who has a strong SOC will be able to prevent and manage a life stress. However, Antonovsky agreed that culture-specific factors such as a homogenous society with a strong heritage that is at once socially insulated but is in touch with the modern world can strengthen SOC.^[2] Hence, although how one develops their SOC ("Does life make sense?," "Is this problem manageable?," "Is my life/this stressor meaningful?") is based on their cultural background, any individual who has a strong SOC will cope better with their problem.

Most research exploring the relationship between SOC and chronic illnesses was conducted in predominantly Western cultures. *e.g.*,^[11,12,18,26] However, Asian cultures that are largely collectivist, paternalistic, and community-driven can significantly influence these relationships. For instance, in a study exploring the cultural differences among Chinese, Japanese, and American participants in their responses to the SOC-13, Lee *et al.* found that Japanese participants found some items in the scale difficult to respond to and Chinese participants frequently did not answer some questions.^[28] Interestingly, both Japanese and Chinese participants were more likely to choose the mid-point on items exploring positive emotion than Americans. This is indicative of cultural differences in interpretations of the SOC constructs. Ding *et al.* concurred with these findings when they found that although the Chinese SOC scale-13 (C-SOC-13) was a suitable scale for Chinese patients with cervical cancer, there may be differing definitions of the meaning of SOC

among the Chinese people.^[29] This, the authors suggested, could be because of the way their sense of spirituality, philosophy and culture contributes to their world view may differ from other cultures, especially Western cultures. This issue can be addressed by developing a culturally more meaningful scale where the items are closely aligned with the socio-cultural background of that population. The scale can be informed by the use of a mixed methods approach where qualitative research can unpack the socio-cultural, philosophical, spiritual, and linguistic nuances of the SOC constructs and quantitative research can develop and test the new, culturally relevant scale.

Although research in Asian cultures has supported the cross-cultural nature of SOC, that is, irrespective of one's cultural background, a strong SOC was predictive of better adjustment and healthy behaviors, *e.g.*,^[30-32] there is limited research exploring SOC and psychological outcomes among Asian individuals with chronic illnesses. To date, only one published study investigated the relationship between SOC, coping, and quality of life after having a critical illness where Fok *et al.* found that patients with a strong SOC were able to cope better and reported better quality of life.^[33] This dearth in research signals the need to unravel the relationship between SOC, culture, and psychological outcomes among patients with chronic illnesses that could, in turn, aid in the development of health interventions using the SOC concept.

POTENTIAL AREAS OF SENSE OF COHERENCE RESEARCH IN INDIA

Until recently, research focussed more on the biomedical pathogenic model in the understanding of health development, but there is a rapid increase in interest in the salutogenic model of health and well-being. Research evidenced the significance of using a salutogenic approach when working with incidence, adjustment and management of chronic illnesses such as cardiac diseases, diabetes, and cancer. Finding a synergy between the individual, group and the surrounding socio-economic, cultural, and psycho-emotional environment is of central importance for the development of a healthy orientation in life. Thus, instead of using only traditional interventions that focussed mainly on mitigating the negative outcomes of illness, future healthcare systems in India can focus on the mobilization of health resources, assets, and capabilities of patients in both community settings and within the health institutions. Further, developing interventions that take into consideration what resources are available for strengthening health would be useful for recovery after illness, and may be particularly

useful for individuals who live with a disease for the rest of their lives.

Culture is a crucial backdrop of all experiences, especially when confronted with a life-altering and life-threatening illness. Antonovskys' theory on the SOC is one of the more widely explored stress-management models using an assets approach with a broad evidence based in recent times.^[5,34,35] However, within the umbrella of chronic illness there is surprisingly limited research emerging from Asian cultures that have explored the relationships between SOC and various psycho-social and health outcomes. Indeed, there is no research emerging from India investigating the SOC construct and its relationship with health outcomes, thereby indicating the need to further SOC research in India. The subsequent scope for such salutogenic research and service for patient outcomes in India can be manifold, ranging from the development of interventions to enhance coping abilities in order to improve psychological outcomes, screening for distress, and developing public health initiatives that encourage healthy behaviors by boosting one's SOC.

Developing effective interventions may be of particular benefit in the context of chronic illnesses. For example, assets-based interventions that focus on building one's self-efficacy through skills development, support networks and psycho-education may be aid in increased adherence and better coping. Further, counselling techniques that introduce concepts of self-empowerment and meaning-making such as existential therapy, mindfulness, and/or person-centered approach can improve psychological well-being and SOC.

CONCLUSIONS

In conclusion, we now have a new paradigm and model on health called salutogenesis that explores how people develop a healthy direction in their life course. The model considers not only the individual but also relates strongly to context and culture as well as working on a systems level. We have adequate scientific ways of measuring it through the SOC instrument or Orientation to Life Questionnaire. In addition, we stand with global evidence from more than 50 countries in all continents that the model works by showing that people who develop a strong SOC also develop good health, well-being, and quality of life. With the rapid growth of chronic illnesses all over the world, particularly in India, it is now crucial to find alternative ways to work with health. Indeed, it is now of significant interest to explore and implement new health maintaining models. Salutogenesis not only offers a theory and model

for a change in scope but also gives numerous concepts as tools for both research and practice. Shifting the balance toward using salutogenesis that takes into account one's cultural background may contribute to resolving issues regarding health promotion, risk prevention, and living with chronic illnesses in India.

REFERENCES

1. Antonovsky A. Health, stress, and coping. San Francisco: Jossey-Bass Publishers; 1979.
2. Antonovsky A. Unraveling The Mystery of Health — How People Manage Stress and Stay Well, San Francisco: Jossey-Bass Publishers; 1987.
3. Andersen S, Berg JE. The use of a sense of coherence test to predict drop-out and mortality after residential treatment of substance abuse. *Addict Res Theory* 2001;9:239-51.
4. Delgado C. Sense of coherence, spirituality, stress and quality of life in chronic illness. *J Nurs Scholarsh* 2007;39:229-34.
5. Eriksson M, Lindström B. Antonovsky's sense of coherence scale and the relation with health: A systematic review. *J Epidemiol Community Health* 2006;60:376-81.
6. Weissbecker I, Salmon P, Studts JL, Floyd AR, Dedert EA, Sephton SE. Mindfulness-based stress reduction and sense of coherence among women with fibromyalgia. *J Clin Psychol Med Settings* 2002;9:297-307.
7. Bergh H, Baigi A, Fridlund B, Marklund B. Life events, social support and sense of coherence among frequent attenders in primary health care. *Public Health* 2006;120:229-36.
8. Kuuppelomäki M, Utriainen 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.
9. Savolainen JJ, Suominen-Taipale AL, Uutela AK, Martelin TP, Niskanen MC, Knuuttila ML. Sense of coherence as a determinant of toothbrushing frequency and level of oral hygiene. *J Periodontol* 2005;76:1006-12.
10. Von Ah D, Ebert S, Ngamvitroj A, Park N, Kang DH. Factors related to cigarette smoking initiation and use among college students. *Tob Induc Dis* 2005;3:27-40.
11. Cohen M, Kanter Y. Relation between sense of coherence and glycemic control in type 1 and type 2 diabetes. *Behav Med* 2004;29:175-83.
12. Eriksson M, Lindström B. Antonovsky's sense of coherence scale and its relation with quality of life: A systematic review. *J Epidemiol Community Health* 2007;61:938-44.
13. Kouvonen AM, Vaananen A, Woods SA, Heponeimi T, Koskinen A, Toppinen-Tanner S. Sense of coherence and diabetes: A prospective occupational cohort study. *BMC Public Health* 2008;8:46.
14. Leksell JK, Wikblad KF, Sandberg GE. Sense of coherence and power among people with blindness caused by diabetes. *Diabetes Res Clin Pract* 2005;67:124-9.
15. Surtees PG, Wainwright NW, Luben RL, Wareham NJ, Bingham SA, Khaw KT. Adaptation to social adversity is associated with stroke incidence: Evidence from the EPIC-Norfolk prospective cohort study. *Stroke* 2007;38:1447-53.
16. Poppus E. The sense of coherence and health. The effects of the sense of coherence on risk of coronary heart disease, cancer, injuries and all-cause mortality [dissertation]. Tampere: University of Tampere; 2007.
17. Nabi H, Vahtera J, Singh-Manoux A, Pentti J, Oksanen T, Gimeno D, *et al.* Do psychological attributes matter for adherence

- to antihypertensive medication? The Finnish Public Sector Cohort Study. *J Hypertens* 2008;26:2236-43.
18. Dantas RA, Motzer SA, Ciol MA. The relationship between quality of life, sense of coherence and self-esteem in persons after coronary artery bypass graft surgery. *Int J Nurs Stud* 2002;39:745-55.
 19. Kattainen E, Meriläinen P, Sintonen H. Sense of coherence and health-related quality of life among patients undergoing coronary artery bypass grafting or angioplasty. *Eur J Cardiovasc Nurs* 2006;5:21-30.
 20. Richardson AN, Adner N, Nordström G. Persons with insulin-dependent diabetes mellitus: Acceptance and coping ability. *J Adv Nurs* 2001;33:758-63.
 21. Shiu AT. Sense of coherence amongst Hong Kong Chinese adults with insulin-treated type 2 diabetes. *Int J Nurs Stud* 2004;41:387-96.
 22. Bruscia K, Shultis C, Dennery K, Dileo C. The sense of coherence in hospitalized cardiac and cancer patients. *J Holist Nurs* 2008;26:286-94.
 23. Kulik L, Kronfeld M. Adjustment to breast cancer: The contribution of resources and causal attributions regarding the illness. *Soc Work Health Care* 2005;41:37-57.
 24. Gibson LM, Parker V. Inner resources as predictors of psychological well-being in middle-income African American breast cancer survivors. *Cancer Control* 2002;10:52-9.
 25. Bowman BJ. Cross-cultural validation of Antonovsky's sense of coherence scale. *J Clin Psychol* 1996;52:547-9.
 26. Poppius E, Virkkunen H, Hakama M, Tenkanen L. The sense of coherence and incidence of cancer-role of follow - up time and age at baseline. *J Psychosom Res* 2006;61:205-11.
 27. McCrae RR, Costa PT, Del Pilar GH, Rolland JP, Parker WD. Cross-cultural assessment of the five-factor model the revised NEO personality inventory. *J Cross Cult Psychol* 1998;29:171-88.
 28. Lee JW, Jones PS, Mineyama Y, Zhang XE. Cultural differences in responses to a Likert scale. *Res Nurs Health* 2002;25:295-306.
 29. Ding Y, Bao LP, Xu H, Hu Y, Hallberg IR. Psychometric properties of the Chinese version of sense of coherence scale in women with cervical cancer. *Psychooncology* 2012;21:1205-14.
 30. Dorri M, Sheiham A, Hardy R, Watt R. The relationship between sense of coherence and toothbrushing behaviours in Iranian adolescents in Mashhad. *J Clin Periodontol* 2010;37:46-52.
 31. Nasermoaddeli A, Sekine M, Hamanishi S, Kagamimori S. 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. *Ind Health* 2003;41:236-41.
 32. Ying YW, Akutsu PD, Zhang X, Huang LN. Psychological dysfunction in Southeast Asian refugees as mediated by sense of coherence. *Am J Community Psychol* 1997;25:839-59.
 33. Fok SK, Chair SY, Lopez V. Sense of coherence, coping and quality of life following a critical illness. *J Adv Nurs* 2005;49:173-81.
 34. Kahonen K, Naatanen P, Tolvanen A, Salmela-Aro, K. Development of sense of coherence during two group interventions. *Scand J Psychol* 2012;53:523-7.
 35. Feldt T, Leskinen E, Koskenvuo M, Suominen S, Vahtera J, Kivimäki M. Development of sense of coherence in adulthood: A person-centered approach. The population-based HeSSup cohort study. *Qual Life Res* 2011;20:69-79.

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