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## Introduction

This chapter presents Chinese contributions to the salutogenesis literature. It has been more than 40 years since Antonovsky put forward the theory of salutogenesis in the 1970s. Chinese research institutions and researchers have learnt from, adapted, and used salutogenesis, with some literature now published, though the first step towards salutogenesis was relatively late in China compared to the Western countries. Cultural differences and varying traditions may play an important role in the use of salutogenesis in research, projects, and teaching in different countries. Along with a wish to highlight relevant research environments in China, we present a brief profile of the literature on salutogenesis which has been published in Chinese.

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## The Main Research Environments

The salutogenic model of health and the salutogenic concept have been used by a number of Chinese researchers and research environments. One of the main research environments for salutogenesis is East China Normal University (ECNU). ECNU is also one of the pioneer universities that first focused on salutogenesis since 2005. Professor Liu at ECNU has been dedicated to the revision of the sense of coherence –13 scale to develop a Chinese version, paving the way for research on salutogenesis in China.

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More recently, Southwest University has made great effort to study salutogenesis. So far, Southwest University has produced the greater part of the salutogenesis literature in Chinese, applying the theory to various groups. Meanwhile, Shandong University has paid much attention to the study of the sense of coherence in clinical fields, with a substantial production of salutogenesis literature since 2010. Other main research environments include Hebei Normal University, Shanghai Normal University, and Zhejiang University.

In sum, the main research environments of interest are normal universities that take up salutogenesis in teaching, departments of psychology in comprehensive universities that focus on mental development research, as well as some medical schools, applying salutogenesis to health issues, and the school of public health in Fudan University is now along with this team.

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## The Salutogenesis Literature in Chinese

The first mention of salutogenesis in Chinese literature was the study of the sense of coherence and its influencing factors, led by Zhou and her colleagues at Zhejiang University, published in the journal *Psychological Science* in 2003 (Zhou, Ma, & Li, 2003). Then, Bao and Liu introduced their work on the sense of coherence at the Tenth Chinese Conference of Psychology in 2005. Among all collected papers from the conference, there were three articles concerning the sense of coherence in particular and salutogenesis more generally. Over the next decade years, salutogenesis has received increasing attention. The number of publications on salutogenesis literature in Chinese in the period 2010–2014 is three times than that in the period from 2003 to 2009.

The literature can be sorted according to at least two criteria, the publication format and the centrality of salutogenesis in the publication. Here, we restrict the focus

to publications which mention important concepts from the salutogenic model of health, such as generalized resistance resources and/or sense of coherence, and exclude work merely mentioning the word salutogenesis to indicate a way of thinking. With regard to publication format, research articles, books and book chapters, and quality publications in other formats (reports) are included. Master's theses and Doctoral dissertations are not included.

The literature search was conducted using the Chinese literature databases "China National Knowledge Infrastructure" and "Wanfang Data." When using "salutogenesis" or "salutogenic model of health" as search terms, no more than ten publications in Chinese are identified. However, when using the search term "sense of coherence," the result was much more fruitful, and we see that the sense of coherence is the main research focus in the Chinese literature on salutogenesis.

It is impossible to do justice to every publication due to the space limitation of this chapter. However, the overview will give the reader a chance to identify publications of interest.

A series of publications have reviewed research progress in the salutogenesis research arena both nationally and internationally, such as Research Progress on the Salutogenic Model of Health (Chen & Xue, 2010) and The Current Situation and Prospects of Research on the Sense of Coherence (Xi, Zhang, Xiao, & Lei, 2014).

Great effort has been made to study the sense of coherence and to develop a Chinese version of the SOC-13. Liu Junsheng and his colleagues have studied the reliability and validity of Chinese Version (Bao & Liu, 2005). The study shows that the quality of items is high; the scale has good criterion-related validity with Cronbach's  $\alpha = 0.76$  and a three-factor model was founded by exploratory factor analysis, which confirmed Antonovsky's hypothesis. He and his colleagues have also carried out research to develop the Children's Sense of Coherence Scale in Chinese Cultural Context (Liu, Zhou, & Sang, 2010). The result of MANOVA showed a significant grade and gender difference in the sense of coherence scores. Overall, the results suggested the Chinese version of the sense of coherence scale provides a reliable and valid measure of children's sense of coherence in the Chinese cultural context. The latent structure of the sense of coherence in the Chinese cultural context has been studied (Zhou & Zheng, 2006) and results also supported Antonovsky's proposition that the sense of coherence consists of meaningfulness, comprehensibility, and manageability.

## Patient and Caregiver Groups

Salutogenic literature related to particular patient groups has mostly focused on the relationship between behaviors and mental health, using the sense of coherence as an indicator of mental health. Patient groups consist of those with chronic diseases, cancers, Parkinson disease, and patients who underwent surgery.

In a study of the correlation between self-care behavior and psychological concordance and depression in 120 Type 2 diabetes patients, Lin, Lin, and Wan (2009) found the mean score of the sense of coherence of patients was  $56.53 \pm 14.65$  and found self-care to be positively correlated with psychological concordance, and to be negatively correlated with depression.

In a study of the relationship between the sense of coherence and medication adherence in patients with hypertension, Li and Fan (2012) found that patients' sense of coherence ( $58.78 \pm 10.44$ ) could affect their medication adherence, and urged attention to the cultivation of the sense of coherence in order to improve medication adherence.

In a study of the relation of health promotion behavior to the Sense of Coherence and depression in cancer patients with a PICC (Peripheral Inserted Central Catheter) Line, Zhang, Gao, Sun, and Li (2014) suggested a positive relationship between the health promotion behavior and sense of coherence ( $50.0 \pm 6.7$ ) while suggesting a negative relationship between health promotion behavior and depression.

Analogously, in a survey of the relativity among sense of coherence, depression, and coping style in patients with Parkinson's disease (Chen & Zhang, 2014) and a study on the sense of coherence in patients with permanent colostomy (Zhang & Ma, 2013), the results both showed a positive relationship between healthier behavior and higher sense of coherence, suggesting one direction of intervention to improve patients' health condition.

In addition to patients, Caregivers also deserve attention.

In a study of factors associated with caregiver burden of lung cancer (Shi et al., 2012), sense of coherence of caregivers has been measured to explore the indicators of the burden on lung cancer caregivers. In this project, a cross-sectional survey was developed and data was collected by face-to-face interview. Zarit caregiver burden interview (ZBI) was used to access the level of caregiver burden. Results showed that the extent of the impact of caregiving on the family caregivers' transportation and health were the risk factors, while sleeping hours and sense of coherence were the protective factors.

## Occupational Health

Among the Chinese Salutogenic literature, there is one part concerning occupational career, most of which has explored the relation between sense of coherence and job presence or job absenteeism, especially within occupational groups such as nurses, policemen, and athletes.

In a study for the effect factors of nurse position holding and resignation and sense of coherence level on the job burnout, Wang, Mao, Zhao, and Han (2012) investigated 286 nurses with the Maslach Burnout Inventory, sense of coherence, and questionnaire of factors for nursing position holding and resignation. The result showed that it could relieve the job burnout effectively by enhancing the sense of coherence for nurses.

In a study of mediating the role of sense of coherence in relationship between self-efficacy and job burnout of policemen (Hu, Li, & Zhang, 2014), 1126 police from 18 areas of Henan province were investigated. Hu and his colleagues found that both self-efficacy and sense of coherence were significantly negatively related to the three dimensions of job burnout. Besides, self-efficacy was significantly positively related to the sense of coherence; Sense of coherence mediated the relationship between self-efficacy and emotional exhaustion completely, and partly mediated the relationship between self-efficacy and depersonalization as well as personal accomplishment reduction.

In a study of the level of sprinters' sense of coherence and its influence factors, Xu (2008), investigated 120 sprinters on the sense of coherence and its influencing factors. The results showed a significant difference of the sense of coherence between sprinters and ordinary young people, and the former one ( $54.75 \pm 11.26$ ) is significantly higher. It also suggested no significant difference between male and female sprinters in the sense of coherence. Moreover, there is significant difference in the level of the sense of coherence between two groups of sprinters who had participated in competitions beyond province level and had not yet. That is, competition experience influences the sense of coherence of sprinters.

These jobs mentioned above are often under stress. According to these researches, it seems that the sense of coherence is important to regulate both physical and mental states.

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## Age Groups

One part of Chinese salutogenesis literature has focused on some particular age groups for people in different life stages with different characteristics.

When it comes to children, in a study of the relationship between left-at-home children's sense of coherence, peer attachment, and mental health, Yang, Hu, Guo, and Zhang (2012) surveyed 327 students in China's southwest regions with the SOC-13, the peer attachment subscale in the IPPA (Inventory of Parent and Peer Attachment), and the MSSMHS (Middle School Students Mental Health Scale). Left-at-home children is a group who do not live with their parents together over 6 months or more long time and often live with their grandparents. They found that the left-at-home children showed a significant gender difference in their sense of coherence (girls'  $=53.02 \pm 4.94$  and boys'  $=51.61 \pm 5.66$ ): the girls showed a significantly higher degree of sense of coherence as well as peer attachment. Besides, senses of coherence, peer trust, peer communication, and peer attachment have a significantly positive correlation with their mental health.

For adolescents, in a study of the mediating effect of sense of coherence between life events and stress consequences on adolescents, Zhou, Li, and Liu (2010) found a negative relationship between the sense of coherence ( $54.26 \pm 8.48$ ) and depression, and a positive relationship between the sense of coherence and happiness. Also, sense of coherence played an important mediating role in adolescents' coping with life events and stress.

With regard to the elderly, Li and Yang focused on the study of relationship of sense of coherence and subjective well-being among the elderly in Chinese rural area (2013). They concluded that the comprehensibility and meaningfulness dimensions of sense of coherence had some predictive validity for subjective well-being of the rural elderly.

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## Other Topic Areas

Other Chinese Salutogenic literature covers topics like drug abuse, posttraumatic stress disorder, and so on.

In a study of relationship between resilience and sense of coherence for rehabilitating drug abusers (Gao, 2013), the Chinese revision of Connor Davidson Resilience Scale and Sense of Coherence-13 scale were used to survey 365 rehabilitating drug abusers. And Gao found a positive correlation between resilience and the sense of coherence.

In a study of the relationship between the sense of coherence and posttraumatic stress disorder (PTSD) of medical staff in Sichuan earthquake area where 8.0 magnitude earthquake occurred in 2008 (Li, Zhou, & Shi, 2010), Essen Trauma Inventor (ETI) and Sense of Coherence-13 were applied to 706 medical staff in the earth quake area. Li et al. came up with conclusions: PTSD irritation symptom and sense of meaningfulness of medical staff in the earthquake area were associated with genders (females higher than males) and age (the older higher than the younger);

Sense of coherence played a cushioning, regulatory, and predictive role in PTSD development.

## Final Comments

A limited number of Chinese language papers introduce salutogenesis in a general way, but most of the salutogenic literature in Chinese takes an empirical quantitative approach, measuring the sense of coherence and analyzing its relationship with other related factors of interest. Most of the research just applies sense of coherence as a tool without laying out the whole salutogenic model of health. In China, there is room for the development of the salutogenic theoretical perspective and the salutogenic model of health in a variety of fields, especially in the area of health promotion.

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## References

- Bao, L. P., & Liu, J. S. (2005). The reliability and validity of Chinese version. *Chinese Journal of Clinical Psychology, 04*, 24–26.
- Chen, X. F., & Xue, X. L. (2010). Research progress on helpful health model. *Chinese Nursing Research, 34*, 3103–3105.
- Chen, X., & Zhang, Y. L. (2014). A study on the relativity among sense of coherence, depression and coping style in patients with Parkinson disease. *Journal of Qilu Nursing, 3*, 33–34.
- Gao, Y. P. (2013). Relationship between resilience and sense of coherence for rehabilitating drug abusers. *Chinese Journal of Drug Dependence, 01*, 44–46.
- Hu, P. L., Li, L., & Zhang, Z. M. (2014). Mediating role of sense of coherence in relationship between self-efficacy and job burnout of policemen. *China Journal of Health Psychology, 08*, 1231–1233.
- Li, L., & Fan, X. Z. (2012). Relationship between sense of coherence and medication adherence in community patients with hypertension. *Medicine and Philosophy, 02*, 56–57.
- Li, H., Zhou, J., & Shi, Q. J. (2010). The relationship between sense of coherence and posttraumatic stress disorder of medical staff in Sichuan earthquake area. *Neural Injury and Functional Reconstruction, 04*, 282–284.
- Lin, T., Lin, X. Y., & Wan, L. H. (2009). A study on correlation between self-care behavior and psychological concordance and depression of Type2 diabetes patients. *Chinese Nursing Research, 01*, 22–24.
- Liu, J., Zhou, Y., & Sang, B. (2010). Psychometric analysis of children's sense of coherence scale in Chinese cultural context. *Psychological Development and Education, 01*, 87–93.
- Shi, J., Teng, Y., Jin, B., Zhao, M., Yu, P., Wang, L., et al. (2012). Factors associated with caregiver burden of lung cancer. *Journal of Modern Oncology, 09*, 1851–1853.
- Wang, H. F., Mao, L. F., Zhao, X., & Han, Y. X. (2012). Study for the effect factors of nurse position holding and resignation and sense of coherence level on the job burnout. *Journal of Nurses Training, 19*, 1752–1754.
- Xi, T., Zhang, Z. M., Xiao, Z. P., & Lei, Y. Y. (2014). The current situation and prospects of research on sense of coherence. *China Journal of Health Psychology, 01*, 151–155.
- Xu, Z. (2008). The level of sprinters's sense of coherence and its influence factors. *Journal of Military Physical Education and Sports, 02*, 111–113.
- Yang, Y., Hu, P. L., Guo, X. W., & Zhang, Z. M. (2012). On the relationship between left-at-home children's sense of coherence, peer attachment and mental health. *Chinese Journal of Special Education, 07*, 87–91.
- Yi, X., & Yang, Y. (2013). Relationship of sense of coherence and subjective well-being among the elderly in Chinese rural. *The Journal of Medical Theory and Practice, 20*, 2683–2685.
- Zhang, M., Gao, W., Sun, Y. Y., & Li, K. (2014). The relation of health promotion behavior to sense of coherence and depression in cancer patients with a PICC Line. *Journal of nursing science, 18*, 72–74.
- Zhang, J., & Ma, X. Q. (2013). Study on sense of coherence in patients with permanent colostomy. *Journal of Nursing Science, 06*, 78–80.
- Zhou, Y., Li, Y., & Liu, J. S. (2010). The mediating effect of sense of coherence between life events and stress consequences on adolescents. *Psychological Science, 02*, 429–432.
- Zhou, Y. P., Ma, J. H., & Li, T. (2003). The study of sense of coherence and its influencing factors. *Psychological Science, 06*, 1134–1135.
- Zhou, H. Y., & Zheng, Q. Q. (2006). The latent structure of sense of coherence in Chinese cultural context. *Psychological Development and Education, 02*, 104–107.