

International Review of Psychiatry



ISSN: 0954-0261 (Print) 1369-1627 (Online) Journal homepage: informahealthcare.com/journals/iirp20

Salutogenic factors for mental health promotion in work settings and organizations

Silke Graeser

To cite this article: Silke Graeser (2011) Salutogenic factors for mental health promotion in work settings and organizations, International Review of Psychiatry, 23:6, 508-515, DOI: 10.3109/09540261.2011.637909

To link to this article: https://doi.org/10.3109/09540261.2011.637909





Salutogenic factors for mental health promotion in work settings and organizations

SILKE GRAESER

Institute for Public Health and Nursing Research (IPP), University of Bremen, Germany

Abstract

Accompanied by an increasing awareness of companies and organizations for mental health conditions in work settings and organizations, the salutogenic perspective provides a promising approach to identify supportive factors and resources of organizations to promote mental health. Based on the sense of coherence (SOC) – usually treated as an individual and personality trait concept – an organization-based SOC scale was developed to identify potential salutogenic factors of a university as an organization and work place. Based on results of two samples of employees (n = 362, n = 204), factors associated with the organization-based SOC were evaluated. Statistical analysis yielded significant correlations between mental health and the setting-based SOC as well as the three factors of the SOC yielded by factor analysis yielded three factors comprehensibility, manageability and meaningfulness. Significant statistic results of bivariate and multivariate analyses emphasize the significance of aspects such as participation and comprehensibility referring to the organization, social cohesion and social climate on the social level, and recognition on the individual level for an organization-based SOC. Potential approaches for the further development of interventions for work-place health promotion based on salutogenic factors and resources on the individual, social and organization level are elaborated and the transcultural dimensions of these factors discussed.

Introduction

Mental health problems show globally an increasing trend. Going along with the development of countries and the adaptation of urban life-styles, the epidemiological transition shifts the attention from infectious diseases to non-communicable diseases and mental health. Mental health problems come under the most common causes of disability; depressive disorders take the first place in the ranking of leading global causes for disabilities in terms of life years lost due to disability (YLD) both in highincome as well as in low-income countries, and alcohol use disorders also take prominent rank (WHO, 2008). With increasing numbers of sick leave days and increasing costs for employers and the health care system, more attention has been given to mental health and its promotion in work settings too.

Work places are central settings that may influence mental health and provide possibilities for mental health promotion. The more frequently recognized meaning of mental health topics and mental health promotion at workplaces and in organizations has put the development of measures for work contexts on the agenda of health promoters and health professionals. Based on trends for an increase of mental health problems in societies and at work

places and associated increasing costs, organizations such as employers look for ways to promote mental health.

Organizations provide frames and represent social systems as specific social norms, values, beliefs and attitudes, shape experiences and provide options for social learning. Moving away from a perspective that rotates around the individual responsibility for mental health, settings and organizations provide significant structures and environments for health. It is therefore worth looking at the structural preconditions for mental health in organizations and settings from a salutogenic perspective. But which are the salutogenic factors in this relationship between a person and an organization that should be enhanced to have impact on mental health within organizations? For mental health promotion the salutogenic factors, the factors that enhance health instead of solely preventing disease, provide a promising approach to integrate these factors in health in workplace health promotion in organizations. New studies show that the individual sense of coherence (SOC) may serve as a predictor for depression in working populations (Sairenchi et al., 2011) and a strong SOC may decrease the risks for sick leave and disability pensions (Kuoppala et al., 2011). Considering a potential salutogenic organizational impact

Correspondence: Dr Silke Graeser, Institute for Public Health and Nursing Research (IPP), University of Bremen, Grazer Strasse 4, 28359 Bremen, Germany. Tel: +49-44117748. E-mail: graeser@uni-bremen.de

on mental health at workplaces shifts the attention to structural preconditions for health and mental health in work contexts and to approaches for mental health promotion.

The centre of this research is the concept of an organization-based SOC and the exploration of its meaning for the promotion of mental health in organizations. Based on the example of universities, health promoting resources of an organization are reflected by salutogenic factors. Organizations such as universities may serve as the mediators of a salutogenic and diversity recognizing culture. The search for resources and their utilization can enable settings and organizations to provide salutogenic and health promoting conditions.

Background

In the era of the Ottawa Charter for Health Promotion of 1986, the value of the concept of salutogenesis (Antonovsky, 1987) was promoted by the promising new salutogenic perspective, focusing on health as the central term instead of the absence of disease and illness that helped the approach gain some fame. Overcoming the dichotomic understanding of health and disease as two separate states, the concept of salutogenesis represents a paradigm shift by integration of a multi-dimensional continuum with the pole 'health' on one side and 'dis-ease' on the other. Salutogenesis made health become the focal point, aiming to identify the health promoting factors influencing a movement towards 'health' on that continuum. Especially as disease and health were usually discussed as two complementary states, the idea of salutogenesis becomes thrilling for those who seriously wanted to 'unravel the mystery of health' (Antonovsky, 1987).

Considered as the central component in the salutogenic model the SOC is meant as a concept in which the different influences are inherent, and shape the perspective an individual takes towards her/his environment. The SOC was conceptualized to summarize basic commonalities of the 'generalized resistance resources' and to define protective factors and resilience by one construct. As a moderating instance the SOC affects the ways of coping with external and internal stressors and influences by this the movement and direction on the continuum between health and disease; from the perspective of stress research successful coping goes along with a shift towards health. Since then several studies and reviews evaluated the concept and meaning of the SOC and the salutogenic model and demonstrated relations of the individual SOC with mental and physical health (e.g. Eriksson & Lindström, 2005; Togari et al., 2008).

Organization-based sense of coherence

The original SOC, assessed by an 'Orientation to Life' questionnaire (Antonovsky, 1993), aims to measure the perspectives and the overall attitude of individuals towards life. This originally individualfocused approach, discussed as a state or trait question, can gain a new dimension if it is understood as a collective state, not only including the individual factor, but also the organizational perspective and a dynamic interaction between the individual and the organization. An organization-based SOC is inspired by a cultural perspective representing the former experiences in interaction with the environment as they are psychological, social, organizational and societal, and the learnt and experienced social and cultural norms. Anyway, the setting-based SOC does not just represent the 'outside' and the response of an individual to the external demands and challenges of the environment, but also has the individual component of internal motivation, cognitive structures and personality which influence the interpretation of situations, and by this the coping with life-events and the feeling of distress.

The idea of a setting-based SOC has been developed already by the research group around Antonovsky; the family SOC was the first setting-based SOC developed (Antonovsky & Sourani, 1988), aiming to understand the SOC as a collective concept with its meaning for coping and health of families. Behind it was the idea of a group SOC that would specifically influence the coping with challenges posed to the group. Antonovsky (1987) discussed this specific group SOC as a potential influential factor for the development and modification of the individual SOC.

Central to the concept of a group-based SOC is the different perspective; instead of a solely individually centred approach, dimensions of daily living, namely settings, and the interaction and transaction between the individual and the setting (e.g. family, community, organization, school, university, workplaces, etc.) are in the focus. Replacing a purely individual perspective in which individuals deal with external stimuli, challenges and threats, the settingbased SOC includes the environment in terms of social environments and the meaning of these transactions for health and well-being and explicitly differs from the individual SOC (Antonovsky, 1979). Based on an understanding of settings as social systems that represent specific spheres of life that are relevant for health, the evaluation of the resources and factors of a setting-based SOC provides a promising perspective for the development of health promoting settings such as organizations as universities.

Universities represent a potentially health promoting setting; they unite organization, workplace and educational institution. The Health Promoting Universities Network, since 1997 part of the Healthy Cities project of the World Health Orgainzation, aims to explicitly take a salutogenic perspective to create supportive conditions for health at universities (Graeser, 2011). The strong focus of the salutogenic model on resources further emphasizes the need for organizations for a more comprehensive and integrated health promotion concept that takes a wider perspective towards health. Within the scope of this network a university-based SOC has been developed to enable the measurement of the structural resources of the university and providing an evaluation tool for comprehensive workplace health promotion.

Universities as health promoting settings may be defined as social systems providing organizational, structural and social preconditions that offer possibilities to support and foster health in and through all areas of this environment. Setting-based health promotion is based on a common understanding that health is a cross-sectional task, which has to be tackled by applying a comprehensive approach to health, including physical but also mental health and the related structural conditions at the university. It includes measures and means for the maintenance and creation of health that are not solely based on individual and behavioural approaches but integrate all conditions, either psychological, social or organizational, within the setting for all members of the setting, either students or scientific, management, administrative or technical staff.

The increasing number of students and staff at universities with a variety of different nationalities poses new challenges to the setting university. Internationalization and increasing mobility of students and staff turns universities into a typical work context dealing with transcultural diversity, uniting different nationalities, cultures, ethnic groups, different religions and offering a living, working and educational environment for all of them. To deal with these multiple diversities new competences and strategies are needed to respond to the need for a transcultural competence.

Diversity and diversity management are new keywords in the management and policy of universities indicating the responsibility of universities to create learning and working conditions that are conducive to health for all of its diverse members. The trend to strengthen the internationalization at universities emphasizes the meaning of universities as models in society and as workshops for innovation. Universities provide work places, study conditions and education opportunities, but also take responsibility for societal development through the creation of future leaders and professionals for all relevant areas of society (Graeser, 2003). The university by itself creates a

university culture which is determined by an internal and common agreement about values and norms and provides cognitive and social patterns, for example through processes of social learning. This study dealt with university culture in terms of perceived comprehensibility, manageability and meaningfulness. Experiences, expectations and perceived reality are parts of the basis for a setting-based SOC and the university culture will be compared to other culturally built up patterns, schemes and expectations. These expectations are created by former experiences which are considered as main sources for the development of the SOC.

Methods

University Sense of Coherence (U-SOC) scale

The basic understanding of the setting-based SOC as a transactional construct includes the possibility of identifying structural conditions of organizations in a collective feeling of trust in an organization such as a university, including structural, organizational and social dimensions and the perceived participation of the setting members. Additionally the transactional view includes a concept of changeability of the setting-based SOC through a change of structural and organizational preconditions, and by this opens opportunities to develop salutogenic measures for settings and organizations.

The university SOC is based on the three subcomponents of comprehensibility, manageability and meaningfulness and defined as 'a global feeling of trust' that (1) stimuli from the university are structured, understandable and explainable (comprehensibility), (2) at the university resources are available to cope with challenges posed by these stimuli (manageability) and (3) these challenges are worth the efforts and the engagement to cope with them (meaningfulness) (Antonovsky, 1991, 1998).

To identify a setting-based SOC in the university organization, the University Sense of Coherence (U-SOC) scale was developed, based on items adapted from the Family Sense of Coherence questionnaire (Antonovsky & Sourani, 1988), the Sense of Coherence Heidelberg questionnaire (Schmidt-Rathjens et al., 1997), and additional self-constructed items (Graeser, 2003). Two versions of the scale have been developed: a short version, the 13 items including U-SOC-K (Cronbach's Alpha: 0.81) and the U-SOC-L with 27 items (Cronbach's Alpha: 0.89) based on a 7-point Likert scale. Both versions were developed based on an expert panel for the preselection of items and the evaluation of conducted pre-tests. Extensive statistical calculation tests were conducted to ensure further the reliability and validity of the scale. Item difficulties and discriminatory power of the items were tested and the scale adapted to improve the scale parameters.

Two separate studies were conducted to evaluate the setting-based coherence concept and test reliability and validity of the developed scale in the setting university. In total, 566 employees of a German university participated in the two separate studies, which were conducted as employee health surveys within the scope of a health promoting university project at the university to assess the health situation of the university and its employees. For the first study all 860 employees in administration and technology departments of the university were included in the sample and asked to fill out the questionnaire including different sections and questions related to the health situation in the university and a short 13-item version of the U-SOC scale (U-SOC-K). A total of 370 employees responded and finally 362 questionnaires could be included in the analysis, representing a response rate of 43%. This first study included 65.4% female and 34.6% male staff members. Due to the strict data security regulations, the sensitivity of health-related data, and in order to obtain the permission of the employees union to conduct the study, only two different age groups were analysed: the age group younger than 45 (53.6% of the sample), and 45 and older (46.4% of the sample).

The second study was conducted eight months later and included the complete scientific staff of the university but excluding employees with a professorship. For this study all 502 employees were approached and finally 204 questionnaires were received and included for the analysis, representing a response rate of 40.6%. This sample included 67% female and 33% male scientific employees. Again related to the data security requirements, this time three different age groups were separated and analysed: the age group younger than 35 years (52.9%), the age group 35-44 years old (29.9%) and 45 years and older (17.2%). In this study, next to other health-related questions, the long 27-item version of the scale (U-SOC-L) was included and tested. Both questionnaires included three items, measuring the self-rated status of general health and well-being, mental health and physical health. The study on the administrative and technological staff included additionally a selfrating symptom list evaluating symptoms of common mental and medical problems (Beschwerdeliste/List of symptoms (BL)) (Von Zerssen, 1976). Both of the studies were conducted in close collaboration with the responsible data security assurance representative of the university, strictly in line with the data security law of Lower Saxony and approved by the university board, the data security assurance representative and the employees union. Due to these requirements and the smaller sample size the scientific staff study was again not allowed to include the symptom list. Informed consent was obtained from the participants of the studies.

Results

The results from both studies showed clear correlations between the setting-based SOC and health. The results from the study with the non-scientific staff using the U-SOC-K scale with 13 items yielded correlations of r=0.28 for the short scale and mental health (p<0.01) and r=0.27 for the short version and both, general and physical health (p<0.01). Additionally, significant results could be identified for correlations between most of the symptoms from the mental and medical symptom list and the U-SOC-K with 13 items (Table I).

Highly significant correlations (Spearman) were also identified in the scientific staff study for the total score of the U-SOC-L scale and mental health $(r=0.46,\ p<0.01)$, health in general $(r=0.30,\ p<0.01)$. A more detailed look at the three sub-components of the U-SOC-L and mental health showed that again highly significant correlations occurred between the component meaningfulness and mental health $(r=0.42,\ p<0.01)$, perceived manageability at the university and mental health $(r=0.40,\ p<0.01)$ and comprehensibility and mental health $(r=0.27,\ p<0.01)$.

Table I. Correlations (Spearman) between U-SOC-K and B-L list of symptoms (Von Zerssen, 1976).

Pondering	- 0.34**
Irritability	- 0.33**
Back pain	- 0.26**
Neck and shoulder pain	- 0.25**
Faintness	-0.24**
Feeling of pressure or distention in body	- 0.21**
Fatigue	- 0.21**
Weakness	-0.20**
Agitation	-0.19**
Dyspnea	-0.19**
Heartburn	-0.18**
Restlessness in legs	-0.16**
Sensitivity against cold	-0.16**
Insomnia	-0.15**
Sensitivity against heat	-0.15**
Stabbing chest pain	-0.14*
Weight loss	-0.14**
Headache	-0.13*
Heavy legs	-0.13*
Abundant sweating	-0.13*
Dizziness	-0.13*
Dysphagia	-0.12*
Feeling of lump or tightness in throat	-0.12*
Nausea	n.s.
Trembling	n.s.

^{*}p < 0.05 (two-tailed); **p < 0.01 (two-tailed).

For both studies principal component analyses (PCA) with varimax rotation were conducted, yielding similar results. In this paper the results from the PCA of the scientific staff are presented including the original 27 items of the U-SOC-L; four items were excluded in the course of the factor analysis due to insufficient factor loadings (< 0.40) for an interpretation. Based on Cattell's scree test (1966) three principal components similar to the postulated subcomponents by Antonovsky were yielded from the U-SOC-L scale: comprehensibility, manageability and meaningfulness.

(In-)Comprehensibility as factor includes the six items that illustrate the absence of a loss of control over the circumstances in the university and limited perceived participation. Structures and decisions at the university are experienced as intransparent, unclear and not understandable - and clearly indicate the absence of trust in the organization. The strongest items for this factor were 'I often feel to be at the mercy of the universities' structures' (0.66) and 'I often can't understand why things at the university develop in this way and not in another' (0.61), indicating an absence of empowerment, one of the central principles in health promotion. To summarize, this factor is based on perceived intransparency, helplessness, resignation and powerlessness. In this study for example, over half of the respondents (52.9%) often cannot understand why things at the university develop in this way and 43.3% stated they 'often feel to be at the mercy of the university's structures'.

The factor manageability can be described as centred on coping with the demands posed by the university; it included nine items, mainly related to the institutional and social climate of the organization and identification with the organization. It reflects the trust in 'legitimated others', representing the organization and the university as social community as a source for internal strength and resilience. Strongest loading items in this component analysis are 'If an important decision for the university has to be taken that affects the whole university, I trust that this decision will be good for the members of the university' (0.79), 'If the university is threatened by critics, I believe that the whole university would hold together' (0.68), and 'When I have to do tasks that need the cooperation of the members of the university, I think, this will work out' (0.60). For example, the study showed that 65% of respondents doubted that decisions at the university will be beneficial for its members and 59.4% that the members of the university would hold together against threats. On the other side 58.8% agreed to the statement that they will find people at the university who would help them if confronted with a difficult situation at the university and 59.6% that for every problem at the university a solution may be found.

The factor meaningfulness contains eight items that describe demands as challenges instead of threats and the possibility for personal growth and enrichment through engagement with the organization. The willingness to cope with external and internal stimuli suggests a proactive attitude and perceived self-efficacy to overcome occurring barriers in the university. The highest loadings for this component could be identified for 'Working at the university is an exciting challenge for me' (0.75) and 'I feel that the university enriches my life' (0.68), followed by items that focus on the meaningfulness of the work at the university (-0.64)and items that show congruency of personal individual goals with opportunities at the university: 'At the university I can reach my personal goals' (0.58). As results of this study 69.6% agreed that the work at the university is an exciting challenge and enrichment for their lives, 60% of university members thought that the work at the university is meaningful and the challenges posed there are worth engagement (Table II).

The results from both studies suggest a meaning of an organization-based concept of the SOC for mental health based on the three different sub-components. Similar results from other studies based on this scale showed similar tendencies in terms of an organization-based SOC for students of universities but also in other organizations as hospitals (Brunner et al., 2009; Graeser, 2011; Graeser, Wienert, Fleige-Völker & Stiefler, in print; Kada et al., 2011; Janssen & Volke, 2011). All adapted scales showed sufficient Cronbach's alphas and could confirm the three subcomponents and yielded significant correlations for the U-SOC and mental health. For example, a study on the Student Sense of Coherence (S-SOC) scale in an Austrian university, adapting the U-SOC scale for students, demonstrated significant correlations between the S-SOC score and mental well-being, with physical well-being and the two components meaningfulness and manageability (Brunner et al., 2009). Likewise, significant correlations between the U-SOC and mental health were found in a study on mental health of students of another German university (Graeser, 2011; Janssen & Volke, 2011).

The SOC construct was originally discussed as a universal life-orientation (Antonovsky, 1987). The results of the studies give hints in the direction of the changeability of an organization-based SOC. Understanding the two protagonists in the creation of mental health in members of organizations means to encourage deeper looks on the individual, the organization and especially the dyadic process and interactive process between them. Considering the results from the studies, the setting-based SOC is a promising construct to evaluate this process and gain insights about potential for mental health promotion.

Table II. Rotated factor loadings (varimax) U-SOC-L (23 items).

U-SOC-L items	Comprehensibility	Manageability	Meaningfulness
The university has clear and transparent structures.	-0.57	0.22	0.03
I have the feeling that the university enriches my life.	-0.17	0.32	0.68
I often can't understand why things at the university develop in this way and not in another.	0.61	-0.11	-0.02
If I am confronted with a difficult problem at the university surely I will find people there who will help me to solve the problem.	-0.14	0.55	0.23
Difficulties at the university are challenges to continue anyway.	0.07	0.22	0.47
I often feel to be at the mercy of the universities' structures.	0.66	-0.04	-0.18
At the university I am often doubtful about the meaning of my doing.	0.35	-0.08	-0.64
If a problem occurs in an important part of my university work it will surely be possible to find a solution.	-0.21	0.46	0.25
Life at the university is chaos: all the time situations occur that are not predictable.	0.51	-0.26	-0.09
In general I have the impression that things at the university develop according to my interests.	-0.35	0.60	0.19
When I have to do tasks that depend on the cooperation of the members of the university, I think, this will work out.	-0.10	0.60	0.28
Often I am speechless about developments at the university.	0.56	-0.32	-0.18
Sometimes I wonder about the sense of what we doing at the university.	0.25	-0.14	-0.64
If the university is threatened the university members altogether will do something to protect from the threat.	-0.34	0.60	0.01
At the university I can reach my personal goals.	-0.06	0.18	0.58
I am not clear what my real task at the university is.	0.30	0.03	-0.49
At the university we share joyful events with each other.	0.12	0.55	0.32
Many people, even those with a strong character, feel sometimes like a jinx. In the university there are situations when I feel like this.	0.58	0.11	-0.34
If the university is threatened by critics, I believe, that the whole university will hold together against it.	-0.02	0.68	-0.19
I believe that what is done at the university is meaningful.	-0.20	0.37	0.58
If an important decision for the university has to be taken, affecting the whole university, I trust that this decision will be good for the members of the university.	- 0.35	0.79	- 0.37
Working at the university is an exciting challenge for me.	-0.05	0.22	0.75

To summarize, a high setting-based SOC is based on a foundation of measures for a dynamic interaction between the organization and the individual carrying comprehensibility, manageability and meaningfulness as pillars of the coherence. As the main conclusion it is neither the individual nor the organization separately, but the transactional processes which make the individual feel that she/he is a part of the setting and provide conditions conducive to mental health promotion. This transaction requires a clear and transparent communication between the different parts of the organization, the individuals, the colleagues, the departments and the management level. As the results indicate the strong meaning of all three sub-components for mental health, measures to support a salutogenic culture have to be based on the components of understandability, manageability and meaningfulness. This includes the creation of understandable and transparent structures in the organization and clear and effective opportunities for participation, the support of a positive social climate with colleagues, in working groups and departments, including communication structures that are supportive for a perceived

appreciation and feedback. In a more practical approach this means the improvement of internal organizational communication ways and tools, measures on the level of management and leadership to support the professional and personal development of employees and provide opportunities for career development.

Limitations for the interpretation of the results are mainly related to the exploratory character of the studies and the related relatively small samples. Other studies conducted on basis of the university SOC are so far limited to organizations in Germany; new settings such as hospitals have been explored and show promise for further investigations of other organizations. The scope of this organization-based construct is limited and has to be evaluated in different cultures and organizations to identify commonalities and differences. Some of the studies found hints for a gender-specific difference of the setting-based scale (Brunner et al., 2009); for the original U-SOC no gender-specific differences could be identified, so this question has to be explored further. There are also hints that the U-SOC might change over time, the cluster analysis showed that the group with the

lowest U-SOC worked longest for the university; in any case the group was too small to evaluate this in more detail. Other tasks are related to the currently absent norm values of the U-SOC scale and to define thresholds to give orientation about the meaning of scores and results.

Conclusions and future needs

Cultural dimensions are the basis for an organization-based SOC and have to be considered as characteristic of the organization. The setting-based SOC shifts the focus from the individual to the organizational culture in an organization. Instead of an enduring personal trait, the orientation of a SOC towards an organization includes a transactional, and by this, dynamic process. Culture may be understood in a general way, as the 'result of a learned and shared dynamic and interactive process becomes visible in common beliefs, attitudes, values and norms, behavior and communication patterns and structures' (Kreuter & McClure, 2004, p.440). This dynamic process may be observed from the angle of a cultural setting. The creation of a transculturally sensitive salutogenic culture in workplaces and organizations refers to the provision of understandable structures and transparent ways of decisions by effective communication in the organization. This includes the consideration of cultural diversity in the organization and the choice of culturally appropriate ways of communication.

Concrete measures for mental health promotion in organizations have to be built on a proper analysis of working and health conditions in the organization which will provide hints for the development of organizational, structural and social measures that may be taken to support mental health and well-being. This has to accompany a sound analysis of the salutogenic and health situation in the organization including transcultural dimensions to be able to identify needs in terms of transcultural competences. An organization-based university SOC reflects the different cultures within the members of the organization, their expectations, their values and social norms. Even though the organization-based SOC with its three sub-components may be a universal construct, it still might require different measures for different cultural settings and a specific attention for increasing transcultural work environments. Culturally formed expectations as social norms might differ in ethnic groups and cultures, meaning that interventions implemented have to be culturally sensitive. The development of an organization-based SOC requires the awareness towards cultural dimensions as an integral part of a health promoting setting. In accordance with approaches of setting-based and comprehensive work health promotion, a transcultural perspective will demand consideration of all steps of organizational and setting-based health promotion. It has to include in the planning phase the steps of analysis of transcultural issues at the organization, and the careful attention to cultural aspects in the implementation of measures.

Future studies and results will have to further investigate the differences and commonalities of an organization-based U-SOC of different cultural contexts and may reflect the increasing importance of transcultural settings as work contexts. More studies have to be undertaken related to the transcultural dimension of the U-SOC; this could provide more insights about the mechanisms, factors and specific resources needed for mental health promotion in transcultural settings, especially focusing on methods of involvement and participation of employees, social norms and social support, and communication. The transcultural competence of the members of the setting is one aspect that influences how the members can experience the coherence of the setting university. For the human resources development and the organizational development of workplaces and organizations the integration of transcultural competences becomes important when talking about a university culture and a feeling of trust and cohesion towards the organization. Only if the university organization considers the transcultural perspective as a factor in the creation of a dynamic relationship with its members, may it be integrated in a global feeling of trust towards the organization - an organizationbased SOC.

Take-home points

An organization-based SOC is meaningful for mental health in transcultural workplace settings. The construct of an organization-based SOC with the components comprehensibility, manageability and meaningfulness may describe the salutogenic quality of an organization.

Future directions

With increasing attention and importance of mental health promotion more attention will be given to new ways to promote mental health in organizations. An organization-based sense of coherence provides an approach for the development of a comprehensive work-place health promotion in transcultural settings.

Acknowledgement

Special thanks go to Jutta Jacob for valuable comments.

Declaration of interest: The author reports no conflicts of interest. The author alone is responsible for the contents and writing of the paper.

References

- Antonovsky, A. (1979). *Health, stress and coping*. San Francisco: Jossey-Bass.
- Antonovsky, A. (1987). Unraveling the Mystery of Health How People Manage Stress and Stay Well. San Francisco, CA: Jossev-Bass.
- Antonovsky, A. (1991). The structural sources of salutogenic strengths. In C.C. Cooper & R. Payne (Eds), Personality and Stress: Individual Differences in the Stress Process (pp. 67–104). Chichester: Wiley.
- Antonovsky, A. (1993). The structure and the properties of the sense of coherence scale. Social Science and Medicine, 36, 725– 733
- Antonovsky, A. (1998). The structure and the properties of the Sense of Coherence scale. In H.I. McCubbin, E.A. Thompson, A.I. Thompson & J.E. Former (Eds), Stress, Coping and Health in Families (pp. 21–40). Thousand Oaks, CA: Sage.
- Antonovsky, A. & Sourani, T. (1988). Family sense of coherence and family adaptation. *Journal of Marriage and the Family*, 50, 79–92.
- Brunner, E., Maier, M., Gritsch, A. & Jesull, B. (2009). Die Universität ein kohärentes Setting? Messung des studentischen Kohärenzgefühls [The university a coherent setting? Assessment of the Student Sense of Coherence]. *Prävention und Gesundheitsförderung*, 4, 66–70.
- Cattell, R.B. (1966). The scree test for the number of factors. Multivariate Behavioral Research, 1, 245–276.
- Eriksson, M. & Lindström, B. (2005). Validity of Antonovsky's sense of coherence scale: A systematic review. Journal of Epidemiology & Community Health, 59, 460–466. doi:10.1136/ jech.2003.018085
- Graeser, S. (2003). Hochschule und Gesundheit: Salutogenese am Arbeitsplatz Universität [University and Health: Salutogenesis at the workplace university]. Lengerich, Germany: Pabst Science.

- Graeser, S. (2011). The international development of health promoting universities. *Prävention und Gesundheitsförderung*, 5, 179–184. www.gesundheitsfoerdernde-hochschulen.de/documents
- Graeser, S, Wienert, J., Fleige-Völker, J., Wohlrab, C. & Stiefler, S. (in print). Befragung zur gesundheitlichen Lage von Public Health Studierenden [Survey on Health of Public Health Students]. Bremen: Universität Bremen.
- Kada, O., Brunner, E. & Maier, M. (2011). Das Krankenhaus ein kohärentes Setting? Entwicklung eines bereichsspezifischen Instruments zur Messing des Kohärenzgefühls während stationärer Aufenthalte. [The hospital a coherent setting? Development of a specific instrument for the measurement of the Sense of Coherence for inpatient stays]. Prävention und Gesundheitsförderung August, 4, 299–304, doi:10.1007/s11553-011-0304-3
- Kuoppala, J., Lamminpää, A., Väänänen-Tomppo, I.L. & Hinkka, K. (2011). Employee well-being and sick leave, occupational accident, and disability pension: A cohort study of civil servants. Journal of Occupational and Environmental Medicine, 52, 633–640, doi:10.1097/JOM.ob013e31821aa48c
- Kreuter, M.W. & McClure, S.M. (2004). The role of culture in health communication. Annual Review of Public Health, 25, 439–455.
- Janssen, B. & Volke, A. (2011). Psychische Gesundheit von Studierenden [Mental health of students] (Unpublished master thesis). Bremen: University Bremen.
- Sairenchi, T., Haruyama, Y., Ishikawa, Y., Wada, K., Kimura, K. & Muto, T. (2011). Sense of coherence as a predictor of onset of depression among Japanese workers: A cohort study. BMC Public Health, 11, 205, doi:10.1186/1471-2458-11-205
- Schmidt-Rathjens, C., Benz, D., Van Damme, D., Feldt, K. & Amelang, M. (1997). Über zwiespältige Erfahrungen mit Fragebögen zum Kohärenzsinn sensu Antonovsky [About ambivalent experiences with sense of coherence questionnaires sensu Antonovsky]. *Diagnostica*, 43, 327–345.
- Togari, T., Yamazaki, Y., Takayama, T.S., Yamaki, C.K. & Nakayama, K. (2008). Follow-up study on the effects of sense of coherence on well-being after two years in Japanese universities. *Personality and Individual Differences*, 44, 1335–1347.
- Von Zerssen, D. (1976). *Die Beschwerdeliste*. Weinheim, Germany: Beltz.
- WHO (2008). Global Burden of Disease: 2004 Update. Geneva: World Health Organization.