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ORIGINAL ARTICLE

From health education to healthy learning: Implementing salutogenesis in educational science*

BENGT LINDSTRÖM^{1,2} & MONICA ERIKSSON³

¹Nordic School of Public Health, Gothenburg, Sweden, ²Folkhälsan Research Centre, Helsinki, Finland, and

Abstract

Aim: The aim is to scrutinise the concept of health education (HE) and to broaden the concept of health literacy (HL) towards a lifelong healthy learning concept. HL is a broader concept than HE. This paper dissects both the health and the education concepts, and puts them into the value system of health promotion (HP) of the Ottawa Charter (OC) using the core principles and values of HP, HL, and action competence (AC) in the light of the salutogenesis (SAL). Conceptually the salutogenic model focuses on the direction towards the healthy end of the health continuum. The salutogenic theory, based on resources and comprehensibility, manageability, and meaningfulness, can be integrated into a learning model. People are seen as active and participating subjects shaping their lives through their AC. Method: a combination of an analysis of the values and intentions of health promotion according to the OC combined with the existing evidence on the salutogenic approach to health, stemming from a systematic research synthesis 1992–2003 and an ongoing analysis 2004–2009 by the authors. In addition, the views from a discussion with the participants of a session in the NHPR Conference 2009 are integrated. Results: The similarities and differences between the salutogenesis, the OC and healthy learning were shown in a graph. Integrating the results of the discussions will further develop and strengthen the concept of healthy learning. Conclusions: The

Key Words: Health, health education, health in the river of life, health literacy, health promotion, healthy learning, quality of life, salutogenesis, Sense of Coherence

Background

Health education has been an important pillar for public health ever since it developed into a systematic scientific discipline in the first part of the 19th century. In its early stages health education activities were focused on hygienic aspects and became part of the school curricula when the public school systems were introduced in Europe in the 19th century [1]. There are two parts of the concept, first "health" and second "education". Most of the "education" activities earlier focused on protection, risk reduction, or prevention. There have been different methods and concepts introduced regarding the "education" part of the concept; health communication, health

fostering, health pedagogics, health knowledge, and lately health literacy [2–4]. In the mind of the public, practitioners, and academia, the values and understanding of health education has not changed significantly over time. It is still often seen as a method to convey, "teach", health expert knowledge on factors to special groups and the general public.

There has been less focus on the "health" part of the concept. In the 19th century the health concept evolved in parallel to the increasing knowledge on what causes illness and disease and conceived as the opposite of illness. Public health activities were mainly related to the protection of health and the prevention of risks for disease. This basic view, teaching patients/public, continued up to the

Correspondence: Bengt Lindström, Folkhälsan Research Centre, Public Health Research Programme, Health Promotion Research, Paasikivenkatu 4, 00250 Helsinki. E-mail: bengt.lindstrom@folkhalsan.fi

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³Department of Nursing, Health and Culture, University West, Division of Health and Culture, Trollhättan, Sweden

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middle of the 20th century. A new opportunity came after the Second World War when the UN and WHO were established. The WHO definition of health, based on wellbeing, was declared in 1948. However, most health education activities continued as before also in the "golden age" of health risk behaviour modifications and interventions in the sixties and seventies. The policy change came after 1977 when the WHO launched its global programmes for health - Health for All by the year 2000 - including the aim of "adding life to years" i.e. quality of life (QoL) and wellbeing [5]. This included the embryo of health promotion in the WHO principle document on health promotion of 1984, finally manifested in the Ottawa Charter (OC) on health promotion in 1986 [6].

Health promotion was introduced as a new direction in public health and enabled rethinking of health and health education affecting both the education and health part of the concept [4]. Health promotion aimed at involving and empowering the public itself to a higher extent than before both in the activities and decisions involving health. Health was seen as a process over the life span and as a resource for wellbeing, reaching beyond the views of the traditional health sector. Rather than only directing the main education activities towards the prevention of disease and the avoidance of premature death, health activities intended to make health an important resource for life.

Combining classic public health and medicine with promotion, in a "salutogenic" way gave sound scientific evidence speaking for more positive outcomes such as constructive patterns of living, better stress tolerance, and endurance of chronic and acute illness overall, to improve wellbeing, QoL, and mental health [7–9]. Not taking health directly, but focusing on prerequisites, context, and learning mechanisms give better health results than classic health and education interventions. The gap between practice and principles, theory and evidence urges for a discussion on what health education could achieve if conducted properly. New theories and evidence based on the intentions and values of the OC offer a change in health education practice.

Aim

This paper aims to:

illuminate a possible discourse of health education and health literacy;

dissect the health and the health education concepts through the value system of health promotion, the

Ottawa Charter, and the theory of action competence in the light of salutogenesis;

introduce a new concept, "healthy learning" particularly emphasising healthy in a lifelong learning process.

Method

The method is a combination of analysing the values and intentions of health promotion according to the OC combining it with existing evidence on the salutogenic research, an ongoing systematic research synthesis run by the authors. The first step (1992–2003) was published in 2007 [for details see 9]. This evidence base was discussed with the participants of an oral session at the 6th NHPR Conference in 2009. The session was interactive profiting from the deep knowledge of both the health concepts and of the learning processes expressed by the participants.

Health promotion

Health promotion is complex and hard to define [10–12]. According to the WHO, health promotion is a process enabling people to gain control over their health determinants thereby improving not only health but wellbeing and QoL [6]. In practice, health promotion is a process over the life course with focus on resources for health (determinants). People are seen as active participating subjects improving not only health but wellbeing and the QoL [13,14]. Both the population and the living context are involved as now, presented in the metaphor "health in the river of life", a salutogenic interpretation of health promotion orienting health to life not only to risk, death, and disease [15].

The salutogenic framework

Reviewing literature and evidence of outcome give some theoretical health models that meet these criteria [16,17]. The best documented is the salutogenic theory by Aaron Antonovsky (Figure 1) [18,19]. Both the salutogenesis and the OC present health as a process over the life course but the OC is a principle statement [6] while the salutogenesis has an empirical and theoretical basis [7–9]. Both focus on health as an asset for life and human rights where people are active participating subjects (empowerment) in the process of their lives. Both have a process approach. The OC mainly conceptualises around the health process while salutogenesis has a broader approach towards life orientation [15].

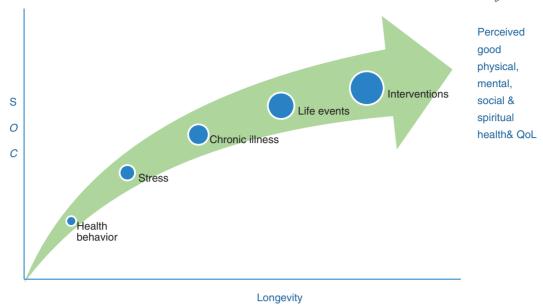


Figure 1. Sense of Coherence as a lifelong process of development.

Other theories fall under the salutogenic umbrella, not elaborated here [see 16]. The similarities and differences of salutogenesis, the OC, and the concept of healthy learning are presented in Table I.

Health education and health literacy

HE is seen as a process, not a product. International practice differs, the USA generally has a traditional view rooted in prevention, Latin America follows the tradition of Paolo Freire liberating learning similar to Europe, Australia, and Canada. Traditionally HE action has focused on individual change towards a healthier orientation, especially in lifestyle research. Nutbeam introduces a broader concept, health literacy (HL) [2]. There are several definitions of HL and differing evaluations of HL action. HL has emerged from two different roots, clinical risk or personal asset [3,4]. Nutbeam states, "health literacy is the ability to perform knowledge-based literacy tasks including literacy skills needed for different health contexts" [4, p.304]. Following Kickbusch and Maag, "health literacy is the capacity to make sound health decisions in the context of everyday life – at home, in the community, at the workplace, a critical empowerment strategy increasing people's control over their health, their ability to seek out information, and their ability to take responsibility" [20, p.206]. In an editorial, Kickbusch states health literacy is a stronger predictor of health status than age, income, employment status, education level, race, or ethnic group [21]. Nutbeam continues, "To find a more complete conceptualisation of health literacy will require a sophisticated understanding of literacy with distinctive health content and contexts" [21, p.304]. Therefore the authors take the salutogenic framework for health into the discussion of literacy and education science expanding the conceptual understanding of the healthy learning process.

The core values of HL are similar to health promotion and the OC (empowerment, human rights, ethics, values, equity) but new directions are emerging integrating participatory and empowering dimensions of learning to create sustainable health developments [22]. Theoretical frameworks like the salutogenic theory [19], an elaboration of the concept of empowerment [23], and action competence [24] become essential.

Education in the context of health promotion

There is a need to focus on health as positive and a broad concept and to work with a health concept including wellbeing and QoL as well as absence of disease. Today health is seen as a four dimensional concept including physical, social, mental, and spiritual aspects [4]. Elaborating the thoughts of Bjarne Bruun Jensen, a holistic concept of health forms the basis for understanding and developing new intervention approaches [22]. There is supposed to be an active participation and active involvement of the target group with focus on participation, generating ownership as a precondition for sustainable change. Furthermore, the participants' concrete action taking is viewed as a crucial part of the learning process. The

Table I. Salutogensis as a healthy learning process in the context of health promotion: similarities and differences of salutogenesis, the Ottawa Charter, and the concept of healthy learning.

Characteristic	Salutogenesis	Ottawa Charter	Healthy learning
Prologue	The Holocaust	UN declaration of Human Rights/ WHO declaration of health	The roots from health education, health literacy, and salutogenesis
Time reference	1979, 1987	1986	A new concept introduced in 2009
Status	Theory, evidence	Principles, ideology	Theory, evidence, perspective
Fundament	Human rights, i.e. active participating subjects	Human rights, i.e. active participating subjects	Human rights, i.e. active participating subjects
Focus	Global life orientation	Health promotion	Health promotion focusing on capacities, assets, and resources
Concept of health	Lifelong learning process	Process	Lifelong learning process
Core question	The origin of health: what creates health? Who are the people staying well? What can their experience tell us about health resources?	Promoting health through active participation	What are the characteristics of a healthy learning process?
Definitions	The original definitions of salutogenesis and the Sense of Coherence (Antonovsky) are generally accepted	There are several and different interpretations of health pro- motion after Ottawa in 1986	Needs to be further developed and improved
Key concepts	Sense of Coherence and Generalised Resistance Resources	Health promotion	Healthy learning
Resources Key mechanism	Generalised Resistance Resources Ability to use the Generalised Resistance Resources for the development of a strong Sense of	Health determinants Enable control over the health determinants (empowerment)	Health and learning determinants Ability to benefit from a strong Sense of Coherence for a life- long learning process
Elements	Coherence Comprehensibility, manageability, meaningfulness		Comprehensibility, manageability, meaningfulness, action competencies
Approach Measurement	Contextual, systems The Orientation to Life Questionnaire. The original Sense of Coherence-29 and Sense of Coherence-13 item-scales, some modified versions with the same questions but with differing scoring alternatives	Settings Different questionnaires with different items depending on the level and dimensions explored	Contextual, systems Needs to be developed based on the original Sense of Coherence questionnaires
Implement level	Individual, group, societal	Individual, group, societal	Individual, group, societal
Outcome	Perceived good health, mental health, and quality of life	A better health and an active and productive life	Perceived good health, wellbeing, and quality of life, thriving and flourishing
Professional role	Serves as a Generalised Resistance Resource	Facilitator, enabler	Facilitator, enabler
Misconception	Only measure Sense of Coherence	Only risk approach focusing on health behaviours	The same concepts as health edu- cation and health literacy
Effectiveness	The global evidence base proves the health model works	Lack of a coherent and sound theory base	Yet to be explored

enablement/empowerment is a question of having an action competence focusing on how individuals and groups manage their own life and influence their living conditions. The concepts of action competence and empowerment include cognitive and social as well as emotional and spiritual/meaningful dimensions, which have to be generated in the learning processes. There is a focus on context through a "settings" perspective where one has to take into account that the promotion of health are influenced by the individual as well as by culture and context.

This implies going from "individualisation" towards a social and cultural model of health and health intervention. This indicates a shift from viewing people with chronic disease as patients towards seeing them as citizens with adequate needs, wishes, and attitudes. The ethics of health promotion calls for a sustainable development with a focus on how methods and educational approaches developed can help to reduce inequality in health – socially and globally in a long-term, sustainable, and ecological development [22]. There is no time for fighting.

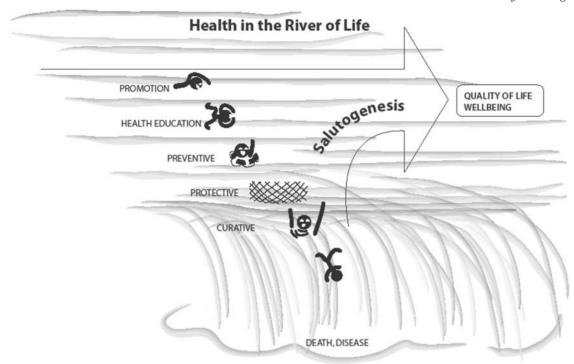


Figure 2. Health in the river of life.

Cure, protection, prevention, and promotion have to work hand in hand in synergy and support each other in order to gain the optimal health results (Figure 2).

Education in the context of salutogenesis

Most of the salutogenic research seems to be applied within the disciplines of classic health sciences, medicine, nursing, psychology, sociology, and social sciences. Education science is seldom included. But there are some exceptions mainly in strict educational research [25,26] or particularly regarding students with special needs [13] and children with learning disabilities [27,28]. Findings from a longitudinal study on Japanese students Togari and colleagues [29] demonstrated that a strong Sense of Coherence predicted good physical and mental wellbeing and a stronger interest in learning. At the ENIRDEM conference in Ireland, Lundgren [30] presented how the Sense of Coherence concept could be used in school context. What seemed to be most important was how pupils were able to construct their own mind set towards a stronger sense of reality and comprehension. The learning process was here seen as a continuous interaction between the pupil and the school environment where comprehensive and meaningful patterns emerged.

A salutogenic reflection of health promotion and learning

While the OC emphasises health determinants (HDs), these are based on factors that eliminate risks and disease instead of "positive" health determinants. Such health risk determinants are perceived and conceptualised through risk management, as seen in discussions on social determinants for health [31]. Salutogensis presents these determinants as Generalised Resistance Resources (GRRs) that enable people develop their Sense of Coherence. Both the OC and the Sense of Coherence can be seen as learning processes where people interact with other people and learn through life experiences gaining the ability to learn how to draw the best conclusions in whatever situations where health and Sense of Coherence develops. Both have a contextual system approach. The OC talks about settings where health can be created and the salutogenesis about the synergy of systems between individual, groups, and society. Both have a eudemonic outcome. The outcome of the OC is to enable people to lead and enjoy an active and productive life in a social context whilst salutogenesis talks about creating a meaningful life in a social and spiritual/meaningful context. There are several models and frameworks focusing on health as an asset leading to a salutogenic, health-promoting development. Space limits elaboration here.

Towards a new synthesis: healthy learning

Reflecting on the discourse of public health and education science in historical context enables a synthesis. By juxtapositioning learning and health-promotion principles, deconstructing the elements, again reconstructing in the spirit of constructivism, adding a reflection of evidence regarding effective health education and health promotion, the silhouette of a different paradigm for health and education emerges. We conceptualise this as "healthy learning".

Salutogenic research gives a clue to the broader aspects of health activities. The systematic review proves that people who learn how to develop a strong Sense of Coherence, also develop better mental health and quality of life [9]. Systems that develop a strong Sense of Coherence seem to make people live longer and more inclined to healthier behaviours regarding exercise, food habits. They can endure chronic and acute illness better and are more stress resistant.

The key is how they approach life as a whole to find life meaningful, rewarding, and challenging on a deeper level. This is the outcome of just one of the salutogenic models, others do have similar outcomes. The finesse is that the model induces health although not necessarily used in classic health interventions. The word "healthy" seems appropriate since it indicates the direction and how people/systems deal with health issues in line with the intentions of the salutogenesis. In health promotion it has been used in the context of settings (healthy city, healthpromoting schools) and in connection to policy making (healthy public policy). As of the learning part, it is a more empowering concept than education and a question of processing life events, habits, and experiences in a reflective way where an event is mirrored in previous knowledge and experience. Further, evaluating what would be the best approach in the life course, thereby building on one's competence for action [24] and increasing one's repertoire to deal with life [32]. It is a reciprocal learning process meaning we all learn from each other.

During the discussion that followed the introduction, many of the participants found the above discourse reasonable and supported the argumentation expressing this was a more "true" argumentation towards the intensions and values of a "real" health-promotion discourse than presented before. Further, the audience suggested the authors developed and presented their views in a formal paper.

Finally, giving the background of the development of HE and HL, the core principles of health promotion and the evidence base of the salutogenic research, we are not ready to present a final definition but suggest a definition: Healthy learning is a lifelong process where people and systems increase the control over, and improve health, wellbeing, and quality of life through the creation of learning environments characterised by clear structures and meaningful empowering conditions where one becomes an active participating subject in reciprocal interaction with others.

Discussion

The purpose of this paper was to introduce the salutogenic framework in educational science by starting a discussion about the content of health education and health literacy expanding towards healthy learning, with the emphasis on healthy, giving a direction similar to the salutogenesis. Research exploring salutogenesis in an educational context is uncommon. This is the first step showing how salutogenesis could contribute to lifelong learning. Further clarification and research is needed. Although the concept was presented formally for the first time in 2009 there has been a long process of developing these thoughts through many years of health-promotion and HE activities in research courses and postgraduate professional training. Now sitting with the models, evidence of outcomes realising this would be an effective way to deal with health education and it is hard to understand this thinking and action has not previously been used explicitly. Here learning has a health-promoting effect in the spirit of Paolo Freire, independent of what is put into focus differing from traditional HE and HL where the focus rather is set on traditional health issues in the meaning of teaching, changing health behaviours, preventing risk and disease, or learning how to navigate in the health system. Sir Michael Marmot looking at health promotion from the outside expressed this dilemma in his input at the 7th WHO Global Conference on Health Promotion in 2009 [33]. According to Marmot the OC states what is supposed to be done and how – the problem is that it is not done. In his analysis he stated, that people do not read and take research seriously, thus the knowledge is not used and transformed into action. People tend to learn "through osmosis" doing what they have been doing before not seriously reflecting on new research results. Therefore the health-promotion movement is at risk to come to stand still.

Giving a practical example regarding health promotion and health education, we take the example of the Finnish school system and its strength and vulnerability. In the Pisa process and evaluation, the

Finnish school children have ranked high as of cognitive competence (reading, mathematics, and natural science) [34]. However, the WHO Human Behaviour in School-aged Children studies repeatedly demonstrate that Finnish school children do not thrive in schools. There are problems with psycho somatic and mental wellbeing in a high extent.

A systematic intervention was made earlier because of worries on the negative health behaviours of the young introducing health literacy as a new subject in the national curricula. In spite of the new curricula the teaching methods have not changed considerably and many teachers continue as before. Some teachers have been specially trained in salutogenic learning. The teaching of students and the new training of the teachers has been going on for just a few years therefore the effects cannot be seen yet. Further, the results of the HBSC studies, especially regarding thriving in schools have had an effect on the academic education institutions. They recently pulled their knowledge together and published a new anthology on the "Education for Wellbeing", this will be a starting point for future training [35].

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References

- [1] Butler TJ. Principles of health education and health promotion. London: Wadsworth; 2001.
- [2] Nutbeam D. Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. Health Promot Int 2000;15:259-67.
- [3] Nutbeam D. The evolving concept of health literacy. Soc Sci Med 2008;67:2072–8.
- [4] Nutbeam D. Defining and measuring health literacy: what can we learn from literacy studies? Int J Public Health 2009;54:303–5.
- [5] WHO. Global strategy for Health for All by the year 2000. Geneva: World Health Organization; 1981.
- [6] WHO. Ottawa charter for health promotion: an international conference on health promotion, the move towards a new public health, 17–21 November 1986. Geneva: World Health Organization; 1986.
- [7] 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.
- [8] 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.
- [9] Eriksson M. "Unravelling the mystery of salutogenesis: the evidence base of the salutogenic research as measured by Antonovsky's Sense of Coherence scale." Doctoral

- thesis Research report 2007:1. Turku: Folkhälsan Research Centre; 2007.
- [10] Seedhouse D. Health promotion: philosophy, prejudice and practice. Chichester: John Wiley & Sons; 2004.
- [11] Keleher H, MacDougall C, Murphy B, editors. Understanding health promotion. New York: Oxford University Press; 2007.
- [12] Labonté R, Laverack G. Health promotion in action: from local to global empowerment. New York: Palgrave Macmillan; 2008.
- [13] Lindström B. The salutogenic model as a tool for quality of life enhancement for children with special needs. Exceptionality Education Canada 1999;9:105–9.
- [14] Laverack G. Health promotion practice: power and empowerment. London: Sage; 2004.
- [15] Eriksson M, Lindström B. A salutogenic interpretation of the Ottawa Charter. Health Promot Int 2008;23:190–9.
- [16] Eriksson M, Lindström B. Bringing it all together: the salutogenic response to some of the most pertinent public health dilemmas. Morgan A, Davies M, Ziglio E, editors. *Health assets in a global context: theory, methods, action.* New York: Springer; 2010. pp. 339–52.
- [17] Lopez SJ, Snyder CR, editors. Positive psychological assessment: a handbook of models and measures. Washington DC: American Psychological Association; 2003.
- [18] Antonovsky A. Health, stress and coping. San Francisco: Jossey-Bass; 1979.
- [19] Antonovsky A. Unraveling the mystery of health: how people manage stress and stay well. San Francisco: Jossey-Bass; 1987.
- [20] Kickbusch I, Maag D. Health literacy. In: Heggenhougen K, Quah S, editors. *International encyclopedia of public health*, Vol. 3. San Diego: Academic Press; 2008. pp. 204–11.
- [21] Kickbusch I. Health literacy: engaging in a political debate. Editorial. Int J Public Health 2009;54:131–2.
- [22] Bruun Jensen B. "The aspiration and strategy for health promotion and education". Available at: www. stenodiabetescenter.com (accessed 12 March 2010).
- [23] Koelen MA, Lindström B. Making healthy choices easy choices: the role of empowerment. Eur J Clin Nutr 2005;59(suppl. 1):10–16.
- [24] Bruun Jensen B, Schnack K. The Action Competence Approach in environmental education. Environmental Education Research 1997;3:163–78.
- [25] Quennerstedt M. "Learning health." [In Swedish]. Doctoral thesis. Örebro: Örebro University, 2006.
- [26] Nilsson LA. Health promotion as school development. Scand J Nutr 2004;48:70–6.
- [27] Margalit M, Efrati M. Loneliness, coherence and companionship among children with learning disorder. Educ Psychol 1996;16:69–80.
- [28] Lackaye TD, Margalit M. Comparisons of achievement, effort, and self-perceptions among students with learning disabilities and their peers from different achievement groups. J Learn Disabil 2006;39:432–46.
- [29] Togari T, Yamazaki Y, Sasaki Takayama T, Yamaki CK, Nakayama K. Follow-up study on the effects of sense of coherence on well-being after two years in Japanese university undergraduate students. Pers Individ Dif 2008;44:1335–47.
- [30] Lundgren M. "Are schools able to bring sense in pupils' lives? An experiment to use Antonovsky's concept sense of coherence from a school perspective." Paper presented at The ENIRDEM conference; Kilkenny, Ireland, 26–29 September 2002.
- [31] CSDH. Closing the gap in a generation: health equity through action on the social determinants of health. Final

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- report of the Commission on Social Determinants of Health. Geneva: World Health Organization; 2008.
- [32] Nordenfelt L. Action, ability and health: essays in the philosophy of action and welfare. London: Kluwer Academic Publishers; 2000
- [33] Marmot M. "Convergent strategies, divergent histories, emergent opportunities: health promotion, the social determinants of health and health care." Subplenary session,
- Tuesday 27 October 2009 at the 7th Global Conference on Health Promotion, Nairobi, Kenya.
- [34] OECD. Pisa 2006: science competencies for tomorrow's world. Paris: OECD; 2007.
- [35] Lappalainen K, Kuittinen M, Meriläinen M, editors. *Educational wellbeing*. [In Finnish]. Turku: Suomen Kasvatustieteellinen Seura; 2008.