

Well-being in schools: a conceptual model

ANNE KONU and MATTI RIMPELÄ¹

Tampere School of Public Health, FIN-33014 University of Tampere, Finland and ¹STAKES, National Research and Development Centre for Welfare and Health, PO Box 220, FIN-00531 Helsinki, Finland

SUMMARY

Health and well-being have mostly been separated from other aspects of school life. Health services and health education have been available for school-aged children in Western societies for a long time. Recently, more comprehensive school health programmes have been developed, e.g. the WHO 'health promoting school' and 'coordinated school health programme' in the USA. They focus on how to implement health promotion and health education in school. However, a theoretically grounded model based on the sociological concept of well-being is needed for planning and evaluation of school development programmes. The School Well-being Model is based on Allardt's sociological theory of welfare and assesses well-being as an entity in school setting. Well-being is connected with teaching and education, and with learning and achievements. Indicators

of well-being are divided into four categories: school conditions (having), social relationships (loving), means for self-fulfilment (being) and health status. 'Means for self-fulfilment' encompasses possibilities for each pupil to study according to his/her own resources and capabilities. 'Health status' is seen through pupils' symptoms, diseases and illnesses. Each well-being category contains several aspects of pupils' life in school. The model takes into account the important impact of pupils' homes and the surrounding community. Compared with others, The School Well-being Model's main differences are the use of the well-being concept, the definition of health and the subcategory means for self-fulfilment. Making the outline of the well-being concept facilitates the development of theoretically grounded subjective and objective well-being indicators.

Key words: school; theory; well-being

INTRODUCTION

The Convention on the Rights of the Child (UN, 1989) article 24 states that 'States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health ...'. Furthermore, the Ottawa Charter (WHO, 1986) and the Jakarta Declaration (WHO, 1997) emphasize the importance of the settings in which the prerequisites of health are created. School is the main setting for health promotion among children and adolescents.

Previously, health in school has for the most part been separated from other aspects of school life. Health services have long been available for school-aged children in Western societies. The other parts of the school health core have been health education and a healthy school environment

(Green and Kreuter, 1999). Recently, more comprehensive school health programmes have been developed, e.g. the WHO 'health promoting school' idea (Parsons *et al.*, 1996; WHO, 1998; Turunen *et al.*, 1999) and the 'Coordinated School Health Program' in the USA (Allensworth and Kolbe, 1987; Marx and Wooley, 1998).

Comprehensive health programmes in school have moved towards wider and wider interpretation of the health concept. Still, these programmes derive their conceptual basis from the theory of health and health promotion, and not from the concept of well-being. In our understanding, the next critical step is to define a theoretically grounded model of school well-being, based on the sociological concept of well-being. Such a

conceptual model (Earp and Ennett, 1991) should present and define the concept of well-being, place health aspects into this context, and at the same time provide guidelines for indicators of measurement of well-being both at the individual and school levels.

In this paper we present a proposal for the conceptual model of well-being in schools grounded on Allardt's theory of welfare (Allardt, 1976a; Allardt, 1976b; Allardt, 1981; Allardt, 1989). Widely interpreted, well-being is the key concept of the School Well-being Model; it takes into account environmental considerations, social relationships, personal self-fulfilment and health aspects.

COMPREHENSIVE SCHOOL DEVELOPMENT PROGRAMMES

In recent literature, four approaches can be identified from the programmes to support pupils' growth into good and well-balanced people and members of society, and to give them the knowledge and skills needed in life. Beginning in the late 1970s, *effectiveness* was emphasized as the main challenge of school development (Rutter *et al.*, 1979; Teddlie and Stringfield, 1993), leading further to *measuring the quality of school* (Riley and Nuttall, 1994; Nevo, 1995; OECD, 1995). Health-related school programmes such as the WHO's 'health promoting school' (Parsons *et al.*, 1996; WHO, 1998; St Leger, 1999) and the 'Coordinated School Health Program' in the USA (Allensworth and Kolbe, 1987; Marx and Wooley, 1998) were developed in the late 1980s and early 1990s.

The effective school approach

School effectiveness studies have been undertaken mainly in the United Kingdom and in the USA (Rutter *et al.*, 1979; Teddlie and Stringfield, 1993). They have revealed remarkable differences between schools as to how they use their resources and are able to fulfil their main aims. These studies have listed the characteristics of an effective school (Rutter *et al.*, 1979; Teddlie and Stringfield, 1993; Sahlberg, 1997). Teddlie and Stringfield have a five-factor model for evaluating school effects [(Teddlie and Stringfield, 1993), p. 3]:

- strong principal leadership
- pervasive and broadly understood instructional focus

- safe and orderly school climate
- high expectations for student achievement, and
- student achievement data used for evaluating programme success.

Janssens has classified school evaluation and presented criteria for school organization and teaching atmosphere (Janssens, 1995). These criteria require that:

- the approach to teaching is logical and coherent
- the school provides a secure and well organized learning environment, and
- the school maintains good relationships with the pupils' homes, next school grade (stage) and surrounding community.

These studies concentrate on the effectiveness of school. They partly share the same goals as the projects concerned with pupils' health, but the concepts of health and well-being are not discussed explicitly.

Measuring the quality of school

Effectiveness studies were developed in further studies measuring the quality of school (Riley and Nuttall, 1994; OECD, 1995). These studies also include some qualitative indicators concerning parents' and pupils' school satisfaction and social relations in schools. A more comprehensive perspective of the quality approach is illustrated by Nevo (Nevo, 1995).

Evaluating the school as a whole is important from two different perspectives. On the one hand, a school might be interested in an overall review of its educational and administrative activities in order to improve its overall functioning and performance. On the other hand, a demand for accountability may demand demonstration of the merit of the school and the extent that it fulfills its goals and meets the need of its 'clients'.

Nevo also points out that the life of a school is far more complex than that which can be reflected through student achievement.

To assess the quality of a school and understand the nature of its problems, one should look into a wide array of issues related to goals of the school, its educational philosophy, the characteristics of its students, the quality of its teachers, the variety of its educational programmes, its physical resources, its social atmosphere, its educational accomplishments, and more [(Nevo, 1995), p. 154].

Even though many aspects related to health and well-being in school are mentioned in the quality of school literature, they have not been operationalized as quality indicators.

Health promoting school

The WHO revised Global School Health Initiative (WHO, 1998) states: 'A health promoting school can be characterised as a school constantly strengthening its capacity as a healthy setting for living, learning and working'. It proposes four strategies for creating health promoting schools:

- Strengthening the ability to advocate improved school health programmes
- Creating networks and alliances for the development of health promoting schools
- Strengthening national capacities
- Research to improve school health programmes.

St Leger traces the early genesis of the health promoting school back to 1950 when the WHO established an Expert Committee on School Health Services (St Leger, 1999). In 1966, WHO released a publication *Planning for Health Education in Schools*, which addressed pragmatically the planning and implementation of school health programmes. The European Region of WHO (Burgher *et al.*, 1999) initiated a project, The European Network of Health Promoting School (ENHPS) in 1992. The ENHPS conceptual construction is based on WHO's broad definition of health and the Ottawa Charter idea of health promotion, and on its further development by Bunton and Macdonald (Bunton and MacDonald, 1992; Parsons *et al.*, 1996; Rasmussen and Rivett, 2000).

In 1997, 37 countries in Europe were participating in the network. The regional networks for the development of health promoting schools were promoted and fostered in the southern part of the Western Pacific (1995), Latin America (1996), Southern Africa (1996), South East Asia (1997) and the northern part of the Western Pacific (1997) (WHO, 1999). The ENHPS conference resolution (Burgher *et al.*, 1999) in Greece in May 1997 outlines 10 principles for the health promoting school: democracy, equity, empowerment and action competence, school environment, curriculum, teacher training, measuring success, collaboration, communities and sustainability.

Coordinated school health programme

In the USA, the movement for the Comprehensive (lately Coordinated) School Health

Program (CSHP) developed in the late 1980s (Marx and Wooley, 1998). CSHP has its roots back in the 1920s, when a book entitled *School Health Services* was published, followed by *Healthful School Environment* (1953) and *Health Education* (1957) (Davis and Allensworth, 1994). Allensworth and Kolbe expanded the concept by adding five more areas to the original three (Allensworth and Kolbe, 1987). They proposed that a school health programme should include eight components: health education, physical education, health services, nutrition services, counselling and psychological and social services, healthy school environment, health promotion for staff and parent/community involvement. These eight components were developed and defined further by representatives of almost 60 US national organizations. As a conceptual base, they use the WHO definition of health (McKenzie and Richmond, 1998). According to McKenzie and Richmond, education initiatives will succeed only if they also address students' health and well-being.

St Leger and Nutbeam have created a model for mapping linkages between health and education agencies to improve school health (St Leger and Nutbeam, 2000). According to them, the model provides a map for school health promotion to identify priorities and directions in school health planning and implementation.

Evaluation of comprehensive school development programmes

These four above-mentioned approaches are valuable in developing schools further. However, when studied from the well-being perspective, all of them seem to be based on too narrow a view of well-being in school. The effective school approach serves more economic purposes than the needs of the 'clients', pupils. The approach of measuring the quality of school continues with this strategy, although it looks more into pupils' and their parents' contentment with school.

The state of the art of comprehensive school health programmes has been recently assessed in several literature reviews. Lynagh *et al.* conducted a worldwide information search from the Medline and Eric databases to find programmes that would carry out the Ottawa Charter settings idea of the health promoting school (Lynagh *et al.*, 1997). The researchers concentrated on the school programmes that dealt with tobacco, alcohol and UV radiation. They could not find any

programmes carrying out the health promoting school programme as a whole. The researchers paid attention to the need for a well organized intervention that would carry out and evaluate the health promoting school ideas.

St Leger presents the potentials and real benefits of the health promoting school, but is cautious about labelling a school as such (St Leger, 1999). Recent literature on health promoting schools primarily relates to topic-based interventions, 'which largely are implemented through only one or two building blocks of health promoting schools' [(St Leger, 1999), p. 55]. Lister-Sharp *et al.* recommend the development of new outcome measures for school health promotion interventions after making systematic reviews of health promoting schools and health promotion in schools (Lister-Sharp *et al.*, 1999). They also call for a theoretical basis or assumptions underpinning the interventions (Lister-Sharp *et al.*, 1999).

The comprehensive health programmes in school (ENHPS and CSHP) apply the WHO definition of health (Parsons *et al.*, 1996; McKenzie and Richmond, 1998; Rasmussen and Rivett, 2000), and they strongly refer to the social and mental aspects of health. In empirical studies, the outcomes are mainly defined as health status and health behaviours or as feelings, values, attitudes or competencies of a person. An ever wider definition of health is an explicit attempt to correct the limitations of the health paradigm. Yet, health remains the key concept of these programmes. Therefore, regardless of comprehensive approaches in theoretical discussion, the practice of school health promotion is often reduced to rather traditional health interventions.

The WHO definition of health refers to social and psychological well-being (WHO, 1986). In fact, the definition may be the major origin of the often confusing ways the concept is used in the health promotion context. Instead of aiming at still wider interpretation of health, another alternative may be to start the construction of a theoretical basis from the sociological concepts of welfare and well-being. The conceptual model needs to be rather detailed to facilitate the evaluation of the success of school development programmes and the assessment of pupils' well-being in school.

THE CONCEPTUAL MODEL BY ALLARDT

Allardt uses the concept 'welfare' in the sociological tradition (Allardt, 1976a; Allardt, 1976b; Allardt,

1989). He notes that in Nordic languages the word 'welfare' also stands for well-being, and that it covers aspects both of level of living and quality of life (Allardt, 1989). According to Allardt, well-being has to be determined historically and has to be defined again when living conditions change. Well-being is a state in which it is possible for a human being to satisfy his/her basic needs. In the indicator systems of well-being, both material and non-material basic human needs have to be considered. Allardt divides these needs into three categories:

- having
- loving, and
- being.

'Having' refers to material conditions and impersonal needs in a wide perspective. 'Loving' stands for the needs to relate to other people and to form social identities. 'Being' denotes the needs for personal growth, i.e. integration into society and living in harmony with nature. The positive side of 'being' may be characterized as personal growth, whereas the negative aspect refers to alienation. An example of the indicators for being is a question of 'to what extent a person can participate in decisions and activities influencing his/her life, opportunities for leisure time activities (doing) and the opportunities for a meaningful working life' [(Allardt, 1989), p. 7].

Allardt assigns health to the 'having' category. Furthermore, he states that health is often seen as the central element of well-being [(Allardt, 1976a), p. 134] and that it is a resource that affects the other parts of well-being. In a Scandinavian survey on level of living and quality of life, the exploratory factor analysis placed health and employment as a factor on their own (Allardt, 1976a).

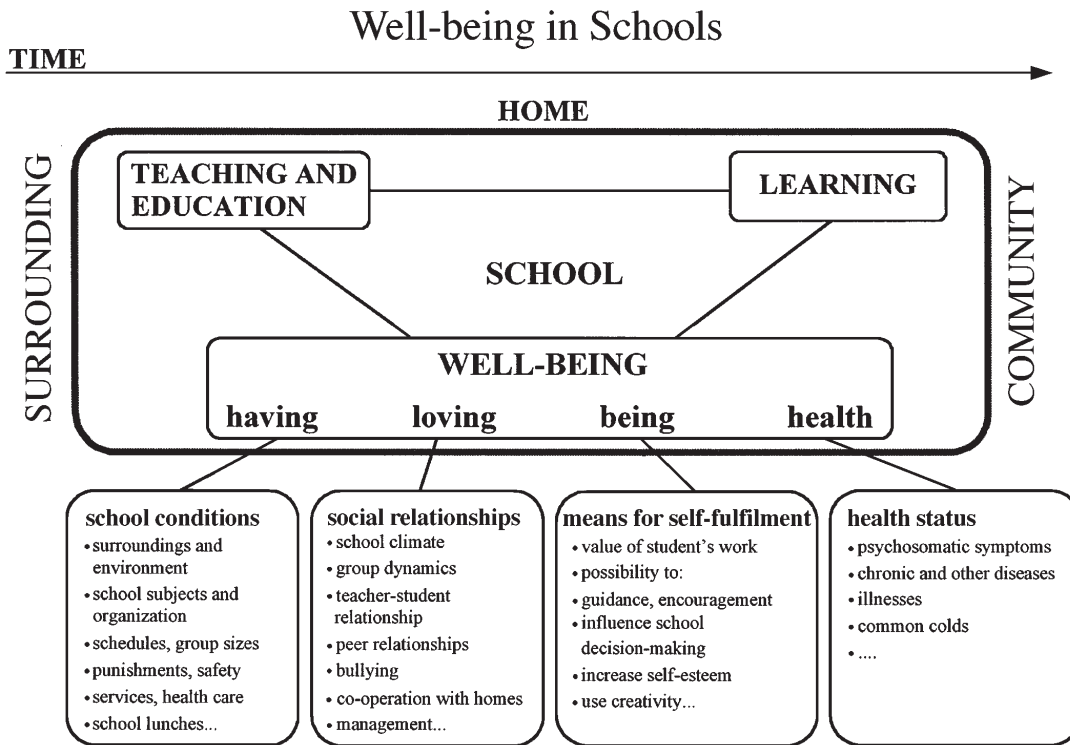
In his updated indicator system of welfare, Allardt points out that both objective and subjective indicators are needed (Allardt, 1989). He cross-tabulates 'having', 'loving' and 'being' with the dichotomy of objective and subjective indicators and obtains six cells of different types of indicators (Table 1). Here, Allardt explains that the objective indicators are based on external observations and the subjective indicators are people's expressions of their attitudes and perceptions of their living conditions.

THE SCHOOL WELL-BEING MODEL

A conceptual model of well-being in school, the School Well-being Model (Figure 1), has been

Table 1: Allardt's (Allardt, 1989) cross-tabulation of 'having, loving and being', with the objective and the subjective indicators of well-being

	Objective indicators	Subjective indicators
Having (material and impersonal needs)	Objective measures of the level of living and environmental conditions	Dissatisfaction–satisfaction; subjective feeling of dissatisfaction–satisfaction with living conditions
Loving (social needs)	Objective measures of relationships to other people	Unhappiness–happiness; subjective feelings about social relations
Being (needs for personal growth)	Objective measures of people's relation to (a) society and (b) nature	Subjective feelings of alienation–personal growth

**Fig. 1:** The School Well-being Model.

defined based on Allardt's model of well-being. It has been developed to fit the school setting by applying the literature on school health and school evaluation. In this model, well-being, teaching/education and achievements/learning are interconnected. 'Teaching and education' affects every category of well-being and is connected with learning. One important part of education is health education; its aim is to strengthen pupils' health literacy (Nutbeam, 2000). 'Learning' or achievements are connected

both with well-being, and teaching and education. According to the literature, the connection between learning and health is strong (Wolfe, 1985; Symons *et al.*, 1997). Questions as to which pedagogical methods are good for achieving both educational goals and pupils' well-being are beyond the scope of this paper.

Pupils' homes and surrounding community have their own impact on schools and school children. The basic education of children always relies on pupils' homes. Each human being lives

in a society and its impact should not be undervalued. With these in mind we will concentrate on well-being in schools. The concept of well-being has been divided into four categories:

- school conditions (having)
- social relationships (loving)
- means for self-fulfilment (being), and
- health status (health).

The School Well-being Model (Figure 1) is presented here from a pupil's viewpoint. From a teacher's or other school personnel's viewpoint it would look roughly similar, but some of the indicators in the well-being categories would need to be changed. Also, 'teaching and education' would need to be changed to more suitable supplementary education. 'Learning' could be augmented by achievements in work.

School conditions (having)

'School conditions' includes the physical environment surrounding a school and the environment inside a school. The areas to be discussed are safe working environment, cosiness, noise, ventilation, temperature, etc. The other aspect of 'school conditions' deals with learning environment. It includes at least curriculum, group sizes, schedules of studies and punishments. The third aspect includes services to pupils like school lunches, health care, trustee and counselling.

Social relationships (loving)

'Social relationships' refers to the social learning environment, student-teacher relationships, relations with schoolmates, group dynamics, bullying, cooperation between school and homes, decision-making in school and the atmosphere of the whole school organization. The school climate and learning climate have their effect on the well-being and contentment of pupils in school. Good relationships and atmosphere are said to promote a person's resources in a society and to improve achievements in school (Samdal, 1998).

In the School Well-being Model, the relationship between schools and homes is placed in the 'social relationships' category. Furthermore, the school's relationships with surrounding communities are important (e.g. relationships with social affairs and health care systems).

The student-teacher relationship has an important role in well-being in school. Hoy and

Hannum see teacher affiliation as a part of school climate. It means that teachers feel good about each other, their work and their students, and that they are committed to both their students and the welfare of students (Hoy and Hannum, 1997). Sabo states that when pupils are asked how they like school, they will often reply how they like their teachers (Sabo, 1995). Management in schools affects pupils' contentment and well-being in school but also pupils' achievements (Teddle and Strinfield, 1993; Baldursson, 1995; Liinamo and Kannas, 1995; Nevo, 1995; Samdal, 1998).

Bullying belongs to the negative part of social relationships. Salmivalli *et al.* argue that bullying can be seen as a group phenomenon based on social relations and roles in the group (Salmivalli *et al.*, 1996). The pupils may act as assistants of the bully, reinforcers of the bully, defenders of the victim or outsiders.

Means for self-fulfilment in school (being)

According to Allardt, 'being' refers to each person being respected as a valuable part of a society (Allardt, 1976a; Allardt, 1989). A person needs to have possibilities for influencing the key elements of his/her life as well as active leisure time. Opportunities for a meaningful working life and for enjoyment of nature are also crucial parts of self-fulfilment.

Applied to the school context, 'being' can be seen as the way in which the school offers means for self-fulfilment. Each pupil should be considered an equally important member of the school community. It should be possible for each pupil to participate in the decision-making affecting his/her schooling and other aspects of school life concerning himself/herself. Opportunities for improving knowledge and skills emphasizing the pupil's own interest fields at his/her own pace are crucial. Positive learning experiences enhance self-fulfilment. Appropriate teaching for each pupil together with guidance and encouragement produce these experiences for different kinds of learners.

The amount of respect a pupil receives for his/her work is essential; parents', teachers' and peers' contributions are all important. Respect is fundamental in order for studying to be meaningful. Opportunities for leisure time activities during breaks and a close connection with nature act as a counterbalance to work and thus support self-fulfilment.

Health status

Health is seen in its concise meaning; the absence of disease and illness. Seedhouse clarifies the concepts of disease and illness in the following manner (Seedhouse, 1986). Diseases are seen as certain sorts of abnormality that occur in parts of people's bodies. These abnormalities can be identified by medical science. Illnesses are feelings that people experience. A person cannot be ill without feeling it, but a person can be diseased without feeling it. 'Health status' comprises physical and mental symptoms, common colds, chronic and other diseases and illnesses. Health is also an important tool through which other parts of well-being can be achieved. However, we have to remember that, for example, a chronically ill person may gain his/her well-being by weighing aspects of other well-being categories.

According to Allardt, health is a resource and an essential part of well-being [(Allardt, 1976a), pp. 134–141 and 237]. He placed it in the 'having' category. We included 'health status' as a separate category because, in the context of well-being, we see health as a personal state although it is affected by external conditions. Also, Allardt found in his statistical analysis that health was part of a different factor than the other aspects of the 'having' category (Allardt, 1976a).

DISCUSSION

The promotion of pupils' well-being as a key challenge of school has always been visible in the school literature. As early as 100 years ago, John Dewey said: 'What the best and wisest parent wants for his own child, that must the community want for all of its children. Any other ideal for our schools is narrow and unlovely; acted upon, it destroys our democracy' (Dewey, 1907; available online at the Mead Project website). According to Ramsey and Clark, students' feelings of well-being in school were more important than formal academic achievements, but well-being was not as well achieved (Ramsey and Clark, 1990).

More recently, the importance of health promotion goals in school development has been strongly emphasized by both the WHO and several national health promotion programmes. 'Health is directly linked to educational achievement, quality of life and economic productivity' states the WHO in the revised Global School

Health Initiative (WHO, 1998). 'Healthy children learn better'—the United States National Action Plan for Comprehensive School Health Program representatives restated this well-known fact (Symons *et al.*, 1997).

However, even today, well-being in school has not gained a central role in development programmes but is mainly seen as a subject separate from the comprehensive goal of schooling. School effectiveness and quality studies have helped to develop the schooling system. They look at school as an entity, but concentrate mainly on achievements in schools. The wide-ranging concepts of health promoting schools and the CSHP have identified the importance of health as one of the main aims of schooling. These programmes concentrate on how to *implement* health promotion and health education in a school setting. The focus of the studies on these programmes has been mostly on topic-based interventions (Lynagh *et al.*, 1997; Lister-Sharp *et al.*, 1999; St Leger, 1999). Some examples of more comprehensive evaluation have been presented (Green and Kreuter, 1999; Rasmussen and Rivett, 2000; Stears, 2000). Their evaluation concerns mainly the process and the context. The product outcome has been health status or feelings, values, attitudes, competencies or health-promoting behaviours of a person. These are all important areas, but still the knowledge of the state of well-being both at individual and school levels remains incomplete.

The main difference between the School Well-being Model and the earlier comprehensive school health models is in the definition of the key concept. Our model proposes to clarify the theoretical void in school well-being evaluation. The key issues are the use of the 'well-being concept', the definition of health and the subcategory 'means for self-fulfilment'. The School Well-being Model derives its theoretical background from the sociological theory of welfare. The same theoretical groundwork (Allardt, 1976a; Allardt, 1976b; Allardt, 1989) has also been used in the evaluation of the quality of working life (Kolu, 1992).

The School Well-being Model lends itself readily to school evaluation by proposing specific indicators for the four different categories of well-being. The focus of an evaluation can be either objective (e.g. facts about well-being indicators) or subjective (pupil's, teacher's or other worker's perceptions of the well-being indicators); according to Allardt, both kinds may be used

(Allardt, 1989). The objective indicators could be obtained from school statistics or by observations, for example. The statistical data could consist of figures on sizes of schools, average number of pupils per teaching group, financial and other resources budgeted per pupil, number of hours of absence per pupil, etc. Observation could be used to investigate social relationships and teaching methods, for example. Health status could be examined by a school doctor or nurse. Subjective indicators may be secured using questionnaires, interviews or pupils' essays. The topics may include perceptions of school conditions (How do you like the schoolyard? How appropriate are the desks?), of social relationships (How many close friends do you have in school/in class? How do you like your teachers?), of self-fulfilment (How easily do you get help in difficulties with your school tasks? How is it possible for you to take part in decision-making in school?) and of health (In general, how healthy do you feel you are? What health complaints do you have?). These indicators are only examples and are an area for future development.

The School Well-being Model considers health education and health promotion as important parts of schooling but not the main issues. Pupils' well-being in school is a vastly wider issue. The School Well-being Model strives to study the school and schooling as an entity. Its main aim is to complement the perspective of achievements and processes with the well-being of pupils to fulfil the challenges set in The Convention of the Rights of the Child (UN, 1989): '... the education of the child shall be directed to: the development of the child's personality, talents and mental and physical abilities to their fullest potential'.

The model can be extended and specified in at least three directions: (i) teaching and education; (ii) learning; and (iii) the impact of the surrounding community, including pupils' homes. Teachers, educators and other education professionals in cooperation with other professionals have the competence to discover those teaching and education practices and learning processes that promote well-being in school.

ACKNOWLEDGEMENTS

This study was financially supported by the University of Tampere and The Finnish Cultural Foundation.

Address for correspondence:

Anne Konu
Tampere School of Public Health
FIN-33014 University of Tampere
Finland

REFERENCES

- Allardt, E. (1976a) *Dimensions of Welfare* [Hyvinvoinnin Ulottuvuuksia]. WSOY, Porvoo.
- Allardt, E. (1976b) *Dimensions of Welfare in a Comparative Scandinavian Study*. *Acta Sociologica*, **19**, 227–240.
- Allardt, E. (1981) Experiences from the Comparative Scandinavian Welfare Study, with the bibliography of the project. *European Journal of Political Research*, **9**, 101–111.
- Allardt, E. (1989) *An Updated Indicator System: Having, Loving, Being*. Working papers 48, Department of Sociology, University of Helsinki.
- Allensworth, D. D. and Kolbe, L. J. (1987) The comprehensive school health program: exploring an expanded concept. *Journal of School Health*, **57**, 409–412.
- Baldursson, S. (1995) Educational policy and evaluation of schools [Evaluering av skolor] *TemaNord*, **531**, 47–64.
- Bunton, R. and MacDonald, G. (1992) *Health Promotion: Foundations for Practice*. Routledge, London.
- Burgher, M. S., Rasmussen, V. B. and Rivett, D. (1999) *The European Network of Health Promoting Schools. The Alliance of Education and Health*. IPC, Copenhagen.
- Davis, T. M. and Allensworth, D. D. (1994) Program management: a necessary component for the Comprehensive School Health Program. *Journal of School Health*, **64**, 400–404.
- Dewey, J. (1907) *The School and Society*. University of Chicago Press, Chicago. Available online (ref. 28.01.2000) at the Mead Project website http://paradigm.soci.brocku.ca/~lward/Dewey/DEWEY_11.html.
- Earp, J. A. and Ennett, S. T. (1991) Conceptual models for health education research and practice. *Health Education Research*, **6**, 163–171.
- Green, L. W. and Kreuter, M. W. (1999) *Health Promotion Planning. An Educational and Ecological Approach*, 3rd edition. Mayfield Publishing Company, Mountain View.
- Hoy, W. K. and Hannum, J. W. (1997) Middle school climate: an empirical assessment of organizational health and student achievement. *Educational Administration Quarterly*, **33**, 290–311.
- Janssens, F. J. G. (1995) Educational evaluation in primary and secondary schools by the Netherlands' Inspectorate of Education [Evaluering av Skolor]. *TemaNord*, **531**, 9–24.
- Kolu, T. (1992) The quality of working life 1977–1990 [Työelämän Laatu 1977–1990. Hyvinvoinnin Koettuja Muutoksia Työssä]. Työolokomitean liiteselvitys, Tilastokeskus, Tutkimuksia 188, Helsinki.
- Liinamo, A. and Kannas, L. (1995) Schooling as perceived by pupils [Viihdyntö, pärjäyntö, selviäntö turvallisesti: koulunkäynti oppilaiden kokemana]. In Kannas L. (ed.) *Koululaisten Kokema Terveys, Hyvinvointi ja Kouluviihtyvyys*. Opetushallitus. Hakapaino Oy, Helsinki, pp. 109–130.
- Lister-Sharp, D., Chapman, S., Stewart-Brown, S. and Sowden, A. (1999) Health promoting schools and health promotion in schools: two systematic reviews. *Health Technology Assessment*, **3** (22), Review.

- Lynagh, M., Schofield, M. J. and Sanson-Fisher, R. W. (1997) School health promotion programs over the past decade: a review of the smoking, alcohol and solar protection literature. *Health Promotion International*, **12**, 43–60.
- McKenzie, F. D. and Richmond, J. B. (1998) Linking health and learning: an overview of coordinated school health programs. In Marx, E. and Wooley, S. F. (eds) *Health is Academic. A Guide to Coordinated School Health Programs*. Teachers College Press, New York.
- Marx, E. and Wooley, S. F. (eds) (1998) *Health is Academic. A Guide to Coordinated School Health Programs*. Teachers College Press, New York.
- Nevo, D. (1995) *School-Based Evaluation: a Dialogue for School Improvement*. Elsevier Science, Oxford.
- Nutbeam, D. (2000) Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, **15**, 259–267.
- OECD (1995) *Measuring the Quality of Schools. Indicators of Education Systems*. Centre for Educational Research and Innovation, Paris.
- Parsons, C., Stears, D. and Thomas, C. (1996) The health promoting school in Europe: conceptualising and evaluating the change. *Health Education Journal*, **55**, 311–321.
- Ramsey, W. and Clark, E. E. (1990) *New Ideas for Effective School Improvement. Vision. Social Capital. Evaluation*. The Falmer Press, London.
- Rasmussen, V. B. and Rivett, D. (2000) The European Network of Health Promoting Schools—an alliance of health, education and democracy. *Health Education*, **100**, 61–67.
- Riley, K. A. and Nuttall, D. L. (eds) (1994) *Measuring Quality: Education Indicators—United Kingdom and International Perspectives*. The Falmer Press, London.
- Rutter, M., Maughan, B., Mortimore, P., Ouston, J. and Smith, A. (1979) *Fifteen Thousand Hours. Secondary Schools and their Effects on Children*. Butler and Tanner Ltd, Frome and London.
- Sabo, D. J. (1995) Organizational Climate of Middle Schools and the Quality of Student Life. *Journal of Research and Development in Education*, **28**, 150–160.
- Sahlberg, P. (1997) *Opettajana Koulun Muutoksessa [Being a Teacher in a Changing School] Opetus 2000*. WSOY, Juva.
- Salmivalli, C., Lagerspetz, K. M. J., Bjorkqvist, K., Osterman, K. and Kaukiainen, A. (1996) Bullying as a group process: participant roles and their relations to social status within the group. *Aggressive Behaviour*, **22**, 1–15.
- Samdal, O. (1998) *The School Environment as a Risk or Resource for Students' Health-Related Behaviours and Subjective Well-being*. Research Centre for Health Promotion, Faculty of Psychology, University of Bergen.
- Seedhouse, D. (1986) *Health: The Foundations for Achievement*. John Wiley & Sons, Chichester.
- Stears, D. (2000) Profiling the health-promoting school: valuing assets and evaluating the management of change. *Health Education*, **100**, 74–80.
- St Leger, L. H. (1999) The opportunities and effectiveness of the health promoting primary school in improving child health—a review of the claims and evidence. *Health Education Research*, **14**, 51–69.
- St Leger, L. and Nutbeam, D. (2000) A model for mapping linkages between health and education agencies to improve school health. *Journal of School Health*, **70**, 45–50.
- Symons, C. W., Cinelli, B., James T. C. and Groff, P. (1997) Bridging student health risks and academic achievement through comprehensive school health programs. *Journal of School Health*, **67**, 220–227.
- Teddle, C. and Stringfield, S. (1993) *Schools Make a Difference. Lessons Learned from a 10-Year Study of School Effects*. Teachers College Press, New York.
- Turunen, H., Tossavainen, K., Jakonen, S., Salomäki, U. and Vertio, H. (1999) Initial results from the European network of health promoting schools program on development of health education in Finland. *Journal of School Health*, **69**, 387–391.
- UN (1989) *Yearbook of UN 1989. The Convention on the Rights of the Child*. UN, Martinus Nijhoff Publishers, Zoetermeer, pp. 560–569.
- Wolfe, B. L. (1985) The influence of health on school outcomes. A multivariate approach. *Medical Care*, **23**, 1127–1138.
- World Health Organization (1986) *Ottawa Charter for Health Promotion*. WHO, Copenhagen.
- World Health Organization (1997) The Jakarta Declaration on Leading Health Promotion into the 21st century. *Health Promotion International*, **12**, 261–264.
- World Health Organization (revised 1998) *WHO Global School Health Initiative: Helping Schools to Become 'Health-Promoting Schools'*. Available online (ref. 3.11.1999) at <http://www.who.int/inf-fs/en/fact092.html>.
- World Health Organization (1999) *Improving Health Through Schools. National and International Strategies*. WHO, Information Series On School Health, Geneva.

