School well-being in Grades 4–12

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Abstract

The World Health Organization has encouraged a whole-school approach when trying to promote mental health and well-being in schools. The Internet-based School Well-being Profile aims to be a holistic well-being evaluation tool for schools. Well-being is divided into four categories: ‘school conditions’, ‘social relationships’, ‘means for self-fulfillment’ and ‘health status’. The questionnaires for the School Well-being Profile were developed for school personnel and for pupils at three levels: primary, lower secondary and upper secondary schools. The present data consisted of the responses from 8285 participants from primary, lower secondary and upper secondary schools in the school year 2004–05 in Finland. School well-being was compared between gender, school levels and grades. Pupils in primary school experienced school conditions, social relationships and means for self-fulfillment to be better than pupils in secondary schools. When comparing gender and grades, the main finding was that girls and younger students within each school level rated school well-being more positively, except the fact that boys had fewer symptoms than girls did. The aim of the School Well-being Profile is to provide a well-being evaluation tool for schools to use. The idea is that schools evaluate their well-being, make positive changes and perform the evaluation again to see if progress has been made.

Introduction

The World Health Organization (WHO) has encouraged a whole-school approach when trying to promote mental health and well-being in schools. In WHO, they use the concept of creating an environment for emotional and social well-being [1]. The two already well-known holistic approaches to school health promotion are the Health Promoting School [2] and the Comprehensive School Health Program [3, 4]. The settings approach—the shift from monocausal risk factor interventions to focus on the whole-school change—has many advocates [5–7]. Lister-Sharp et al. [8] have also called for a theoretical basis or explicated assumptions underpinning the health promotion interventions in schools. Recently, Deschesnes et al. [9] noted that despite the tremendous potential of these two comprehensive approaches to school health promotion mentioned above, only rarely are they put into practice. However, Mükoma and Flisher [10] showed that it is possible to integrate health promotion into the school curriculum and policies successfully.

Health promotion interventions could also benefit from the action research practice of feeding back the data to schools [11]. Furthermore, the school organization needs to be motivated to get the most out of health promotion interventions [12]. A good example of feeding back the data to schools

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is the School Health Index (SHI) (http://apps.nccd.cdc.gov/shi), which is a theory-based (the Coordinated School Health Program [3, 4]) and holistic school health evaluation tool. In SHI, schools can fill in the questionnaires either on the Internet or in paper format.

Lister-Sharp et al. [8] recommended new outcome measures for school health promotion interventions in their systematic review of school health promotion. Deschesnes et al. [9] state that the fundamental goal is to evaluate the effectiveness of holistic school health promotion programs; that is, their ability to produce the desired effects on health, well-being or academic achievements. According to St Leger [13], the evaluation of school health programs should include cognitive and social outcomes and comprehensive and holistic programs. The evaluation of health promotion interventions reveals many difficulties; for example, how to evaluate different types of schools in different areas with different health promotion foci [10]. In both planning and evaluating health promotion interventions, cooperation between health and education sectors is essential [14].

Well-being in the school context has been studied by Knuver and Brandsma [15], Samdal [16] and Opdenakker and Van Damme [17]. Knuver and Brandsma [15] studied both cognitive and affective outcomes in school. Affective outcomes referred to attitudes the student had towards school and learning. They measured school well-being by Stoel’s [18] questionnaire about the pupils’ experience (positive or negative) of their school and its organization, their teachers and their classmates. The schools’ cognitive and affective outcomes were relatively independent [15].

Samdal [16] measured pupils’ subjective well-being with one single item: ‘In general, how do you feel about your life at present?’ Student support, adequate expectations and teacher support were the most important predictors of subjective well-being. Opdenakker and Van Damme [17] used a well-being questionnaire consisting of eight indicators: well-being at school, social integration in the class, relationships with teachers, interest in learning tasks, motivation towards learning tasks, attitude to homework, attentiveness in the classroom and academic self-concept. The results showed that the relative influence of classes and schools on a pupil’s achievement was higher than the influence on his or her well-being.

The present indicator, the well-being profile, aims to be a holistic well-being evaluation tool for schools. It is based on theoretical work on school well-being, which produced a well-being model for schools [19–22]. In the model, well-being is divided into four categories: ‘school conditions’, ‘social relationships in school’, ‘means for self-fulfillment in school’ and ‘health status’. The well-being theory and model are discussed more deeply in separate articles mentioned above, especially in the article of Konu and Rimpelä [19].

Health promotion evaluation should help the schools to develop their current practices and give them relevant information to make plans for the future. Evaluation research should bring information to a broader audience: what kind of interventions and practices were successful in improving health and well-being in schools. The aim of the present paper is to present a holistic, Internet-based evaluation method of school well-being and to compare the well-being in different grades in primary, lower secondary and upper secondary schools in Finland. The School Well-being Profile’s main purpose is to aid an individual school in its development process in an easy and effective way.

Methods

Development of the well-being evaluation tool

For the School Well-being Profile, new questionnaires were developed on the basis of the Well-being Model and the empirical findings of the School Health Promotion Survey in Finland [19–22] and two international school surveys conducted in Finland: Health Behaviour in School-aged Children [23] and School Environment 2000 Questionnaire [24]. The well-being profile questionnaires were tested during the years 2002–04 in the Koulumiete Project [25], which was a part of the Pirkanmaa Mental Health
The region of Pirkanmaa, which has a city of about 200,000 inhabitants as well as other smaller towns, is situated in southern Finland. The KouluMiete Project’s main aims were to support pupils’ mental health, prevent marginalization and support the whole school so that it could promote positive development. The KouluMiete Project worked with seven schools (two primary and five lower secondary schools) in the region. One school was in an urban area, and others were in smaller towns. There were two main strategies for achieving the project’s aims, which were to produce a well-being profile for each school and thus to find out the most important development areas from the well-being and mental health viewpoints and to pay special attention to school absenteeism and develop a model for early recognition and prompt help for pupils with high absence rates.

The questionnaires for the School Well-being Profile were developed for school personnel and for pupils at three levels: primary (Grades 4–6, aged 10–12 years), lower secondary (Grades 7–9, aged 13–15 years) and upper secondary (Grades 10–12, aged 16–18 years). The topics of the questions were the same at each level, only wording was suited for each grade and for personnel. In the questionnaires for primary schools, the answering options were decreased to three (agree, neither agree nor disagree, disagree) instead of the five in others (completely agree, agree, neither agree nor disagree, disagree, completely disagree). There were also fewer questions in each well-being category for primary schools to make it more suitable for pupils aged 10–13 years.

The school conditions category included questions on physical conditions like ventilation, desks, classrooms, safety; organizational conditions like schedules, working in peace, rules and regulations, haste, lunch break and services like lunches, access to a school nurse and counselor. The number of questions was 15 in primary, and 26 in lower and upper secondary schools. The social relationships category had questions on relationships between personnel and pupils, among pupils themselves and cooperation between homes and school. The number of questions was 15 in primary, 19 in lower secondary and 17 in upper secondary schools. The means for self-fulfillment category included questions on work appreciation, attitudes towards studies, getting help in studying, participation, spurring on and commending. The number of questions was 17 in primary schools, and 24 in lower and upper secondary schools. The health status category had questions mostly on symptoms: neck and shoulder pains, lower back pains, stomach aches, tension or nervousness, irritability and temper tantrums, difficulties falling asleep or awakenings during night, headache, feeling tired or weak, feeling downhearted, feeling fear, common cold, flu and cough. The number of questions was nine in primary schools, and 11 in lower and upper secondary schools [25].

Data and analysis

The well-being profile has not yet been publicly advertised. Schools which have heard about it in seminars or by word of mouth or found it themselves on the Internet have used it. It is located in the Finnish National Board of Education Web pages (www2.edu.fi/hyvinvointiprofiili). Some active schools have found the profile by searching for something new in those Web pages. The present data consisted of participants from active and voluntary schools. This is likely to cause some bias when using it for research purposes. However, the selection process was the same in each school level, and the comparison was made between school levels and within school grades. In Finland, every school has access to the Internet (M. Suvanen, personal communication), over 80% through a high-speed connection. However, there may be differences between schools on how this technology is used and managed. This may affect which schools use this kind of an evaluation tool. This has also been a technical test period for the tool itself and it has worked well.

After the schools asked for and received their username and password, the primary user, usually a teacher, in each school instructed the pupils and personnel on how to complete the questionnaires on the Internet. The schools were advised to fill in the questionnaires during school hours under a teacher’s supervision. The researchers were not
present. The administration of the instrument may have varied between schools, which may have affected the results. To ensure confidentiality, each pupil and a member of personnel got a randomly assigned password for the questionnaire. These passwords were not saved in the database. Seventy schools completed the well-being profile (33 primary schools, 28 lower secondary schools, 9 upper secondary schools and personnel from 46 schools) from a total of around 4000 primary and secondary schools in Finland. The total number of 9169 questionnaires was completed during October 2004–May 2005 (2381 pupils from primary, 5280 from lower secondary, 624 from upper secondary schools and 884 people from school personnel).

The present data consisted of pupils from all participating schools from three levels: primary school (Grades 4–6), lower secondary school (Grades 7–9) and upper secondary school (Grades 10–12). The results from personnel data will be discussed in a separate article. In all, 49.3% of participating pupils was male, 10.4% 4th, 6.7% 5th, 11.6% 6th, 27.7% 7th, 18.8% 8th, 17.3% 9th, 4.5% 10th, 1.8% (151 students) 11th and 1.1% (93 students) 12th Graders. Six students studied fourth year in upper secondary school and were not included in comparing the grade data.

In the School Well-being Profile, means for each well-being category (school conditions, social relationship, means for self-fulfillment and health status) were calculated. The proportion of missing responses within variables varied between 0 and 4%. Most missing responses concerned questions on counselors—not all schools had them. The percentage of agreement (completely agree or agree) was calculated for each variable. Bullying was indicated by the percentage of those being bullied/bullied others at least once a week during the school term (percentage of those being bullied many times during this school term among primary school pupils). In the health status category, the indicators present the percentage never experiencing these symptoms.

One-way analysis of variance with Bonferroni post hoc test in the cases of more than two explanatory variable categories was used for analyzing the statistical significances of differences between the mean values of the four well-being categories by explanatory variables. The internal consistency of each well-being category was calculated using Cronbach’s alpha. The correlations between categories were analyzed using Pearson correlation. SPSS 11.0 for Windows was used for the analysis.

Results

The internal consistencies of the four well-being categories were very good at each school level: in the school conditions category, Cronbach’s alpha was 0.84 in primary school (0.92 in lower secondary and 0.89 in upper secondary), in the social relationships category, it was 0.78 in primary school (0.89 and 0.89, respectively), in the means for self-fulfillment category, 0.87 in primary school (0.94 and 0.92, respectively) and in the health status category, it was 0.79 in primary school (0.90 and 0.89, respectively). As expected, the correlations between well-being categories were moderate [22] at each school level. The highest correlation was found between the means for self-fulfillment and social relationships categories (0.74 primary, 0.74 lower secondary, 0.71 upper secondary), means for self-fulfillment correlated also with the school conditions category (0.71, 0.69, 0.64, respectively). The lowest correlation was found between the school conditions and health status categories (0.32, 0.31, 0.31, respectively).

The differences in school well-being between school levels are presented in Fig. 1. Pupils in primary school experienced school conditions and means for self-fulfillment to be better than pupils in lower and upper secondary schools, but there was no difference between lower and upper secondary school pupils. There was a significant difference between each school level on social relationships category; lower secondary school pupils rated their social relationships the lowest. Pupils in upper secondary schools had more symptoms than pupils in lower secondary and pupils in primary schools; there was no significant difference between lower secondary and primary school pupils.
The differences in school well-being between gender and between grades (Grades 4–6 in primary school, Grades 7–9 in lower secondary school and Grades 10–12 in upper secondary school) within each school level are presented in Tables I and II. The main finding was that girls and younger students within each school level rated school well-being more positively, except the fact that boys had fewer symptoms than girls did.

Selected single questions from each well-being category are presented in Fig. 2. School was rated quite safe. Almost 65% from lower and upper secondary school pupils thought that there was too much time pressure in school. Over 90% of pupils

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**Table I. Differences in school well-being between the genders within each school level**

<table>
<thead>
<tr>
<th></th>
<th>Primary</th>
<th>Lower secondary</th>
<th>Upper secondary</th>
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<tr>
<td></td>
<td>Girls</td>
<td>Boys</td>
<td>Mean</td>
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<tr>
<td>School conditions</td>
<td></td>
<td></td>
<td>3.07</td>
</tr>
<tr>
<td>Social relationships</td>
<td>3.39</td>
<td>0.47</td>
<td>3.23</td>
</tr>
<tr>
<td>Means for self-fulfillment</td>
<td>3.22</td>
<td>0.58</td>
<td>3.04</td>
</tr>
<tr>
<td>Health status</td>
<td>2.61</td>
<td>0.78</td>
<td>2.77</td>
</tr>
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**P < 0.001.
had friends in school, but only a third reported that classmates intervened in bullying. In all, 53% of lower secondary school pupils (60% upper secondary and 72% in primary school) thought that teachers treated pupils fairly. Around 80% of pupils thought that they could follow teaching and got
help from teachers, but only a quarter of pupils (a third in primary school) took part in making rules in school and 45–56% of pupils felt that their views were taken into account in school development. Around two-thirds of pupils never felt fear in school. In primary schools, fewer pupils had any symptoms. Headache, stomach ache and common cold were the most commonly reported symptoms at all school levels. In secondary schools, feeling tired or weak and being tense and nervous were also common symptoms.

In all, 5.3% of pupils were bullied once a week or more often in lower secondary and 2.4% in upper secondary school. In all, 3.9% bullied others once a week or more often in lower secondary and 2.7% in upper secondary school. In primary school, the response options for this question were ‘never’, ‘rarely’ and ‘many times’ during this school term. In all, 6.9% of pupils were bullied many times and 3.2% bullied others many times.

**Discussion**

Health promotion interventions should feed back data to schools [11]. This was the main aim of the development of the Internet-based well-being evaluation system for schools (the School Well-being Profile; www2.edu.fi/hyvinvointiprofiili). Most probably, the schools that utilize the system are motivated for development, because they have actively chosen to use it. Those schools may also be the most motivated and get the most out of a health promotion intervention, as Reynolds and Teddie [12] called for. The School Well-being Profile acts as a health promotion intervention by a careful, theory-based planning of the questionnaire giving instant feedback. Answering the questionnaire (open questions included) gives the pupils a possibility to get their voice heard.

The data analyzed in this paper were gathered from pupils who answered the well-being profile questionnaire during the school year 2004–05. Some questions on the qualities of the research data should be noted. It consisted of different numbers of pupils from each school level (primary, lower secondary and upper secondary) and grade (from 4 to 12). However, even the grade with the least participants had 93 respondents. In most schools, all their pupils used the system; in some schools, only a certain grade completed it. Even pupils absent during the survey could easily complete the questionnaire when they returned to school. We do not know how many pupils in each school did not answer the questionnaire. However, we do know that the schools were motivated and wanted their pupils to complete the questionnaire. In addition, the fact that the most active schools participated in the system may introduce some bias in the results. To the above-mentioned limitations had to be added the fact that not every school could participate in the system, because it is in the Internet. Although every school has had access to the Internet since the year 2000 (M. Suvanen, personal communication), in practice, the use of the Internet varies considerably among schools. Despite these limitations, the School Well-being Profile provided a decent data set for studying well-being in schools.

The wording of the questionnaires had minor variations according to school level. The primary school questionnaire differed the most from the others. Some questions were removed to make it shorter and more easily understandable for children aged 10–13 years. The theoretical basis of school well-being [19] was the same in each questionnaire and the topics of the questions were the same. The internal consistencies of the school conditions, social relationships, means for self-fulfillment and health status categories were very good in lower and upper secondary schools and good in primary school.

The data were gathered entirely via Internet. The feedback concerning the answering mode has been very positive. An open question on the ease of use was included at the end of the questionnaires. Over 90% of the answers were like the following: very easy, easy, easily, easy of course, much easier than in paper format, piece of cake, etc. McCabe et al. [26] have found that among young children, there were minimal differences between survey modes (Web form versus paper form) in data quality.
Pupils in primary school experienced school conditions, social relationships and means for self-fulfillment to be better than pupils in lower and upper secondary schools. Pupils in secondary school are going through their period of puberty, during which they construct their identity and self-image. Their opinions towards adults at home and school vary. In adolescence, pupils’ cogitation gradually approaches the level of abstraction and logic, which is typical of adults [27]. These changes may affect the way they assess the settings they study in. Whatever the reason, pupils’ assessments of school at each level should be noted. This could also be a sign of pupils’ views being ignored in school. Less than half of the pupils thought that their views were taken into account and only a third reported that pupils could take part in making rules. Primary school pupils ranked these questions higher than others. This is surprising; it would seem natural that older pupils had more say in school. That might increase their responsibility as students, too. School well-being could also be improved by appreciating each member’s work in school more. The appreciation is seen also in offering possibilities for pupils’ participation. The school environment has a major impact on behavior and emotional well-being, so we should ensure that young people feel valued at school by providing them with opportunities for positive participation [28]. Simovska [29] calls for schools to provide space for the voices and choices of young people.

In the lower secondary schools, pupils experienced social relationships to be worse than pupils in primary and upper secondary schools. The period between Grades 7 and 9 (from 13- to 15-year old pupils) is very challenging. During puberty, school motivation may diminish, difficulties in concentrating may affect studying and pupils need continuing feedback about themselves [30]. This calls for special efforts to enhance social relationships between pupils and personnel, and among pupils themselves. The transition from primary to secondary school (between Grades 6 and 7) is quite a big change for pupils in Finland. Many children, of course, manage the transition well, but it may be a stressful situation when they are undergoing the changes experienced during puberty [31]. In primary schools, we usually have one teacher per class, whereas in secondary schools there is a different teacher in every school subject. Recently, schools with Grades 1–9 have been introduced to reduce the gap between Grades 6 and 7.

Bullying was not very common in participating schools compared with the School Health Promotion Survey in Finland, where 8% of 8th and 9th Graders were bullied and 6% bullied others once a week or more often [32]. Still, the finding that classmates do not intervene when others are being bullied is alarming. Salmivalli et al. [33] see bullying as a group phenomenon, where there are more players involved than only the one who bullies others and the one being bullied. School personnel should take action to educate pupils to intervene when their classmates are being bullied. Promising results have been seen when the whole-school policy approach [34] and participant role approach in school classes [35] have been used.

Comparing gender and grades, the main finding was that girls and younger students within each school level rated school well-being more positively. However, girls had more symptoms than boys at every school level, even in primary school. This result is in line with other studies [20, 36]. The differences between gender and grade tend to diminish in upper secondary school.

Primary school pupils’ responses concerning single questions on school well-being were generally more positive than corresponding responses in secondary schools. Interesting exceptions were noted. Only one-third of primary school pupils thought that there was a good chance to work in peace, whereas many more secondary school pupils thought so. Less than half of primary school pupils thought that their work was appreciated in school, whereas this percentage was ~60 among secondary school pupils. Work appreciation would be an interesting topic for further research at all school levels.

Early prevention programs for younger children are more effective as well as programs which develop protective factors compared with those which try to reduce existing negative behavior [37].
The current intervention tried to influence schools as a whole—starting from primary school. Its basis was positive development—well-being in school. Schools get both pupils’ and personnel’s results, so they are able to see a holistic picture of well-being in their own school. They can see the ratings of the four well-being categories as well as single questions. They can also compare their own school’s results with the results of all answers from the same school level. The feedback data were available directly on the Internet. In the Koulumiete Project, the results were discussed among the school personnel, and the teachers presented and discussed each class’s results with the pupils. After these discussions, the schools started to work on chosen development areas [25]. During the present study, the administrator was available for advice when needed. Lectures have also been given in different seminars in Finland. Several intervention projects utilizing the system have been started; these include more intensive participation in the school development process.

The SHI (http://apps.nccd.cdc.gov/shi) has mainly the same purposes as our tool. It is a theory-based and holistic school health evaluation tool and its main purpose is to feed back data to schools. Both can be used either on the Internet or in paper format. The theory behind them is different as is the role of the evaluation tool provider. A detailed comparison of these two tools is out of limits of this present paper, but would be an interesting task for the future.

The main features of the School Well-being Profile are that it is theory-based [19] and that it uses new technology offering instant feedback. The profile is available on the Internet for schools to use free of charge. The idea is that schools evaluate their well-being, make positive changes and perform the evaluation again to see whether the development has been in the right direction. In the future, it would be important to investigate how schools really use their feedback data; do they make improvements based on the results? According to the feedback on the system, the results have started discussions in schools and that is, in itself, a way forward.

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