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Factors associated with schoolchildren's general subjective well-being

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Abstract

Based on a conceptual model of well-being in school, this study was aimed at exploring factors associated with schoolchildren's general subjective well-being. Classroom data for the School Health Promotion Survey were gathered in 1998 (n = 39 886) and in 1999 (n = 47 455) among eighth and ninth graders (aged 14.3–16.2 years) from 458 secondary schools in different parts of Finland. The dependent variable was the General Subjective Well-being Indicator (GSWI), based on the Raitasalo-modified 13-item Beck Depression Inventory. The independent variables (total 56) included *background* (grade, socioeconomic status, social cohesion, recreation and health behaviors) and *school context* (school conditions, social relationships, means for self-fulfillment and health status). The analysis utilized multivariate linear regression modeling. The final model accounted for 22% of boys' and 25% of girls' GSW variation. 'Means for self-fulfillment' (R^2 = 0.11 boys, R^2 = 0.15 girls), and social relationships in school (R^2 = 0.09 boys, R^2 = 0.10 girls) and outside school (R^2 = 0.09 boys, R^2 = 0.11 girls) were the categories showing the strongest correlations with GSW. Grade and socioeconomic status showed only a weak correlation with GSW (R^2 = 0.01) among both genders. The study indicated that the *school context* has a major influence on pupils' general subjective well-being.

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Introduction

School health studies have tended to focus on issues of health education, school health services and on healthy school environments (Green and Kreuter, 1999). Recently, more comprehensive school health programs have been developed, e.g. the WHO 'Health Promoting School' (Denman, 1999; St Leger, 1999; Barnekow Rasmussen and Rivett, 2000) and the 'Coordinated School Health Program' in the USA (Allensworth and Kolbe, 1987; Marx and Wooley, 1998). Rowling provides one definition for a health promoting school (Rowling, 1996): 'A HPS is one which has an organized set of policies, procedures, activities and structures, designed to protect and promote the health and well-being of students, staff and the wider school community members'. In health promoting schools, health is interpreted in its broad meaning (WHO, 1947), i.e. as comprising physical, social and mental health (Parsons *et al*., 1996; McKenzie and Richmond, 1998).

The broad definition of health ties in closely with the concepts of quality of life and well-being. Issues of quality of life have attracted growing research attention in recent years (WHOQOL Group, 1998; Ware and Gandek, 1998). Measurements of quality of life in *children* tend to focus on questions of health, i.e. the accent is on evaluating the effect of diseases and treatment protocols (Apajasalo, 1997; Drotar, 1998). One of the few studies concerning children's or adolescents' quality of life at the population level is The Quality of

Life Profile—Adolescent Version (Raphael *et al.*, 1996). Raphael *et al.* define adolescents' quality of life as 'the extent to which a person enjoys the important possibilities of his/her life'.

Overall subjective well-being can be understood in terms of life satisfaction, contentment and hedonic level, while different aspects of subjective well-being include self-appraisals like job satisfaction, self-esteem and control belief (Veenhoven, 1991). By life satisfaction, Veenhoven means 'the degree to which an individual judges the overall quality of his life-as-a-whole favorable' (Veenhoven, 1991). She uses the word happiness synonymously with life satisfaction. Well-being has been measured by a number of researchers using various instruments (Bowling, 1991; McDowell and Newell, 1996). These scales mostly concern personality disorders, distress and psychological well-being, and deal with areas such as happiness, life-satisfaction and morale.

Huebner and his colleagues (Huebner, 1991; Terry and Huebner, 1995; Huebner *et al.*, 1999; McCullough *et al.*, 2000) have concentrated on the construct of subjective well-being among children and adolescents. Drawing on the Students' Life Satisfaction Scale (SLSS) and ratings of the measures of frequencies of positive and negative affect, they argue that subjective well-being among children and adolescents can be seen as a three-component construct: global life satisfaction, and positive and negative affect (Huebner, 1991; McCullough *et al.*, 2000).

Samdal (Samdal, 1998) and Opdenakker and van Damme (Opdenakker and van Damme, 2000) have studied well-being in the school context, although using different indicators of well-being. In Samdal's survey subjective well-being was measured with one single item: '*In general, how do you feel about your life at present?'*. Her results showed that student support, adequate expectations and teacher support are the most important predictors of subjective well-being. Opdenakker and van Damme used a well-being questionnaire consisting of eight indicators (Opdenakker and van Damme, 2000): 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. They noted that the same variables concerning instruction and knowledge acquisition were effective both for achievement and well-being. Teacher–staff co-operation and pupil counseling were also related to both achievement and well-being, whereas co-operation and professional contacts between teachers were related only to school well-being.

The phenomenon of welfare has been extensively researched in the sociological tradition. Allardt notes that in all Scandinavian languages the word welfare also stands for well-being, and covers both the level of living and quality of life (Allardt, 1976, 1989). Allardt cross-tabulates his concept of well-being with the dichotomy of objective and subjective indicators; on the other axis, he makes a distinction between the categories of having, loving and being (Allardt, 1989). Allardt's work provided the foundation for the conceptual model of well-being developed for this project, i.e. the School Well-being Model (Konu and Rimpelä, 2001). This model (Figure 1) divides well-being in the school context into four categories: school conditions, social relationships, means for self-fulfillment and health status. Important contexts with an influence on children's well-being outside school include home and the surrounding community.

This study explored the associations of children's general subjective well-being with factors related to the school context (Figure 1). General subjective well-being was measured using an indicator (GSWI) (Konu *et al.*, in preparation a) that is based on the Raitasalo modification of the Beck Depression Inventory (Raitasalo, 1995; Kaltiala-Heino *et al.*, 1999). The GSWI focuses on perceived satisfaction in specific life domains.

Methods

Data collection

The data were collected as a part of the School Health Promotion Survey. The 16-page classroom

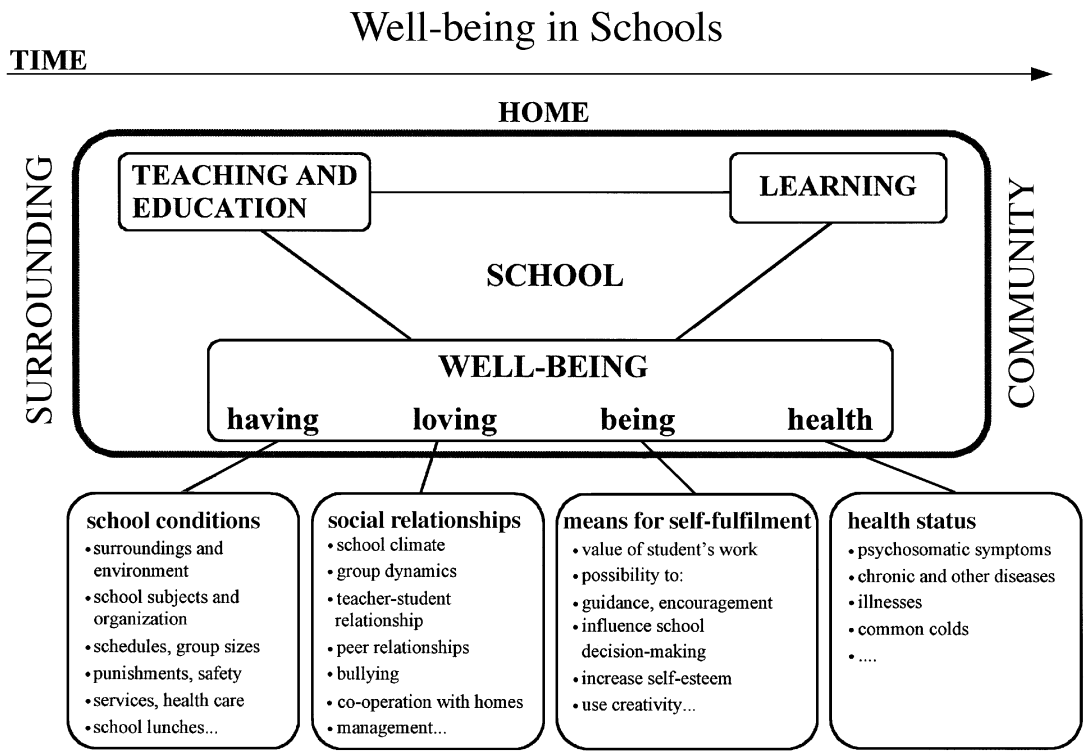

Fig. 1. The School Well-being Model (Konu and Rimpelä, 2002).

survey covers numerous aspects of pupils' health and lifestyle, and has been conducted in Finland every year since 1995. The data were gathered in the same geographical areas every other year. Self-administered questionnaires were used as a classroom survey setting supervised by the pupils' own teacher. The mailing envelopes containing the questionnaires were sealed in the presence of pupils to ensure confidentiality. The data used in the present study were collected in April 1998 (n = 43 085) in the eastern part of Finland and in April 1999 (n = 50 282) in the southern and western parts of Finland, and schoolchildren aged 14.3–16.2 years in the eighth and ninth grade of secondary school. The rate of valid responses among registered pupils in these areas (Statistics Finland, 1999) was 61% in 1998 and 74% in 1999; 6.5% of the cases were further excluded because respondents were from small schools (3.0%), from special schools (1.0%) or they were from schools with less than 15 respondents in each gender/grade group (2.5%); 46% of the final data (n = 87 341 from 458 schools) were from the year 1998 and 49% of the respondents were girls.

The proportion of missing responses within variables varied between 0 and 4.2%, with two exceptions: the question concerning satisfaction with confidentiality in the school health service (5.6%) and the question concerning parents' education (9.6%). The missing responses for parents' education were re-coded into the category of 'under 12 years of education' in order to keep that data in the analysis. The effect of this procedure was tested; the modeling results remained unchanged.

Measurement and analysis

The dependent variable is a score, the GSWI, which is based on the Raitasalo-modified (Raitasalo, 1995) 13-item Beck Depression Inventory (details in Konu *et al.*, in preparation a). The

GSWI consists of 13 items of general perceptions of life: positive mood, future orientation, success, satisfaction, global self-esteem and specific self-esteem (appearance), social orientation, decision-making, sleeping, energy, appetite, and anxiousness.

The independent variables were categorized into two groups, i.e. *background* (grade and socioeconomic status, social cohesion among family and friends, recreation, and health behaviors) and *school context* (school conditions, social relationships, means for self-fulfillment and health status). A total of 65 variables were tested for associations with subjective well-being using linear regression. Nine of the variables were not statistically significantly related to GSWI and were excluded from further analysis. The remaining variables were dichotomized (Table I), except the 'number of healthy eating habits' and the 'number of recreational activities', which were scores. Separate multivariate linear modeling for boys and girls was used to study the associations of these variables with pupils' general subjective well-being. Grade and socioeconomic status variables (family structure, unemployment and educational status of higher-educated parent) were forced into the models for adjustment purposes, while variables in the other categories were added as blocks using a forward stepwise procedure. SPSS 9.0 for Windows was used for analysis.

Results

General subjective well-being differed between boys and girls; the mean score for boys was 4.9 compared to 4.3 for girls. The variation among boys was greater (SD 3.2) than among girls (SD 2.8). Among eighth graders the mean score was 4.54 [95% confidence interval (CI) 4.51–4.56] and among ninth graders 4.69 (95% CI 4.66–4.72). All results are presented separately for boys and girls.

The main focus of the study was on subjective well-being in the school context; the other factors had to do with children's background (Figure 2). *Background* (grade and socioeconomic status, social cohesion, recreations, and health behaviors) explained 12.2% of boys' GSW and 14.5% of girls' GSW. Grade and socioeconomic status accounted for only 1.2% of boys' and 1.5% of girls' GSW. *School context* (school conditions, social relationships in school, means for self-fulfillment, health status) accounted for 17.0% of boys' GSW and 20.1% of girls' GSW (Figure 2). In the school context, the category 'means for self-fulfillment' explained most of the GSW variation; 10.5% for boys and 14.5% for girls. Social relationships were the second most important area both outside school (9.1% for boys and 10.9% for girls) and in school (9.1% for boys and 10.1% for girls).

The *final model* (whole school context and whole background together) with 56 variables accounted for 22.2% of boys' and 24.9% of girls' GSW variation. Girls' general subjective well-being (GSW) was better explained in all the models tested.

Table II presents the regression coefficients in the final model for 36 variables in different categories. Variables with $P > 0.01$ were excluded from Table II. The individual variables showing the strongest correlation with general subjective well-being were 'frequent talks with parents', 'no weekly symptoms', 'has not been bullied at school' and 'has at least one intimate friend' (Table II). Other strong correlations with GSW were found with variables in the 'means for self-fulfillment' category, i.e. 'plans for future education' and 'no problems with tasks that require personal activity'.

The most important variables were the same for both boys and girls. 'School lunch is a relaxing break' and 'no problems getting along with school friends' were significant for girls, but were either insignificant or excluded from the boys' model. 'No chronic disease' was significant for boys, but was excluded from the girls' model (Table II).

Discussion

Earlier, Samdal studied subjective well-being in a representative school survey (Samdal, 1998). However, well-being was measured by one single item. Opdenakker and van Damme have published a more detailed study of pupils' well-being

Table I. *Independent dichotomous variables according to the categories of the School Well-being Model, response options and their proportions*

Variable	Option (alternative)	Boys (%)	Girls (%)
Grade and socioeconomic status			
grade	ninth (eighth)	50	50
parents' unemployment	no (father, mother or both)	68	67
family structure	nuclear family (other)	75	74
guardians' education	⩾12 years (<12 years)	47	42
Social cohesion			
supper together with whole family	yes (no)	43	34
parents know most friends	yes (no)	81	78
parents know weekend activities	always (no)	59	67
talks with parents	often or quite often (rarely/never)	45	42
at least one intimate friend	yes (no)	85	94
Recreation and health behaviors			
leisure exercise	more than once a week (less frequently)	81	78
bedtime	regular (irregular)	54	65
number of healthy eating habits	scale 1–4	mean 1.8	mean 2.2
number of recreational activities	scale 0–9	mean 2.8	mean 2.8
regular dating	yes (no)	15	22
daily nicotine use	no (yes)	75	78
really drunk	rarely or never (at least monthly)	73	78
alcohol use	rarely or never (at least monthly)	49	49
drug-related acquaintances	no (yes)	58	54
illegal drug use	no (has tried or uses)	86	88
School conditions			
amount of school work	just right (too much or too little)	52	55
time pressure disturbs school work	no (yes)	60	57
school lunch is a relaxing break	yes (no)	79	81
getting to meet school nurse	easy (difficult)	88	86
peaceful atmosphere in class	yes (no)	56	52
locker available	yes (no)	27	34
ventilation disturbs school work	no (yes)	40	33
temperature disturbs school work	no (yes)	45	34
dirtiness disturbs school work	no (yes)	65	63
inappropriate desks complicate school work	no (yes)	44	50
restlessness disturbs school work	no (yes)	72	70
risk of accidents disturbs school work	no (yes)	84	82
Social relationships in school			
being bullied at school	no (yes)	61	71
teachers interested in how pupil is doing	yes (no)	29	27
problems working in teams	no (yes)	92	95
problems getting along with school friends	no (yes)	94	96
having bullied at school	no (yes)	41	71
handling personal matters in health service	satisfied (not satisfied)	80	76
pupils enjoy being together	yes (no)	77	66
problems getting along with teachers	no (yes)	76	86
teachers treat pupils fairly	yes (no)	52	53
pupils' views are respected in school	yes (no)	45	48
Means for self-fulfillment in school			
problems finding a personal way to study	no (yes)	76	75
problems with tasks requiring personal activity	no (yes)	75	79
get help with problems in school or studies	yes (no)	83	84

Table I. *Continued*

Variable	Option (alternative)	Boys (%)	Girls (%)
problems preparing for tests	no (yes)	65	66
plans for future education	yes (no)	83	83
teachers expect too much	no (yes)	65	70
teach. encourage pupils to express their views	yes (no)	54	54
problems following teaching	no (yes)	83	84
problems doing tasks that require writing	no (yes)	78	88
problems doing tasks that require reading	no (yes)	76	86
problems doing homework	no (yes)	69	78
Health status			
weekly symptoms	no (one or more)	44	23
common colds during past 6 months	no more than one (more often)	58	40
chronic disease	no (yes)	90	89
asthma	no (yes)	94	94

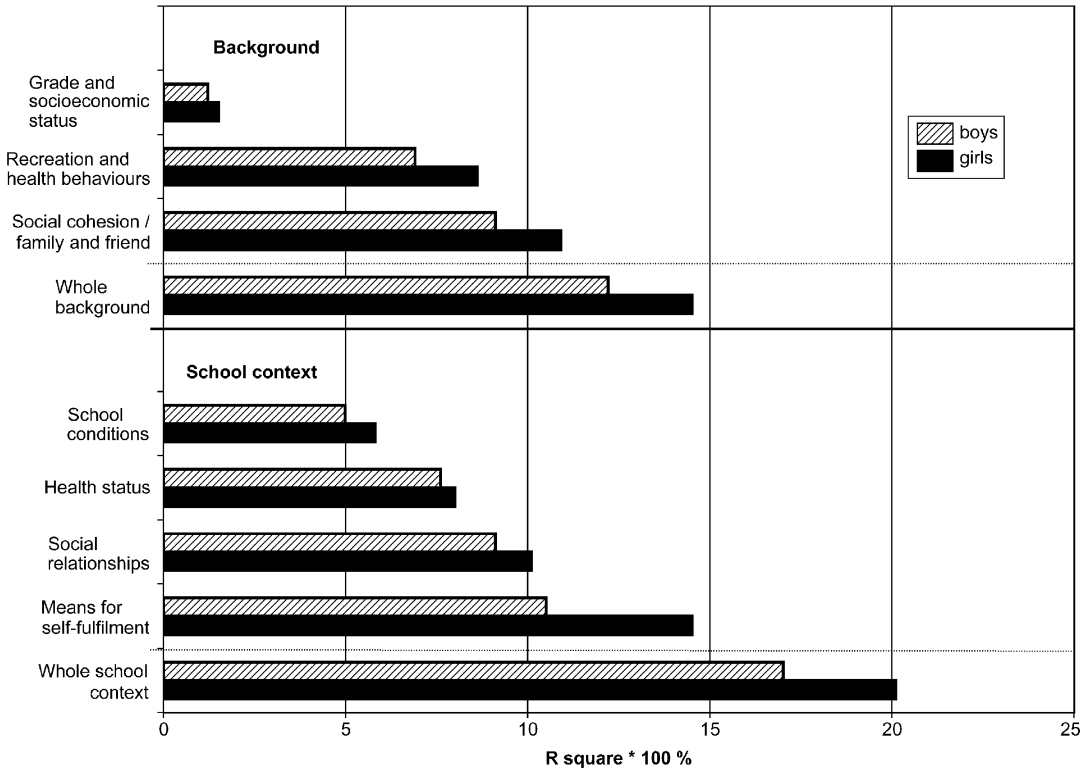

Fig. 2. Different well-being categories and their share (%) of the well-being variation among pupils.

(Opdenakker and van Damme, 2000). Their instrument covered widely different aspects of well-being at school, but did not measure pupils' general subjective well-being. In our study general subjective well-being was measured by a 13-item indicator. As far as we are aware this is the first study that examines the association of a multitude of factors with schoolchildren's

Table II. *Coefficients and their significance in the final multivariate linear regression model*

	Boys (n = 44262)		Girls (n = 43079)	
	Coefficient	Significance	Coefficient	Significance
Constant	–1.63	<0.001	–2.21	<0.001
Grade and socioeconomic status				
grade, ninth	0.07	0.053	0.14	<0.001
parents not unemployed	0.19	<0.001	0.09	0.006
guardians' education ⩾12 years	0.12	0.001	0.20	<0.001
nuclear family	0.10	0.040	–0.03	NS
Social cohesion/family and friend				
frequent talks with parents	0.80	<0.001	0.84	<0.001
at least one intimate friend	0.58	<0.001	0.69	<0.001
parents know weekend activities	0.36	<0.001	0.21	<0.001
supper together with whole family	0.18	<0.001	0.14	<0.001
parents know most friends		NS	0.14	0.001
Recreation and health behaviors				
regular dating	0.48	<0.001	0.39	<0.001
free time exercise more than once a week	0.48	<0.001	0.29	<0.001
number of healthy eating habits	0.19	<0.001	0.11	<0.001
regular bedtime	0.16	<0.001	0.24	<0.001
no daily nicotine use	0.13	0.006		NS
number of recreational activities	0.12	<0.001	0.11	<0.001
School conditions				
locker available	0.12	0.002	0.09	0.003
atmosphere in class is peaceful	0.11	0.002		NS
school lunch is a relaxing break		NS	0.22	<0.001
amount of school work is just right		NS	0.15	<0.001
time pressure does not disturb schoolwork		NS	0.12	<0.001
Social relationships in school				
has not been bullied at school	0.78	<0.001	0.58	<0.001
teachers are interested in how pupil is doing	0.30	<0.001	0.40	<0.001
pupils in class enjoy being together	0.21	<0.001	0.16	<0.001
has not bullied at school	0.17	<0.001		excl.
satisfied with handling personal matters in health service	0.16	0.001	0.12	0.001
no problems working in teams		NS	0.38	<0.001
no problems getting along with school friends		excl.	0.29	<0.001
Means for self-fulfillment in school				
has plans for future education	0.46	<0.001	0.42	<0.001
no problems with jobs that require personal activity	0.40	<0.001	0.46	<0.001
no problems finding a personal way to study	0.39	<0.001	0.40	<0.001
no problems preparing for tests	0.38	<0.001	0.28	<0.001
get help with problems in school or studies	0.31	<0.001	0.42	<0.001
no problems doing tasks that require writing	0.15	0.001		excl.
teachers do not expect too much		excl.	0.18	<0.001
no problems following teaching		excl.	0.16	0.001
teachers encourage pupils to express their views		excl.	0.15	<0.001
Health status				
no weekly symptoms	0.79	<0.001	0.93	<0.001
no more than one common cold in 6 months	0.36	<0.001	0.19	<0.001
no chronic disease that restricts daily activities	0.21	<0.001	excl..	

NS, not significant; excl., excluded from the model (linear regression, forward stepwise; P in 0.001, P out 0.005).

general subjective well-being in a nation-wide school survey.

The phenomenon, general subjective well-being, among pupils in school context has rarely been studied. The present study aimed at finding associations between pupils' general subjective well-being and factors related to school. The issue of causal relationships was left out for forthcoming research. Furthermore, the data used was cross-sectional and analysis correlational, thus causal inferences were not even legitimate. In studying factors associated with schoolchildren's subjective well-being the main concern was the *school context.* No individual variable *per se* was seen to be as important as the ensemble it belongs to. For this purpose the school-related variables were categorized on the basis of the School Well-being Model (Figure 1). The model does not propose causal linkages but rather the interdependencies within the school well-being phenomenon. The most important categories related to general subjective well-being were 'means for self-fulfillment in school' and 'social relationships in school'. However, the social relationships among family and friends were also essential. Socioeconomic status had less impact on schoolchildren's general subjective well-being than expected.

Comprising almost 90 000 respondents from over 400 schools, the School Health Promotion Survey provided a comprehensive and useful data set for our study. The respondents comprised almost the total pupil population of the areas studied (61–74%). Since schools were free to decide on their participation in the study, pupils from some schools were completely left out. Pupils who were absent from school on the day of the survey may show different characteristics in terms of their subjective well-being than those who were present. The reliability of the responses was probably increased by the fact that the envelopes were sealed in the presence of the pupils, who were informed in advance that this is what would be done. Further, it is important to bear in mind that all the variables studied were pupils' subjective perceptions.

Pupils' grade and socioeconomic status of his/her family accounted for no more than around 1% of the variation in pupils' general subjective well-being. McCullough and his colleagues (McCullough *et al.*, 2000) also note that demographic variables contribute only modestly to adolescents' subjective well-being. Another possible reason for the negligible effect of socioeconomic status on well-being may lie in the phase of life the pupils were living during the study—the transition from childhood to adulthood. They are in the process of establishing their own socioeconomic status and the status of their parents may have a lessening impact on them. West has discussed this issue more thoroughly (West, 1997).

Social cohesion in the family, especially frequent talks with parents, showed a strong correlation with well-being among pupils. This factor seemed more important than family structure and parental control. This is in line with the findings of Landgraf and Abetz (Landgraf and Abetz, 1998), who argue that the quality of family relationships is more important than structure. The presence of an intimate friend was also important to pupils' subjective well-being. Questions of peer influence were not examined in closer detail in this study.

Recreation and health behaviors were associated with subjective well-being; the most important factors were exercise during leisure and regular dating. Leisure exercise concerns most pupils (about 80%), while only 15% of boys and 22% of girls date regularly at this age. Healthy eating habits was important for boys' well-being, but less so for girls. Regular bedtime was important for girls' well-being and showed some correlation with boys' well-being as well. Good sleep is one of the key constituents of general well-being in adolescence [see also (Tynjälä *et al.*, 1999)].

Rather surprisingly, drug use had no association with either boys' or girls' subjective well-being. Daily nicotine use (tobacco or snuff) was not significantly related to well-being among girls and showed only a minor association among boys. Alcohol use *per se* was not related to subjective well-being, but frequent drunkenness showed a weak correlation with lowered well-being among girls. Altogether, health-compromising behaviors did not seem to be all that important to pupils'

general subjective well-being. Parents and other adults often focus their concern on these aspects of youngsters' life. These behaviors may be a way to experiment with the possibilities of adult life and a passing episode in young person's growth. Anyway, the study indicated that these behaviors were not notably related to schoolchildren's general subjective well-being.

The main concern in this study was with school and 35 factors out of the total of 56 had to do with the school context. Even though we did not conduct an exhaustive analysis of factors from other areas of life, it can be safely argued that the school context has a major influence on pupils' general subjective well-being.

School conditions, like ventilation, temperature, dirtiness and inappropriate desks, had a lesser impact on subjective well-being than predicted. Even perceived peaceful atmosphere was not very important. This may be due to the fact that the 'social relationships' category partly covers this aspect, too. Girls' well-being showed some correlation with the view that school lunch is a relaxing break. When the factors in this category were studied individually, they showed a systematic small but significant association with well-being.

Health is understood here in its narrower meaning as the absence of disease and illness (Seedhouse, 1986). *Health status* was studied in the school context, although it could be argued that it should be placed in background information. In his theory Allardt placed health in the 'having' category (Allardt, 1976). However, in a factor analysis health was placed on a factor separate from the other aspects of that category (Allardt, 1976). In the School Well-being Model (Konu and Rimpelä, 2002) health was separated from the 'having' category because, in the context of well-being, health was seen as a personal state affected by external conditions. Health and well-being are interrelated. It is not self-evident how their relationship should be conceptualized. Depending on the phenomenon and the theory in focus the relationship between these two concepts should be explained. Whatever the conceptualization, health status is an important part of children's subjective well-being.

Measures of *health status*, symptoms (neck pains, back pains, stomach ache, headache, nervousness, etc.) and common colds, were strongly associated with pupils' general subjective well-being. Absence of chronic disease showed some association with boys' well-being, but was excluded from the girls' model. This may indicate that the care of chronic diseases, e.g. diabetes and asthma, has succeeded to the point that these individuals can lead normal lives.

Social relationships in school were important to pupils' subjective well-being. In particular, not being bullied in school seems to be associated with high subjective well-being. This confirms the findings of Salmivalli and Kaukiainen, according to whom bullying is a wider social phenomenon (Salmivalli and Kaukiainen, 1999). Teachers' caring for pupils appeared to be important for both boys and girls. Having no difficulty working in teams and getting along with schoolmates were connected to girls' higher GSW, but not so among boys. Surprisingly, neither teachers' fair treatment of pupils nor pupils' possibilities to influence decision making in school were associated with pupils' well-being.

The category of *means for self-fulfillment* showed the strongest correlation with pupils' general subjective well-being, although no single factor emerged as particularly important. This finding lends support to the results of Opdenakker and van Damme, who identified the same factors affecting achievements and well-being (Opdenakker and van Damme, 2000). In our study factors related to schoolwork and getting help with possible problems were important. Having plans for future education were also associated with higher well-being. These fundamental issues are often neglected when discussing pupils' well-being. On the basis of our findings it would be crucial to take this educational aspect seriously when trying to improve the well-being of schoolchildren. This emphasizes the importance of closer co-operation between educational and health promotional

perspectives in schools, as highlighted by St Leger and Nutbeam (St Leger and Nutbeam, 2000).

Health habits and health compromising behaviors have often been the main focus of health promotion and health education professionals when targeting their efforts to improve young people's health and well-being. In the light of this study of schoolchildren's general subjective well-being it might be more fruitful to concentrate on the meaning of school in young people's lives. Our conceptual model (Figure 1) (Konu and Rimpelä, 2002) seemed to provide a useful basis for evaluating pupil's subjective well-being in school. However, the variables obtained from the School Health Promotion Survey were not designed on the basis of this model and therefore the areas of the model were not all completely covered. Nonetheless these variables did explain a considerable part of the variation in pupils' general subjective well-being. Improvement could be achieved by developing indicators on the basis of the conceptual model. The subject could be developed further by studying the relationships between categories of school well-being and possible inter-relations between variables within categories. This process is underway with the aim of developing a specific school well-being indicator conceptually separate from general subjective well-being (Konu *et al*., in preparation b).

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