



Arto K. Ahonen

Psychosocial Well-being of Schoolchildren in the Barents Region

A Comparison from the Northern Parts of Norway,
Sweden and Finland and Northwest Russia

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ABSTRACT

Arto K. Ahonen

PSYCHOSOCIAL WELL-BEING OF SCHOOLCHILDREN IN THE BARENTS REGION

A comparison from the northern parts of Norway, Sweden and Finland and Northwest Russia

This study was connected to the ArctiChildren-project which was conducted from 2004–2006 and Coordinated by the University of Lapland. The project's one aim was to recognise and evaluate the developmental needs of psychosocial well-being in the participating school communities of the Barents Region. The questionnaire developed for the Health and Behaviour of School-aged Children (HBSC) survey and was the main research tool used to recognise and evaluate the state of psychosocial well being of schoolchildren in the area. The survey was carried out in comprehensive schools from northern parts of Norway, Sweden and Finland and Northwest Russia. There were altogether 1398 respondents from 27 schools. The respondents were 13- to 15-year-old pupils, from school grades 6 to 8 in Finland and Sweden, 7 to 9 in Norway and 6 to 10 in Russia. Comparisons were also made with the national level data (HBSC data) collected in the HBSC 2001/02 -study, with altogether 14 789 respondents of a nationally representative selection.

This study based on ArctiChildren survey is a case study, rather than a representative analysis on the sate of well-being in the area. This study identified certain indicators of the psychosocial well being, while pointing out some differences between the countries and areas. The results were analysed in descriptive level comparisons of the well-being factors. They were divided into *having* factors related to material welfare, *loving* factors related to social interaction and *being* factors related to personal growth, based on Erik Allardt's conceptual model of well-being. Furthermore, explanatory models were formulated for examining the factors behind the psychosocial well-being in the schools of the Barents Region; life satisfaction and school satisfaction were used as the dependent variables. For the descriptive study quantitative methods such as frequency analysis and cross

tabulations were used through the SPSS (Statistical Package for Social Sciences) programme. For the explanatory models the data were analysed mainly by using hierarchical regression analysis.

Differences were found in the structures and the state of pupils' psychosocial well-being between schools from the Barents Region and countries in general. The diversities in the national cultures and practices in the local school cultures seemed to have an impact on how the children's psychosocial well-being was built in each country. Families' affluence was reported as being on a higher level in the north overall, with the highest level in northern Norway. The pupils in the north reported suffering less from psychosomatic symptoms compared to the countries in general. When examining the loving factors, pupils in the ArctiChildren data reported spending more time with their friends, and getting more support from their school mates than pupils in the HBSC data. No differences between the data sets were found in the pupils' school satisfaction or in schoolwork causing pressure. There was a clear difference in pupils' life satisfaction; pupils in the ArctiChildren data were more satisfied with their lives when compared with the HBSC data.

The explanatory analyses in the ArctiChildren data showed that there were differentiated structures in explaining life and school satisfaction, and that all three categories (having, loving and being) of well-being had an impact on them. The importance of the school atmosphere was great; the other pupils' and teachers' support and schoolwork causing pressure were closely related to it, especially in the Nordic countries. These are key areas of school culture and everyday work and are therefore essential to pay attention to and take into serious consideration in every school.

Keywords: Children, school, psychosocial support, well-being, comparative education

TIIVISTELMÄ

Arto K. Ahonen

KOULULAISTEN PSYKOSOSIAALINEN HYVINVOINTI BARENTSIN ALUEELLA

Vertailua Pohjois-Ruotsissa, Pohjois-Norjassa ja Pohjois-Suomessa
sekä Luoteis-Venäjällä

Tutkimus liittyy Lapin yliopiston koordinoimaan ArctiChildren hankkeeseen, joka toteutettiin vuosina 2004–2006. Kehittämistyön perustaksi hankkeessa kerättiin tietoja WHO:n koululaiskyselyssä käytetyllä HBSC (Health and Behaviour of School Aged Children) lomakkeella. Vastaajina oli yhteensä 1398 oppilasta 27 koulusta Pohjois-Norjasta, Pohjois-Ruotsista ja Pohjois-Suomesta sekä Luoteis-Venäjältä. Koulut sijoittuivat sekä kaupunki-, että haja-asutusalueille. Vastaajat olivat kolmesta ikäryhmästä 13–15-vuotiaita peruskoululaisia. ArctiChildren hankkeessa kerättyä aineistoa verrattiin myös kansainvälisen HBSC-tutkimuksen aineistoon, missä otokset olivat kansallisesti edustavia. Vastaajia oli yhteensä 14 789 Norjasta, Ruotsista, Suomesta ja Venäjältä, kustakin noin 3 500.

ArctiChildren aineistosta tehty tutkimus on luonteeltaan tapaustutkimus, missä otanta on tehty harkitun valinnan perusteella. Tutkimus toteutettiin käyttäen kvantitatiivisia menetelmiä, se jakaantui kuvailevaan ja selittävään osaan. Tuloksia tarkastellaan kuvailevalla tasolla vertailemalla koululaisten hyvinvoinnin osatekijöitä tutkimukseen osallistuneiden maiden ja alueiden kesken. Hyvinvoinnin osatekijät jaettiin sosiologi Erik Allardtin hyvinvointimallin mukaisesti *having*-, *loving*- ja *being*-tekijöihin. Mallin mukaisesti *having*-tekijöitä ovat materiaaliseen hyvinvointiin liittyvät, *loving*-tekijöitä sosiaaliseen kanssakäymiseen liittyvät ja *being*-tekijöitä itsensä toteuttamiseen ja persoonalliseen kasvuun liittyvät. Kuvailevan osan analyysit rakentuvat frekvenssijakaumien ja ristiintaulukoiden ja korrelaatioiden tarkasteluista. Tutkimuksen selittävässä osassa ArctiChildren aineistosta on rakennettu kouluviihtyvyyttä ja yleistä elämään tyytyväisyyttä selittäviä malleja. Ne tehtiin hierarkkisen regressioanalyysin tulosten pohjalta.

Koululaisten psykososiaalisen hyvinvoinnin rakenteessa ja tasossa ilmeni eroja sekä alueiden että maiden kesken. Alueiden erilaiset koulukulttuurit näyttivät omalta osataan vaikuttavan koululaisten psykososiaalisen hyvinvoinnin rakentumiseen. Vertailtaessa materiaaliseen hyvinvointiin liittyviä muuttujia ilmeni, että tutkimukseen osallistuneet Barentsin alueen koululaiset raportoivat perheensä materiaalisen hyvinvoinnin korkeammalle tasolle kuin heidän koulutoverinsa kansallisessa aineistossa yleisesti. Sama asia ilmeni myös tarkasteltaessa materiaalisen hyvinvoinnin objektiivisia tekijöitä, kuten asumisolaja ja perheen omistamien varallisuushyödykkeiden määrää. Barentsin alueen koululaiset raportoivat myös kärsivänsä vähemmän psykosomaattisista oireista verrattuna alueen valtioihin keskimäärin. Tarkasteltaessa sosiaaliseen vuorovaikutukseen liittyviä tekijöitä ilmeni, että Barentsin alueen koululaiset viettivät enemmän aikaa tovereidensa kanssa vapaa-ajalla ja olivat enemmän kanssakäymisessä toistensa kanssa myös viestimien välityksellä. Oppilaiden kouluviihtyvyydessä ja koulutyön rasittavuudessa ei ilmennyt eroja Barentsin ja muun alueen välillä. Sen sijaan tutkimukseen osallistuneet Barentsin alueen koulujen oppilaat olivat selvästi tyytyväisempiä elämäänsä verrattuna kotimaansa oppilaisiin keskimäärin.

Selittävä tutkimus osoitti, että koululaisten elämään tyytyväisyyttä ja kouluviihtyvyyttä selittävät tekijät erosivat toisistaan ArctiChildren tutkimukseen osallistuneiden valtioiden kesken. Kaikilla hyvinvoinnin osatekijöillä oli vaikutusta kouluviihtyvyyteen ja yleiseen elämään tyytyväisyyteen. Koulun ilmapiiri oli keskeinen koululaisten hyvinvointia selittävä tekijä, mihin opettajien tuki ja koulutyön aiheuttama paine liittyivät läheisesti. Nämä tekijät ovat läsnä jokapäiväisessä koulutyössä, minkä vuoksi niihin tulisi kiinnittää erityistä huomiota pyrittäessä kehittämään oppilaiden psykososiaalista hyvinvointia tukevaa koulua.

Avainsanat: Lapsi, koulu, psykososiaalinen tuki, hyvinvointi, vertaileva kasvatustiede

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My process of studying schoolchildren's psychosocial well-being began in 2003 when I started my studies in Professor Kyösti Kurtakko's doctoral seminar in the University of Lapland's Faculty of Education. He introduced me to a project which was the beginning to study and support children's psychosocial well-being in the Barents Region. His enthusiasm in the collaboration between schools and universities in the Barents Region enabled the beginning of the ArctiChildren project in the Faculty of Education, led by Professor Kurtakko in years 2004–2006. The project was funded by the European Union Interreg III A North Programme. In autumn 2004 I started working as a project planner and researcher in the project and also began preparing my doctoral dissertation on the topic under Professor Kurtakko's supervision. My first thanks go to Kyösti, thank you for showing me the way.

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In Rovaniemi

16 December 2009

Arto K. Ahonen

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1 INTRODUCTION

1.1 Background

This study was connected to the ArctiChildren project which was coordinated by the University of Lapland and conducted during 2004–06. One aim of the project was to recognise and evaluate the developmental needs of pupils' psychosocial well-being in the school communities of the Barents Region. The WHO's (World Health Organisation) HBSC (Health and Behaviour of School-aged Children)¹ survey and questionnaire for school-aged children was chosen to be the main research tool used to recognise and evaluate the state of psychosocial well-being of schoolchildren in the area. The survey was carried out in the pilot schools participating in the ArctiChildren project from northern parts of, Finland, Sweden and Norway and north-western Russia. This study will identify certain indicators of psychosocial well-being, as well as point out some differences between the countries. In addition, the connections between pupils' everyday life at home and at school and pupils' psychosocial well-being will be studied. The results will be analysed using descriptive comparisons. A further aim is to examine the predictive factors of well-being in each country and for each data group separately.

It has been widely known and reported that the state of school children's psychosocial health and well-being has deteriorated over the last few years (Luopa, Räsänen, Jokela, & Rimpelä, 2005). In Finland this has been a topic of discussion since the beginning of this

¹ HBSC is a WHO/EURO collaborative study. International Coordinator of the 2001/02 study: Candance Currie, University of Edinburgh, Scotland and the Data Bank Manager was Oddrun Samdal, University of Bergen. The 2001/02 survey included the following countries: Austria, Belgium (the Flemish- and French-speaking populations), Canada, Croatia, the Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Greenland, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Malta, the Netherlands, Norway, Poland, Portugal, the Russian Federation, Scotland, Slovenia, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, Ukraine, the United States of America and Wales.

century. According to Rimpelä (2002) historically, the new generation of children has always had better welfare than the one before. In the mid 1990s there was a change; the psychosocial well-being and general welfare did not increase anymore, it started to decrease. Moreover, it is unclear why school children experience more and more problems in their psychosocial well-being.

According to the professionals who work with children every day, the appearance of children's problems in schools has also changed. There are more and more pupils who do not receive enough care. There is a lack in basic needs: care, nutrition, hygiene. The pupils who suffer from a lack of basic needs do not have the strength for schoolwork. According to Järventie's (1999) study, 29% of 7–12-year-old children from the Helsinki region have a lack of basic needs provision. Karvonen, Vikat and Rimpela (2005) suggest that school plays an important role in young people's well-being and that the range of measures that can be taken to improve pupils' health is wider than those related to health directly. According to their study about the role of school and young people's health complaints, Karvonen et al. (2005, p.14) assert that the role of school has to be seen in the wider perspective of promoting the health of school children:

...based on our results, improving the educational climate of the school by providing more adult support to pupils may result in better health of pupils. It is obvious, however, that the school cannot be taken as the only sphere of life that accounts for the worsening health. It remains a challenging task both to identify further the factors behind the quickly increasing trend as well as to develop public health measures to meet these factors.

It is possible to find indicators for the psychosocial well-being of schoolchildren at school, while at the same time it is important to realise that school cannot be the only place that takes responsibility for the weakening of pupils' psychosocial well-being. It is good to be aware that school can be the only place where, for example, mental health problems occur, and school can be the only place where it is possible to take the first step of intervention. School also has its own role in the development process of self respect and self confidence

through the social structures developed in the school society.

In the most recent PISA (Programme for International Student Assessment) study (2006) about academic skills, Finland was on the very top level, Sweden was just above the OECD (Organisation for Economic Co-operation and Development) average, Norway was a bit below average and Russia was at the lowest level of the countries participating in this study (Kupari et al., 2004; OECD, 2004). In contrast, somewhat surprisingly several studies have shown that the Finnish pupils' school satisfaction is at the lowest level in Europe; Finnish pupils have very good learning results even though they do not like going to school. Norwegian pupils, conversely, are very satisfied with school, but do not learn very well there. The positive connection between good academic results and low school satisfaction is a confusing result (see Linnakylä & Malin, 1997). Contrary to the PISA study results, in the last HBSC study (Välimaa & Danielson, 2004) life satisfaction was at the highest level among Finnish pupils. Correspondingly, the Norwegian pupils were not very satisfied with their life, but still they were very satisfied with their school.

The differences between the countries in the pupils' school and life satisfaction brought up interesting questions about the role and purpose of the school systems in the daily life of the children living in the area of this study.

According to Weare (2000) the work in schools on mental, emotional or social health issues has mostly focused on pupils with lower abilities, or those seen as troublesome, rather than being seen to be of relevance to the whole school community, to 'normal' pupils or teachers. It is true that the priority of school education has traditionally been in the spreading of information. Most of the common guidelines have considered the quality or quantity of teaching in different school subjects. The focus of teaching has been changing and some new subjects have been added to school curricula every now and then. All these national level changes are political decisions. The measurements of the success of school arise from the learning results of pupils, which are studied and compared almost yearly. In the Nordic countries there has not been systematic national-level testing, except with the matriculation examinations. Nonetheless, national testing and exams are still in use in most of the OECD countries and in Russia, which is where one group of respondents of

this study is from. When the main interest of the staff and parents is in the learning results, there have been very few opportunities in schools to pay attention to the well-being of pupils.

There have not been many voices standing out to criticise the whole element of the school system or the established practices, even though they have remained similar for a century already. The system has worked fine as long as teachers have had time for the pupils, there have been recreational clubs in schools, and families have not suffered from difficult problems. When the new liberal educational policy arrived in the school system (see Rinne, Kivirauma, & Simola, 2002) it introduced totally new topics to the school discourse, as expounded on by educational policy researchers Rinne et. al in following citation:

Decentralization, goal steering, accountability, managerialism, evaluation, choice, competition and even privatization as key terms seem to be a critical if not hegemonic part of the Nordic discourse and in the international rhetoric of educational policy. In the historical traditions and cultural-social framework of the Nordic nations, however, this 'new' educational policy takes on a different significance, its own appearance, and its own power. More than elsewhere, in the Nordic countries, with their welfare state tradition which stresses diminishing inequality in education as well as in other fields of life, the change is radical. (2002, p. 644)

In spite of the development that has taken place in recent years, it is still possible to identify a particular Nordic political philosophy entrenched in the Nordic model of society. The Nordic model emerges as a composite of two large European models: the Anglo-Saxon model's emphasis on economic liberalism and competition, and the Continental model's emphasis on a large public sector, social welfare and security (Telhaug et al., 2006). In the Nordic countries social security still exists in the form of well-developed public services and a comprehensive well-functioning education system. The Nordic countries have invested more than other nations in the education sector: the level of education is high, the state school is highly regarded, the principle of equal opportunities is adopted, and school

standards are reasonably homogenous throughout the nations.

The Nordic education model, with its emphasis on equality, inclusion and adaptive learning, has undoubtedly helped the Nordic countries compete extremely effectively both economically and scientifically. However, during the last decade, the Nordic education model has lost ground as an ideal for the Western world (Telhaug et al., 2006). It can be questioned if the Nordic education model is as unified as commonly believed. Differences exist especially in the forms in which school education has been implemented in comprehensive schools.

1.2 The Context and Focus of the Study

1.2.1 The purpose

The aim of this study was to research the level of psychosocial well-being of schoolchildren in the schools of the Barents Region by using a comparative method. The role of school-related factors in the developing process of well-being of the pupils was examined. Additionally, the aim was to compare the differences of the well-being factors between the ArctiChildren data from the Barents Region and national level HBSC data from Finland, Sweden, Norway and Russia. Furthermore, this study makes suggestions for further research and governance of the educational systems in each country. According to the AHDR (Arctic Human Development Report) on Human Health and Well-being (Hild & Stordahl, 2004) it is apparent that health challenges are unique to each Arctic community and there is a need for flexibility in community-based services. There is also a need for flexibility and common understanding in pointing out the reasons behind the state of psychosocial well-being, the state of school systems and different cultural foundations.

Even though Finland has had good results in the PISA studies, there are still variations in the quality of schooling. These differences seem to be increasing, like Välijärvi (2002) argues. Even so, several international delegations have visited Finland to study the successful model of education.

According to Launonen and Pulkkinen (2004) in addition to the teaching of academic subjects in schools, attention should be paid to

the achievement of socio-emotional goals and the holistic well-being of pupils. This means a conscious learning of social skills and general life skills. The study of Bardy, Salmi and Heino (2001) showed that in schools more problems have developed in the psychosocial field of health, while at the same time physical health has improved. This study will identify certain indicators of psychosocial well-being as well as point out some differences between the countries and living areas.

1.2.2 Goals and research questions

The purpose of this research is to gain knowledge about the state and factors of psychosocial well-being of the pupils in the comprehensive schools of the Barents Region. The main goals of the research are formulated in the research questions as follows:

Research questions

1. What is the state of psychosocial well-being of the pupils in the schools of all the four countries in the Barents Region? (Specified: What indicators best describe the psychosocial well-being of schoolchildren in this data?)
2. What are the differences and similarities in the factors of psychosocial well-being when comparing the ArctiChildren and national HBSC data between the four countries?
3. By what factors can the indicators of psychosocial well-being be predicted and explained in each country according to ArctiChildren data? (Specified: How do the factors explain the pupils' school satisfaction and life satisfaction).
4. What are the similarities and differences in the predictors of psychosocial well-being of schoolchildren according to the explanatory models of the four countries?

2 PSYCHOSOCIAL WELL-BEING AND SCHOOL EDUCATION – THE CONCEPTUAL FRAMEWORK

2.1 Psychosocial Well-being

2.1.1 Earlier research

Since the 1990s a growing number of studies have been conducted on the well-being of pupils in schools. Following is a brief summary of recent research which has approached well-being from at least the fields of health science, sociology, psychology, medicine and educational science. The main interest in the present study is in the psychosocial well-being of schoolchildren from an educational perspective, which means less of an emphasis on medical (physical health) and sociological (community affairs and politics) aspects.

Earlier research has highlighted several hypotheses of the processes that may have a detrimental effect on the schoolchildren's well-being. Research focusing on subjective well-being (SWB) has increased and one aspect of it has been the children's Perceived Quality Of Life (PQOL). The PQOL has appeared to mediate children's interpersonal and intrapersonal behaviour (Huebner, Suldo, Smith & McKnight, 2004). Linnakylä and Malin (1997) studied the quality of school life of 14-year-old children in Finland and they suggested that it needs to be examined from various perspectives and at many different levels. They also concluded that even though pupils' personal attitudes, competencies and aspirations are important as such, they also interact with each other, teachers' views, fellow students and eventually the culture of the whole school.

Opdenakker and Van Damme (2000) studied the well-being of pupils in the school context using an eight-item questionnaire. Their study indicated some school characteristics to be effective for both academic achievement and well-being, but the relative influence was higher for achievement than the influence for well-being. Konu and Rimpelä (2002) used the General Subjective Well-being Indicator with 13 items to establish how well-being is divided between the individual and the context. They noticed that there was very little variation in pupils' well-being between schools. The variation occurred mostly at the individual level. Karvonen, Vikat and Rimpelä

(2005) also had similar results.

It was not possible to find direct explanatory factors for the change in health complaints of Finnish schoolchildren in the four years between 1996 and 2000 (Karvonen et al., 2005). Many school-related factors, like teacher-student relationship and academic achievement, were connected to well-being but they did not explain the rise in pupils' health complaints. In contrast, according to Engels, Aelterman, Van Petegem and Schepens (2004) school atmosphere, contacts with teachers, involvement in class and at school, school regulations and infrastructure were among the best predictors of the well-being of Flemish pupils.

Furthermore, it has been reported that the state of psychosocial health and well-being has deteriorated over the last few years (Karvonen et al., 2005; Luopa et al., 2005). A few of the most recent studies have concentrated on describing how to actually measure well-being at schools. Desjardins (2008) argues that the connection with education and well-being is ill-defined and there is a need for research to actually describe the outcomes of education and educational systems. According to him (ibid.) there is not a clear understanding of what the education systems can do and achieve. Awartani, Whitman and Gordon (2008) have been developing an instrument for capturing young people's perceptions about how school as a learning environment affects their well-being. The instrument aims to gather information on how the central elements of well-being affect the pupils themselves. Those elements are: *curriculum content, teaching and learning methods, psychosocial climate and relationships, and access to services*. Some meta-analysis from previous research was done and they ended up with an overarching hypothesis that: "Learning environments and several facets of schooling affect well-being, both overall and in its various components" (Awartani et al., 2008, p. 60). Based on this overall hypothesis they created domains and hypotheses for guiding their VOC (*Voice of Children*) programme research. O'Toole (2008) studied what kinds of implications the individual patterns of learning have on one's sense of well-being. She suggested that the pupils' individual patterns of learning should be taken into account in teaching, and that they can have an effect on the individuals' well-being. Ben-Arieh (2008) tried to find more policy orientated indicators and indices on children's well-being. He summed

up earlier research and presented two sets of indices, which should be taken into account when measuring the well-being of children. The suggestion was that there should be a better understanding of the interrelations among the indices, indicators and child policy on the long road of improving children's well-being (Ben-Arieh, 2008).

2.1.2 Is there a definition of the concept of psychosocial well-being?

From the substantial amount of earlier research, it is not an easy task to create a universal or general definition of the concept of schoolchildren's well-being. According to the WHO's Ottawa Charter for Health Promotion of 1986 (Ottawa Charter for Health Promotion, 2006) health is defined as a resource for living a productive life. Based on this definition health can be seen in a much wider perspective than only as physical health. In recent years the term *psychosocial* has been used with increasing frequency in describing children's health and well-being. According to the Oxford English Dictionary:

“Psychosocial” pertains to “the influence of social factors on an individual’s mind or behaviour, and to the interrelation of behavioural and social factors; also more widely, pertaining to the interrelation of mind and society in human development” (The Oxford English Dictionary 2002).

Evidently in this definition the emphasis is on the influence that social factors have on human thought and behaviour and also the influence of thought and behaviour on people's social world. The interrelationship between the two sets of factors is central in the definition. To Loughry and Eyber (2003) the term “psychosocial” basically implies a very close relationship between psychological and social factors. Psychological factors include emotions and cognitive development – the capacity to learn, perceive and remember. Social factors are associated with the capacity to form relationships with other people and to learn and follow culturally appropriate social codes. Human development hinges on social relationships. Forming

relationships is a human capacity and it is also an important need (Loughry & Eyber, 2003). On the question of needs, Deci and Ryan (2000) have introduced the Theory of Self Determination SDT. Their theory maintains that understanding a human motivation requires a consideration of innate psychological needs for competence, autonomy and relatedness (ibid.). They discuss that according to SDT needs specify the necessary conditions for psychological growth, integrity and well-being. Furthermore, the satisfaction of basic needs facilitate natural growth processes and motivation, whereas those that forestall autonomy, competence or relatedness are associated with poorer motivation, performance and well-being (Deci & Ryan 2000, Ryan & Deci 2000).

The concept of well-being can also be defined related to time. It is possible to divide the well-being of schoolchildren into *current well-being*, meaning a pupils' perception at a certain moment, and into *sustainable well-being*, meaning the pupil's self respect and knowledge of one's own skills in the long term (Engels et al., 2004). Of course there is a continual exchange between current and sustainable well-being, therefore both concepts cannot be looked at separately. According to Engels et al. (2004) description of well-being in the context of school:

Well being at school expresses a positive emotional life which is the result of harmony between the sum of specific environmental factors on the one hand and the personal needs and expectations of pupils vis-à-vis the school on the other (Engels et al., 2004, p. 128).

It is difficult to draw a line between health and well-being. The term is more orientated to the tradition and field of science than essential substance differences. Both terms, health and well-being, will be used in the text especially in the theoretical part, depending in the reference used. This is a conscious decision, because each term used may have slightly different connotations according to the context, culture and field of science.

2.2 Well-being in School – the Concept and Models

2.2.1 The conceptual model of well-being by Erik Allardt

Erik Allardt conducted a large-scale comparative welfare study in the 1970s in the Nordic countries (Allardt, 1980). According to that study he created a well-known system of indicators for well-being. Allardt (1980; 1989) uses the concept *welfare* in the sociological tradition. He noted that in Nordic languages the word welfare (in Swedish *välfärd*, Norwegian *velferd* and Finnish *hyvinvointi*) also stands for well-being, and that it covers aspects both of living standards and quality of life (Allardt, 1989). According to Allardt (*ibid.*) 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. Both material and non-material basic human needs have to be considered in indicator systems designed to gauge the actual level of well-being. Allardt (1989, pp. 5-7) divides these needs into three categories:

- having
- loving, and
- being

Having refers to material conditions and impersonal needs in a wide perspective. It covers the needs for nutrition, air and water, and needs for protection against climate and environment.

Loving stands for the needs for social interaction and to form social identities. The level of needs satisfaction can be assessed by measuring

- the attachments and contacts in the local community,
- attachments to family and kin,
- active patterns of friendship,
- attachments and contacts to fellow members in associations and organizations,
- relationships to work mates.

Being stands for the needs for integration into society and for living in harmony with nature. The indicators could measure for instance

- to what extent a person can engage in decisions and activities influencing their life
- political activities
- opportunities for leisure time activities (doing)
- opportunities to enjoy nature, either through contemplation or through activities in nature.

In his updated indicator system (1989) Allardt points out that both subjective and objective indicators are needed. He cross tabulates *having*, *loving* and *being* with the dichotomy of objective and subjective indicators (Table 1). According to him the term objective refers here to reports of factual conditions and overt behaviour, and the term subjective stands for the measurement of attitudes.

Table 1 Allardt's (1989) cross tabulations of objective and subjective indicators of well-being

	OBJECTIVE INDICATORS	SUBJECTIVE INDICATORS
Having (Material and impersonal needs)	1. Objective measures of the level of living and environmental conditions	4. Dissatisfaction–satisfaction, subjective feeling of dissatisfaction–satisfaction with living conditions
Loving (Social needs)	2. Objective measures of relationships to other people	5. Unhappiness–happiness, subjective feelings about social relations
Being (Needs for personal growth)	3. Objective measures of people's relation to (a) society (b) nature	6. Subjective feelings of alienation– personal growth

Allardt also found that there were no relations between the objective and subjective indicators. For example, people's response to be dissatisfied with their living conditions did not correlate with actual living space or housing conditions. One of the Allardt's (1989) main conclusions from his study was that dissatisfaction, unhappiness and alienation are different and distinct social phenomena compared to actual objective measures.

2.2.2 The school well-being model

A conceptual model of well-being in school, the School Well-being model, has been defined by Konu and Rimpelä (2002). Their model derives its theoretical background from Allardt's sociological theory of welfare.

The school well-being model has been developed to fit the school setting by applying the literature on school health and school evaluation. In their model of school well-being (Figure 1), teaching and learning are interconnected. Teaching and education affect every category of well-being and are connected with learning. Pupils' homes and surroundings also have their own important part in the construction of well-being. Konu and Rimpelä (2002) have modified Allardt's earlier model and incorporated health part into it. As such, the concept of well-being has been divided into four categories:

- School conditions (having)
- Social relationships (loving)
- Means for self-fulfilment in school (being)
- Health status (health)

According to Konu and Rimpelä (2002) the main difference in this model compared to earlier comprehensive school health models is in the definition of the key concepts. In this model the key concepts are the use of the well-being concept, and the subcategory *means for self-fulfilment*. The model strives to study school and schooling as an entity; the aim is to complement the perspectives of achievement and processes with the well-being of pupils.

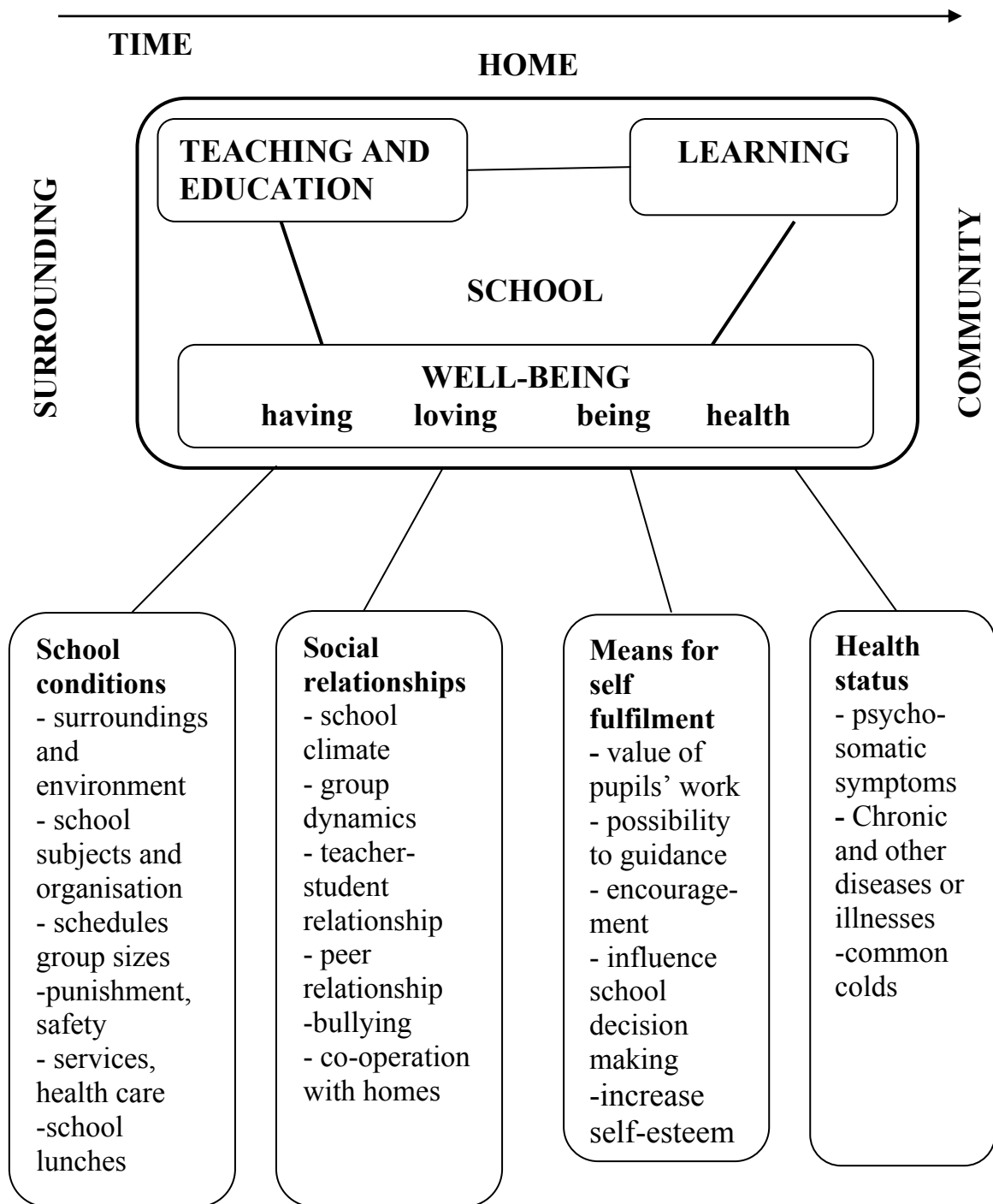


Figure 1 The school well-being model By Konu and Rimpelä (2002, p. 83) (modified by author)

The school well-being model is presented here from the viewpoint of pupils, which makes it very interesting and useful for the purposes of evaluating and doing research on the state of schoolchildren's well-being. In the model of Konu and Rimpelä the *School conditions* (having) include the physical environment surrounding the school, the environment inside the school, and also all the physical elements relating to the safety of the working environment. Other aspects pertaining to school conditions are the learning environment, which in their model includes curriculum, group sizes and schedules. The third aspect includes services for pupils, like school lunches and health care.

Social relationships (loving) refers to the social learning environment, student-teacher relationships, relations with schoolmates, group dynamics, bullying, cooperation between homes and school, and the atmosphere of the whole school organisation.

Means for self-fulfilment in school (being), 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. This also includes the possibilities for pupils to participate in the decision-making affecting their schooling

According to Allardt (1989) the loving part (*social needs*) can be measured objectively by the relationships to other people, and subjectively by the feelings of social relations – that is, the pupils' unhappiness and/or happiness with them. The being part, *needs for personal growth*, can be measured objectively by a person's relations to society and nature and subjectively by the feelings of alienation. According to Konu and Rimpelä (2002) it is possible to study the indicators of loving and being parts, *social relationships* and *means for self-fulfilment*, by creating summed variables and using them as indicators for the well-being of the pupils.

2.3 How Does School Affect the Well-being of Pupils?

School can be both a risk and a resource for the development of pupils' well-being. The risk is most obvious when examining children with negative perceptions of school (Samdal, Nutbeam, Wold, &

Kannas, 1998). Often, the objectives of education are reduced to proximate outcomes such as the attainment of certain skills, because, by assumption (and sometimes theory), these are also commonly believed to lead to well-being (Desjardins, 2008). Most of the evidence base regarding the links between education and well-being rests on assumptions about the significance of outcomes. This approach provides clear and manageable anchors which help to guide and keep educational systems accountable.

Still, there has not been clear evidence that there are differences in the well-being of pupils between the schools. Opdenakker and Van Damme (2000) found that school affects pupils' achievements but not their well-being. A remarkable result in their study was that the school characteristics referring to instruction and knowledge which were effective for achievement were also effective for well-being. They also suggested that the effects should be examined rather on the teacher's level; how do the teachers co-operate in the questions of teaching methods and pupils' counselling. In general it can be interpreted that the teachers' collaboration and job satisfaction is related to the pupils' well-being. It is also shown in the caring attitude towards their pupils and teaching (see Noddings, 2005). Teachers, who teach their pupils with respect and encourage them, contribute considerably to their well-being (Engels et al., 2004). The pupils feel healthier and have better well-being

- if they are satisfied with their school
- if they are involved in setting the rules at school
- if they feel supported by peers and
- if the expectations of parents and teachers are in balance (Samdal et al., 1998, pp. 392-395).

Why should education have well-being as one of its purposes? In most formal educational systems, the cognitive dimension has been the primary, although not the exclusive focus (see Awartani et al., 2008). Most educational endeavours have been directed towards transmitting information and teaching styles that encourage passive learning rather than experiential learning or learning by exploration. Evaluation has been primarily of *what* the children know and less of *how* they know, or how they learn and create new knowledge, or on

their ability to apply this knowledge in their life.

Moreover, teachers who are themselves evaluated on children's performances in standardised testing understandably may focus on the most effective ways to produce test results rather than on the well-being or real learning needs of children. The whole process of testing creates anxiety for children and teachers alike rather than cultivating well-being (Awartani et al., 2008). It cultivates high levels of stress, feelings of alienation from oneself, school and peers, low energy levels, severe self esteem issues and often feelings of helplessness and despair among the many who are not equipped to cope with the education system or this standardised approach to learning (ibid.).

The critical point here is that there is a growing expectation that education systems will take responsibility for the development of the whole person and his/her well-being (Awartani et al., 2008). Change is underway in some countries as governments realise that education systems, with their current structure and function, may not be well equipped to respond to the challenges of the 21st century. The fast pace of change is leading to reflection on the aims and values of education systems and curricula. In Sweden, for example, the single curriculum for compulsory schooling, pre-school and leisure-time stresses that "education can never be the same for all", that activities should be characterised by care for the individual's well-being and development and that the curriculum should "aim to promote pupils' spiritual, moral, social and cultural development", preparing them for opportunities, responsibilities and the experiences of life (Skolverket, 2005).

In the Finnish National Curriculum for Comprehensive Education, well-being is mentioned under the heading of pupils' care and support (Opetushallitus, 2004). It stresses the need for co-operation between the healthcare and social services to build up a school environment that supports pupils' mental, social and physical well-being and well-balanced development. It also mentions that basic school education should support the healthy development of pupils' self esteem.

The Norwegian government's latest reform, *Knowledge promotion* stresses the inclusiveness of the Norwegian school system, with the goal to help all pupils to develop fundamental skills that will enable them to participate actively in the society of knowledge (government.no, 2007). The Knowledge Promotion reform

particularly emphasises learning and it proposes that all pupils receive differentiated education.

As a base for large research programme, VOC (*Voice of Children*) Awartani et al. (2008) have created a list of domains and hypotheses guiding their research of schoolchildren's well-being. This is a good overall definition of the multi faced question, and shows in an explicit manner how this issue is tangled around pupils' everyday life.

Table 2 Domains and Hypotheses Guiding VOC2 (Awartani et al., 2008, p. 62)

<p>Domain 1: Physical Well-Being is feeling comfortable with one's body and physical ability, and being in a healthy physical state and a healthy physical environment.</p> <p>Hypothesis: Resources/conditions, services and practices in the school (including instruction) affect physical well-being.</p> <p>Domain 2: Physical and Emotional Safety means not having to worry about being hurt, either physically or psychologically.</p> <p>Hypothesis: When schools provide a positive psychosocial and safe school environment, students report a more positive view of their emotional and physical safety and well-being.</p> <p>Domain 3: Emotional Well-Being means knowing how one feels and how to express feelings in effective ways.</p> <p>Hypothesis: When schools teach students how to recognize and manage their feelings and emotions and when adults provide positive role modelling, students report a more positive view of their emotional well-being.</p> <p>Domain 4: Satisfying Relationships mean feeling good about one's relationships and involve having relationship and communication skills</p> <p>Hypothesis: When schools provide a caring community for learning and where there are positive relationships between teachers and students, among students, and among teachers, students report a more positive view of the social and emotional well-being.</p> <p>Domain 5: Confidence in Capabilities means feeling able and motivated to learn, willing to experiment, able to influence those around one, and able to manage life's challenges.</p> <p>Hypothesis: When schools encourage and support student learning, provide extra help, make expectations for assignments clear, and give students a voice in shaping the learning environment, students report a</p>
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more positive view of their well-being.

Domain 6: Pleasure and Joy in Learning means finding learning enjoyable and fun, feeling competent, curious, knowing how to learn and feeling that what one is learning is relevant and useful.

Hypothesis: When schools provide a range of creative teaching and learning methods, clear and consistent student feedback, curricula that is relevant and engaging, students report higher levels of joy and pleasure in learning and well-being.

Domain 7: Inner Strength and Spirit means feeling playful, alive, inspired about life, at ease within oneself, and zestful.

Hypothesis: When schools provide students with a range of activities for self-realisation and a positive and enthusiastic environment for learning, students report higher levels of inner strength and positive spirit.

Domain 8: Sense of Interconnection with All of Life means feeling connected to the larger universe and that life has meaning and encompasses feelings of hope and gratitude.

Hypothesis: When schools provide opportunities for students to learn about and engage with the global community, to interact with nature, and encourage students to see positive opportunities in their future, students report more positive feelings of meaning in their life and well-being.

Domain 9: Overall Satisfaction with Life (Well-Being) means feeling that life is congruent with how a person wants it to be and that there is an overall feeling of happiness, positive health and wellness.

Hypothesis: Learning environments and several facets of schooling (physical/psycho-social environment, curriculum relevance, learning processes and relations with teachers and peers) affect student well-being overall and its sub-components

In the English version of the curriculum and principles of the general education of the Russian Ministry of Education, it was not possible to find any mention about pupils' non-educational support (Ministry of Education of the Russian Federation b, 2007). In comparison, in the introduction to the new national curriculum for schools in England, the government explicitly places the well-being of the individual as a central value. It considers that the pupils' spiritual, moral, social and cultural and personal development play a significant part in their ability to learn and achieve (National Curriculum online, 2008).

As a conclusion, the connection between school and pupils' well-being is somewhat clear, but it can have effects in both directions. At its best, school can be a supportive environment, where pupils' and teachers' expectations meet and the pupils' self-esteem and general life skills get well developed. Such a learning environment is supportive and safe and pupils feel a sense of belonging in the school community. In this case pupils also report high satisfaction with school, and school supports the pupils' general well-being in many ways. At its worst, school can be seen to be detrimental to pupils' well-being. If the pupils frequently miss their academic tasks and fail in their expectations, if there is no support and if they feel alienated in the school community, school can be a detrimental place for their development (see Weare, 2000). According to Weare (2000) there are a great many reasons why schools should engage with mental, emotional and social health. She continues that there is overwhelming evidence that people can learn the knowledge, skills and attitudes that help them to get on with each other better, and to be physically, socially, mentally and emotionally healthier and happier.

2.4 School Satisfaction

Students who dislike school are also those most likely to be failing academically; they are also those at the greatest risk of adopting unhealthy behaviour, exhibiting psychosomatic problems and experiencing a reduced quality of life (Samdal et al., 1998). It is also important to notice like Samdal, Dur and Freeman (2004) did, based on the 2001/2002 HBSC survey, that both age and gender have an impact on both school satisfaction and academic achievement. As pupils grew older they seemed to like school less and to believe that they did not perform as well as in earlier years of their education. In general, girls appeared to be more satisfied with school and performed better than boys. School does not promote a similar experience for everyone.

Conceptually, students' satisfaction with school is linked to the construction of the quality of life, reflecting the affective component of this construction indicated by immediate emotional responses such as happiness, enjoyment of school and a sense of well-being at school

(Samdal et al., 1998). Such responses to experiences at school contribute to the global quality of life among young people and are therefore vital to healthy development (*ibid.*). Pupils' satisfaction with school is also related to the teachers' willingness to help them learn and understand (Ireson & Hallam, 2005).

Pupils' school satisfaction has been studied for over three decades along with the international student assessment studies like IEA (International Association for the Evaluation of Educational Achievement) and PISA, and studies concerning the health behaviour of adolescents like those conducted by the WHO's Health and Behaviour of School-aged Children (HBSC) cross-national study. In the HBSC study 2001/02, school satisfaction was at the highest level of Nordic countries in Norway where 31.5% of the 15-year-old pupils liked school a lot. The lowest level of school satisfaction was in Finland where only 4.2% of the pupils liked school a lot (Samdal et al., 2004). Finland was in last place in this comparison of 35 countries, Norway was in fourth place. In Sweden and Russia 13% of 15-year-old pupils liked school a lot; they were in 24th and 25th position respectively. When comparing the results of these four countries in the 2003 PISA study and the HBSC study it is noticeable that school satisfaction and academic results have an almost negative correlation (Kupari et al., 2004; Oecd, 2004).

In the PISA study Finland was on the very top level, Sweden was just above OECD average, Norway was a bit below average and Russia was at the lowest level. It appears that in Finland the pupils have very good learning results even though they do not like going to school. In Norway pupils like going to school but apparently they do not learn very well. Berntsson and Gustafsson (2000) and Berntsson, Köhler and Gustafsson (2001) studied the predictors of psychosomatic complaints (PSC) of schoolchildren in Sweden and in the Nordic countries. According to their studies it could be noticed that school satisfaction and peer support were significantly associated with the PSC. They also found that in Finland and Denmark, low school satisfaction and peer bullying were stronger risk factors for PSC than in the other Nordic countries.

Looking from the Finnish perspective school satisfaction has always been weak among Finnish pupils, even though the results of the academic skills have been on the top level (Leimu & Välijärvi, 2004).

The reasons behind the weak school satisfaction are not simple to find and so far the factors behind the phenomenon have not been clearly explained (Saari, 2004). The factors affecting the positive attitude towards school were found to be mostly effective on the individual level. Kalalahti (2007) found that a lack of difficulties in pupils' studies, the quality of interaction between the teachers and pupils, and feeling of belonging and safety were the strongest factors affecting pupils' positive attitudes towards school among Finnish 15-year-olds. Furthermore, in her study half of the pupils had a negative attitude towards school. In every sense it is clear that there is much to do in trying to improve school satisfaction among Finnish schoolchildren. Finnish pupils are autonomous, they have good learning abilities and they are equal. The quality in teaching and learning in Finnish schools is on the very top level. Why are Finnish pupils not satisfied with school and dislike going to school?

The socioeconomic status (SES) of families has been found to be connected to school satisfaction and motivation in pupils' learning (Linnakylä & Malin, 1997; Olkinuora & Mattila, 2001; Rinne, 2003). Furthermore, it is more likely for a pupil with a mother with higher education to be satisfied with school and to have better achievements (Kalalahti, 2007). Olkinuora and Mattila (2001) found differently oriented groups with regard to school work and they suggested specific actions to improve the learning motivation and school satisfaction for the different groups. Nonetheless, the SES (Socio Economical Status) can only partly explain the weak school satisfaction, and it covers only the individual variation. Figuring out what the contributing factors are to weak school satisfaction of a whole nation is a bigger question. There have been suggestions that the weak school satisfaction of Finnish schoolchildren could even be a good learning result, showing that the pupils have learnt to be critical (Leimu & Välijärvi, 2004). Likewise, many Finnish teachers think that the pupils' weak school satisfaction is not a problem; "school is a place for learning, not for amusement" is a commonly heard saying. This describes quite well the attitude towards school and schooling in Finland, and explains partly explains the good learning results. In Finland school is taken seriously; studying is pupils' work, and public opinion is on the side of schools. Pupils should behave well at school and work hard for their studies, but also success in studies is well

valued. Pupils' school satisfaction and learning motivation are still given very little attention in the common school discussion and in the common curriculum texts (Opetushallitus, 2004) in Finland.

The school satisfaction theory can be linked to the meaningfulness of the learning and studying according to Olkinuora and Mattila (2001). Meaningfulness is seen in both cognitive and affective dimensions. The meaningfulness of schooling is reflected in whether a pupil is motivated by the schoolwork or is trying to avoid it. According to Ahonen's (2007) research on school satisfaction in northern Finland there were no differences in school satisfaction between the schools or between the two school types (primary schools grades 1-6, or lower secondary school grades 7-9). According to that study pupils who reported low general life satisfaction and being pressured by schoolwork were not satisfied with school, while those reporting high academic achievement also reported high school satisfaction. It appeared that school satisfaction was related to other weakening factors of well-being and vice versa. At the level of an individual pupil, an increase in school satisfaction would most probably lead to an increase in his/her holistic well-being and quality of life. In this sense school satisfaction can be considered as an indicator of general well-being.

The pupils recognise their position in the school community firstly through classroom work. The feeling of acceptance, belonging, and peer support builds up the pupils' conception and relationship with school (Ireson & Hallam, 2005). By designing interventions that raise students' satisfaction with school their achievement is likely to improve as well. Motivated students are able to exploit their capability.

3 SCHOOL AS AN ENVIRONMENT OF MENTAL AND SOCIAL DEVELOPMENT

3.1 School Environment

3.1.1 Psychosocial environment

In the process of developing the well-being of pupils in schools Nicholson (1997) divides the school community into three different environments: 1. school environment, 2. education and 3. health services. From this division, school environment is further divided into four parts, including:

The school environment includes:

1. the physical environment
2. the policy and administrative environment
3. the psychosocial environment
4. health promotion for staff²

According to this clarification the psychosocial environment includes supportive and nurturing atmosphere, a cooperative academic setting, respect for individual differences, and involvement of families. In this study the psychosocial environment in school is considered to be similar to the learning atmosphere, the feeling of belonging and support in school.

² in order that staff members can become positive role models and increase their commitment to student health.

3.1.2 Meeting a child — relationships between teacher and pupils

The true teacher is not the one who pours information into the student's head as through a funnel — the old-fashioned "disciplined" approach — or the one who regards all potentialities as already existing within the student and needing only to be pumped up — the newer "progressive" approach. It is the one who fosters genuine mutual contact and mutual trust, who experiences the other side of the relationship, and who helps his pupils realize, through the selection of the effective world, what it can mean to be a man. (Buber, 2002, p. xviii)

School is a place for continuous interaction and various social contacts. A pupil's social status, social skills and behaviour affect the socialisation of the pupil. More specifically, relationships between pupils and teachers have been experienced as problematic. Pupils have not experienced enough possibilities to express their views and have felt that teachers were not interested in them as individuals (Olkinuora & Mattila, 2001). Meeting with a teacher and a pupil on an individual level is essential, but can also be a problematic task for teachers. Pupils want teachers to be interested in them as a person not only as a member of the class. Based on Lévinas (1969), Alerby, Bergmark, Forsman, Hertting and Kostenius (2008) see the context and social conventions being important for the teacher-pupil relations, but there is also something beyond the social conventions that may be called face-to-face meetings (see also Purcell, 1998). Is it possible to actually meet each pupil of the class face-to-face every day? Buber (2002) thinks that a human being really exists in his or her relations to other people; the world consists of meetings. This is very true in the school context, but the school context also sets certain limitations for interpersonal communication. The learning and teaching activities during the school day are set in a more or less formal manner. Hovila (2004) sets the question of whether it is possible to foster a child in a school situation which is aimed at formal education. After careful studies using a narrative inquiry method she states that meeting a child is possible if it has been set as a goal for every learning period and the

teacher has got personal will to notice every pupil as an individual (ibid.). Based on Levinas (1969), Alerby et al. (2008) continue that face-to-face meetings can both constitute a personal challenge and enable the learning of new knowledge. Thus, the meetings between pupils and teachers constitute a somewhat central element of the whole interaction in teaching and learning.

According to Jouko Kari's pioneering study, a teacher who does not give time to his/her pupils and who acts as a civil servant, decreases the pupils' school satisfaction. In contrast, teachers who act more closely and companionably could increase pupils' school satisfaction (Kari, 1977). On the classroom level the social atmosphere of the class could be mirrored in the relationships between the pupils and the teacher. The social backgrounds of the pupils can also have some effect on the quality of the teacher-student relationships and, consequently, on motivation for learning and the enjoyment of schoolwork (Olkinuora & Mattila, 2001). The relationships between pupils to each other, teachers and pupils, teachers to each other and pupils to themselves reflect the atmosphere of the school. The atmosphere was found to be better the more positive the mutual relationships were (Kari, 1977). It could be concluded that school has, in a way, got a twofold mission. On the one hand, schools should socialise pupils in the norms and values of the whole society, but on the other hand, every teacher is responsible for meeting a child in a caring relationship see (Alerby et al., 2008).

3.1.3 The school ethos and atmosphere

Ethos is a fashionable but nebulous term employed to describe the distinctive range of values and beliefs which define the philosophy or atmosphere of an organisation (Donnelly, 2000). According to McLaughlin (2005) the intangibility and elusiveness of the notion of ethos can be seen in the wide range of the life and work of the classroom and school through which it is manifested and in the wide range of modes of influence in which it is embodied. The educative importance of ethos is, however, widely acknowledged. Regardless of the specific perspective, it can still be argued that the ethos of teaching and schooling is clearly a significant part of the overall educational

experience of students (see McLaughlin, 2005). A hierarchy of values can be found in all human actions. Likewise, values play a central role in the action of societies. Similarly, school ethos is based on certain values (Launonen & Pulkkinen, 2004). According to Ahlman (1976) the meaning of ethics is essential when comparing or evaluating certain values.

Donnelly (2000) divided the definition of ethos into two broad camps reflecting either a positivist or anti-positivist viewpoint. A positivist views ethos as something which prescribes social reality, existing independently of the people and social events in an organisation. An anti-positivist sees ethos more as informal emerging from social interaction and process, it is a product of organisational interaction. Solvason (2005) investigated school ethos and came to the conclusion that it is a product of the culture of school. Culture is the basis on which the day-to-day life at school is built. School culture provides a more accurate way to understand school's own unwritten rules, norms and expectations (Solvason, 2005). Usually schools have fairly strict rules, which are written down and commonly accepted by teachers, parents and pupils. From time to time the rules are checked and evaluated. In some schools the rules are in active use as a support of regular schoolwork, when in others they are only filed away and checked when needed.

In school, like in any other society, there is a current atmosphere. The terms atmosphere, spirit, climate, ambience and culture are often used intentionally to describe the 'feeling' or the 'character' of the school that one experiences when visiting the establishment (Solvason, 2005). Atmosphere is a relevant factor for successful education and upbringing in schools, and a relevant part of the upbringing environment of schoolchildren (Kari, 1977). The atmosphere can be free, tolerant, supportive, disapproving, warm or cold. To create a good atmosphere at school it is necessary to put effort into other activities and issues, like achieving socio-emotional goals, besides only the classroom education and teaching. This means a conscious learning of social skills and general life skills (Launonen & Pulkkinen, 2004). School atmosphere was the most important mediator for the pupils' school satisfaction in Kari's study (1977). According to Olkinuora and Mattila (2001) school atmosphere and learning environment were the central factors of pupils' school

satisfaction. A good school atmosphere also has implications for motivation, learning skills and the plans for further education (Pulkkinen, 2002). Furthermore, according to interviews conducted by Hyry-Honka (2008) psychosocial issues in the school context were important for children. Thus, the feeling of belonging and experience of community support a positive school atmosphere.

The school rules and their representation always tell something about the school atmosphere. The accuracy of the rules represents the freedom of which the pupils belong to the school society. All the norms and rules are closely related to values. The norms appear in school as code of behaviour, rules, curriculum, and law regulations (Launonen & Pulkkinen, 2004). Rules and regulations bring safety to the society. They direct behaviour and bring order. School is actually a very strictly regulated place. In a way the norms and regulations maintain and support the values behind them. For example the 'do not lie' rule supports the value of truth and 'do not bully' maintains the value of bodily integrity (Launonen & Pulkkinen, 2004).

In Finland the school atmosphere has been found to be generally negative, at least from the teacher's point of view. According to an inquiry conducted about Finnish rectors and pupils, which was done along with the PISA-study in 2000, the school atmosphere in Finland was rated to be clearly under the average of OECD countries (Välijärvi, 2002). According to Pulkkinen (2002) this could reveal problems in the internal communication and social capital in the schools. In spite of this, in the latest research of the OECD study, *Improving School Leadership*, Finnish school leadership was named to be one of the key elements behind the success in the PISA studies (Ängeslevä, 2008). According to the preliminary results of the study, Finnish schools are led in an innovative and holistic manner, where the innovations are mainly in the field of co-operation and pedagogical leadership (OECD Directorate for Education, 2008; Ängeslevä, 2008). Interestingly this shows that good school atmosphere may not be directly connected to leadership and vice versa.

3.2 Social Competence and Social Capital in the School Context

The term *social capital* has been used frequently since professor Robert D. Putnam lifted it into the spotlight in his article and book, *Bowling alone* (Putnam, 2000). Putnam described how the number of American bowlers increased by ten per cent, but the number of bowlers in the clubs decreased by forty per cent. The Americans started to bowl alone. Since Putnam's classic publications, several books and articles have been published arguing against his thesis, instead they promote the idea that free time can be used individually but still be working together.

The concept of social capital has an even longer history with roots in the 19th century; the contemporary discourse has been going on for least decades at least, started by sociologists James Coleman (1988) and Pierre Bourdieu (1986) and accompanied by Robert Putnam (1993) (Coleman, 1990; Ellonen, 2008; Poikela, 2005a; R. D. Putnam, 1993). Still Bourdieu, Coleman and Putnam do not describe social capital similarly; there is no consensus about the description of the concept. Noora Ellonen has written a doctoral thesis about social capital of children and youth. Her work is based on the following definitions (2008):

- *Bourdieu* represents the European voice and his definition is positioned more on a societal base where social capital is described as a group-based article, which is in the use of an individual to reach his/her individual goals.
- *Putnam* stresses the communal characteristics where social networks, mutual trust, norms, social practices and behaviour are in a central role in the construction of social capital. Active participation in different associations also has an important role.
- *Coleman* stresses local social relations and networks in his definition. He also stresses the individual element of social capital, but he includes the family as part of its construction.

These three theorists have been in the lead in discussions

concerning social capital, and usually researchers of social capital have referred to their publications. This has led to some differentiation in the research field, but has also limited the different interpretations and reasoning on the subject. In the educational context the term social capital has been used by Professor of Psychology, Lea Pulkkinen (2002, p. 44) to mean *sosiaalinen alkupääoma*, that is, *initial social capital*. In her view, children get initial social capital as a gift or a heritage from their nursing environment. Initial social capital does not come from the children themselves but from the community and in the relationships between a child and members of the community. Differences in initial social capital can be found in the amount and quality of the support of the community. One concrete unit of measurement could be the “lap”. It could be measured how many adults are able to use their time and energy to hold a children in their laps.

According to Professor of Education Esa Poikela (2005a) learning increases social capital. New social capital can be produced in school by creating good circumstances for learning and studying. He asks if new social capital can be built by school education or if education is only about adjusting individuals to the ongoing systems of society, not to reform and create new social capital.

In the school context, social capital is reflected in the *social competences* of the schoolchildren. Social competence refers to the “social, emotional, and cognitive skills and behaviours that children need for successful social adaptation” (The Oxford English Dictionary, 2002). Despite this seemingly simple definition, social competence is an elusive concept, because the skills and behaviours required for healthy social development vary with the age of the child and with the demands of particular situations. Again Poikela (2005a) writes about *black and white pedagogy*, in which the principles of the black pedagogy are the desolation of the child’s own will, teaching of obedience and categorising creativity. The principles of white pedagogy can be found, for example, in the ideas of self-directed learning and Paulo Freires’ (1972) democratic education and pedagogy of the oppressed.

Being socially competent in the school context actually means the pupils’ ability to make friends and act as members of different groups. Peer relationships, and particularly close friendships are vital to our

sense of self esteem, identity and emotional support (Salmivalli, 2005; Weare, 2000). Social competence of schoolchildren is also in dialectic relation with his/her social capital. The better the initial social capital is the better the abilities for creating good social competence are. Still, it is possible for a child with very good social skills to create good social competence and in that way increase his/her social capital. This claim relates to the fact that schools aim to be democratic and give uniform possibilities to all the children in the learning and education processes of the ordinary curriculum.

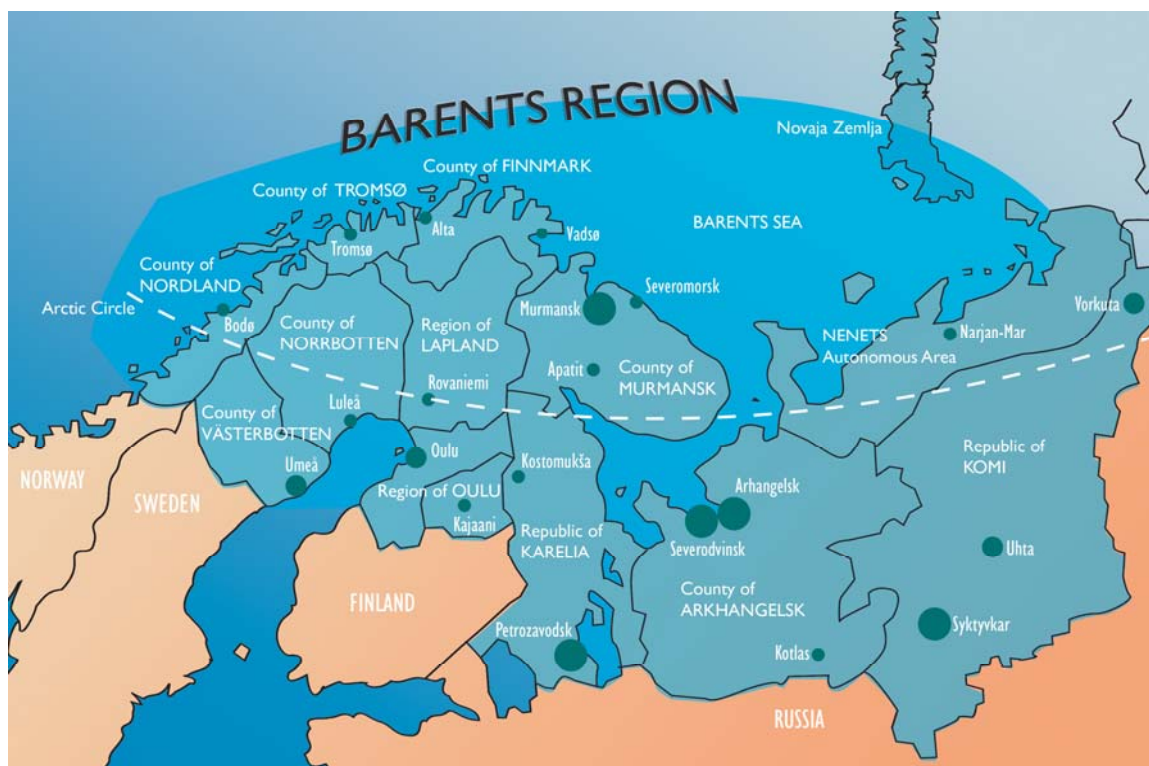
4 A REVIEW OF SCHOOL SYSTEMS AND CULTURES IN THE BARENTS REGION

4.1 Introduction to the Barents Region

The Barents Region refers to the land along the coast of the Barents Sea, from Nordland in Norway to the Kola Peninsula in Russia and beyond all the way to the Ural Mountains and Novaya Zemlya, and south to the Gulf of Bothnia of the Baltic Sea in Finland and Sweden. It was formed after the fall of the Soviet Union with the political ambition to establish international cooperation within the Region (Barentsinfo, 2007). The region has approximately 5.5 million inhabitants in an area of 1.75 million km², with three-quarters of both belonging to Russia. Mainly Norwegians, Swedes, Finns and Russians populate the area along with several indigenous peoples and minority groups living in the region; Sámi live in all four countries, and Nenets, Vepsians and Komi live in Russia.

The regional cooperation was formally established in 1993, initiated by Norway. It includes the administrative regions of Nordland, Troms and Finnmark in Norway, Västerbotten and Norrbotten in Sweden, Lapland, Northern Ostrobothnia and Kainuu in Finland, and County of Murmansk, Republics of Komi, Karelia and Nenets Autonomous Area in Russia (Barentsinfo, 2007) (See Picture 1). The four countries take turns at chairing the cooperation.

The Barents Euro-Arctic Council (BEAC) operates at the government level and the Regional Council operates at the regional level. The purpose of the Barents cooperation is to strengthen east-west infrastructure and establish people-to-people contacts, and thereby contribute to the economic, cultural and social development of the region. According to the official website *Barentsinfo* (Barentsinfo, 2007) the Barents Cooperation promotes people-to-people contacts and economic development, and creates good conditions for inter-regional exchange in many different fields, like culture, indigenous peoples, youth, education, IT, trade, environment, transportation and health. The Barents Cooperation is regarded as an integral part of creating a stable, democratic and prosperous Europe.



Picture 1 A Map of the Barents Region

The area covered in this study did not include the entire Barents Region but only the northern parts of the Nordic countries (Lapland, Norrbotten and Finnmark) and the County of Murmansk from Russia. These Nordic parts are also known as the *North Calotte Area*, of which the County of Murmansk is not a member. These areas form a somewhat unified geographical area, where all parts have common borders and connections to each other. The area has thousands of years of common history and cultural background.

4.2 Schools in the Barents Region – Mirrors in the North

The Barents Region is sparsely populated. The roles of schools differ quite a lot depending on whether a school is located in a small village or in a bigger town. In small villages schools and teachers provide a lot more than just teaching for the children and their families. The village school is usually the centre of all cultural activities and has a very important role in motivating and supporting the recreational field of pupils' everyday lives. In bigger towns, schools mainly provide teaching and collaborate with parents on questions of education.

In northern parts of Norway there are a remarkable number of small schools remaining due to the difficult natural conditions and the political agreement that every child must have a right to attend a school close to his/her home. In contrast, centralisation in northern parts of Finland and Sweden has led to the closure of small village schools and consequently longer commutes for the schoolchildren. In Northwest Russia there are not many people living in so-called remote areas; most of the people living in the Kola Peninsula are centred in towns, which are quite intensively settled. Only some reindeer herders live in the true wilderness, without even a road connection. The children of those families live in boarding schools, like in Lovozero, throughout the school year.

The indigenous groups have their own impact on the local cultures in the area. According to Barentsinfo (2007) the biggest group is that of the Sámi with about 70.000 people. The Sámi culture has different representations in different countries and parts of the area. The Nenets (6.000 people) and Vepsians (7.000 people) have their own impact in Northwest Russia. The numbers of Sámi are still rather inexact because no systematic census has been carried out on the Sámi populations in Norway and Sweden, and the definition of the Sámi also varies according to the legislation in the countries concerned. Sámi language and culture are nowadays fairly well represented in the schools of Finland, Sweden and Norway. In Russia this is also a developing issue.

4.2.1 School system in Norway

One of the most important priorities of the Norwegian government is to invest in education and knowledge (government.no, 2007). Education for all is a basic precept of the Norwegian educational policy. Wherever they live in the country, all girls and boys must have an equal right to education, regardless of their social and cultural background and possible special needs. All public education in Norway is free up to and including the upper secondary level.

Compulsory schooling in Norway lasts for ten years and children start school at the age of six. The Norwegian general education school system can be divided into three parts: primary school grades 1–7 (age

6–13), lower secondary school grades 8–10 (age 13–16) and upper secondary school (age 16–19).

Compulsory education covers the comprehensive school (first ten grades); the upper secondary level is non-compulsory. As a result of Norway's scattered population, forty per cent of primary and lower secondary schools are so small that children of different ages are taught in the same classroom. Primary and lower secondary levels are often combined in the same school (Kunnskapsdepartementet, 2000). Childcare for schoolchildren is obligatory for communities to organise for the pupils in the first four grades. The day care is organised both in mornings and afternoons.

The culture and traditions of the Sámi community are part of the common Norwegian and Nordic culture that both the national curriculum and the special Sámi curriculum require all pupils to be acquainted with. In areas defined as Sámi districts, and according to specific criteria elsewhere in Norway, this teaching is given in accordance with the special Sámi curriculum. For Sámi pupils, this teaching is intended to build a sense of security in relation to the pupils' own culture and to develop the Sámi language and identity, as well as equipping Sámi pupils to take an active part in the community and enabling them to acquire education at all levels. State support is provided for the development of textbooks written in the Sámi language. The Sámi College in Kautokeino has special responsibility for training Sámi teachers. The University of Tromsø has responsibility for Sámi language and Sámi studies (see government.no, 2007).

4.2.2 School system in Sweden

The Swedish public school system is made up of compulsory and non-compulsory schooling. Compulsory schooling includes the regular compulsory school, the Sámi school, the special school, and programmes for pupils with learning disabilities. All education throughout the public school system is free. There is usually no charge for teaching materials, school meals, health services or transport (see Skolverket, 2005).

The nine-year compulsory school programme is for all children

from the ages of seven to sixteen years. Upon parents' request, a child may begin school one year earlier, at the age of six. Almost all compulsory school students continue directly to upper secondary school and the majority of these complete their upper secondary education in three years. Upper secondary education is divided into seventeen national three-year programmes. All of them offer a broad general education and basic eligibility to continue studies at the post-secondary level. Alongside the national programmes there are a number of specially designed and individual study programmes (see Skolverket, 2005).

Most children attend a municipal school close to their home; however, students and their parents have the right to choose another municipal school or a privately run *independent* school. About four per cent of compulsory school students attend one of the independent schools (in 2001). Independent schools are open to everyone and must be approved by the National Agency for Education. The education in independent schools has the same basic objectives as municipal schools, but usually has a profile that distinguishes it from the municipal school. For example, schools may have a particular religious character or use a special educational approach such as Montessori or Waldorf (Steiner pedagogy) (see Skolverket2, 2005).

Childcare for schoolchildren is for children up to and including the age of twelve years who attend preschool class or compulsory school. Municipalities are required to provide childcare for school-aged children whose parents work or study, or for children with a particular need for this form of care. Childcare for schoolchildren is a collective, overall description of activities that occur during the hours of the day when the children are not in school. The provided care can take the form of a leisure-time centre, family day care or open leisure-time activities (see Skolverket3, 2005).

Sámi children can receive education in a Sámi school that covers grades one to six. This schooling corresponds to the first six years of compulsory school. There is a special Sámi school board that provides Sámi schooling in Sámi areas. The Sámi school curriculum is the same as in comprehensive school, plus it includes Sámi language. It is up to the teachers' abilities to implement the Sámi pedagogy, culture and language in their teaching. For grades seven to nine the Sámi children attend communal comprehensive schools and can continue

Sámi language studies as part of their curriculum. There is no specific education for Sámi teachers in Sweden, but the teachers are usually Sámi themselves and have a regular teachers' education.

4.2.3 School system in Finland

Basic education in Finland is provided free of charge for all age groups. Comprehensive school lasts for nine years and is intended for children between 7 and 16 years of age. Within certain limits, pupils are free to choose the comprehensive school of their preference. If it is impossible for a pupil to attend school for medical or other reasons, the municipality of residence is obligated to arrange corresponding instruction in some other form. Special education for pupils with learning disabilities is usually integrated in the comprehensive school. There are also some private schools in Finland. They usually follow the general pedagogical curriculum but some of them have a religious character or use a special educational approach such as Montessori or Steiner pedagogy (Yksityiskoulujen liitto ry, 2008). Only about one per cent of the Finnish comprehensive schools (total 3500) are private (Finnish National Board of Education, 2007). The private schools accepted by the Ministry of Education also receive their funding from the government.

Compulsory education lasts for nine years, plus a one-year voluntary pre-school class for 6-year-old pupils. In practice, almost all Finns go to nine-year comprehensive school. About 92% of all the pupils that complete nine years of comprehensive school continue with upper secondary education (Finnish National Board of Education, 2007). It is obligatory for communities to organise day care for schoolchildren in grades one and two. The day care is available both in the mornings before school and in the afternoons after school, but the after school day care is more common. Following basic education there are two main possibilities to choose from: upper secondary school for general education and vocational school; both are planned to last three years. Both alternatives provide basic eligibility to continue studies at the post secondary level.

The network of comprehensive schools is supposed to cover the entire country. Free transportation is provided for school journeys

exceeding five kilometres. Comprehensive school in Finland is legally one unit, but due to former governance, it is still usually divided into two levels: a lower level (grades 1–6) and an upper level (grades 7–9). The teaching system has differed a lot between these levels, but this is changing and is more flexible nowadays. Traditionally, the teaching at the lower level has been organised by class teachers who are competent to teach all subjects. At the upper level the teaching has been organised by subject teachers, who teach their major subjects to all the pupils in the school. Nowadays there are more united comprehensive schools, where all the comprehensive education is given in one school building by one group of staff.

The Sámi children do not have their own general curriculum in Finland, but they can be taught in their own language or learn their own language as their mother tongue in the comprehensive schools in the Sámi area³, the language can also be learned elsewhere in the country if there are a group of pupils needing it. Sámi culture is suggested to be part of the national teaching curriculum and Sámi language can be studied as the first or second language in secondary school. The Sámi communities get special funding for organising the teaching of Sámi culture and language in their schools. Sámi teachers have usually undertaken regular teacher training at a university. The University of Oulu has responsibility for Sámi language and Sámi studies in Finland. The University Lapland also provides minor subject in Sámi language for class teachers.

4.2.4 School system in Russia

General education in the Russian programmes comprises eleven years of studies. Children normally start school at the age of six or seven and finish secondary general education at seventeen or eighteen. General education comprises three stages corresponding to the levels of educational programmes: Primary general education (4 years), Basic general education (5 years); Secondary (complete) general education (2 years) (Ministry of Education of the Russian Federation

³ The Sámi area in Finland includes the three northernmost communities: Utsjoki, Inari and Enontekiö, where approximately 4,000 of the 6,500 Sámi population in Finland live.

b, 2007).

Compulsory education (primary + basic general education) in Russia lasts for nine years. Graduates of this level may continue their education at upper secondary school to receive secondary general education. They may also enter vocational school or non-university-level higher education institutions after compulsory school (Education System in Russia, 2005). There is no day care for schoolchildren in the Russian school system, but most of the pupils attend different after-school clubs like music, visual arts and sports. The clubs are provided for all the pupils of the comprehensive school

The Basic Curriculum provides disciplines that could be added because of their being specific to the particular region in which the school is located as well as optional disciplines in accordance with the interests of the pupils. In practice, each school designs its own curriculum according to the Basic Curriculum. At present, the entire Russian system of general education includes 67.000 educational establishments in which 21 million students are enrolled. Several hundred private schools have also been established over the last few years.

There is no reference to Sámi teaching in the official Russian documents about the general education. This is understandable because there are several other indigenous languages and hundreds of peoples speaking their original languages. The Sámi of the Kola Peninsula have settled in the Lovozero district. The majority of Russian Skolt Sámi live in the village of Lovozero. Kildin Sámi is still spoken by about 800 people in the Kola Peninsula, Russia (Scandinavian.com, 2006). Unfortunately, support for ethnic culture was weak during the Soviet time, but now, with the help of the Nordic countries and the Sámi community, at least the Sámi culture is raising its head in Russia. Speakers of Sámi language are still very few, but Sámi language and culture are beginning to be taught in schools.

4.2.5 Comparison of the school systems

According to Raivola (1984) it is not necessary to define the concept of comparison itself. It is only necessary to choose the contemplation viewpoint, *tertium comparationis*. The identification of comparability rests upon establishing a categorical and thematic interrelationship between the chosen subjects aimed at similarity (affinity) and diversity (discrepancy) (Lauterbach & Mitter, 1998). When comparing the school systems of the four different nations it is rather easy to create the contemplation viewpoint. The similarities and differences in the school systems can be recognised by the organisation of the whole educational system, by the length of education and the subjects studied and programmes in the schools. This has been done in this chapter only on a descriptive level; the main interest has been in comparing the systems of basic education, so the comparison was done based on that.

Many similarities can be seen when comparing the school subjects and school systems in Norway, Sweden, Finland and Russia (Table 3). In the Nordic countries the school subjects do not differ very much from each other, but some differences can still be found. In Sweden there appears to be more combined school subjects, like geography, history, religion and civics, than in the other countries. Similarly in Norway there are combined school subjects under the name of social studies. In Finland and Russia there are no combined school subjects at the curriculum level. English is the most common foreign language in all the countries. In the Russian curriculum most of the school subjects are mentioned, which could indicate the hierarchical organisation of the school governance. In Finland there are also quite precise descriptions of the school subjects, but in Norway and especially in Sweden there seems to be a lot of freedom for the schools to arrange their teaching in their own ways. Table 3 shows the school subject comparison between the countries.

Table 3 Comparison of school systems and subjects of comprehensive school in Norway, Sweden, Finland and Russia (Education system in Russia, 2005; government.no, 2007; Ministry of Education, 2006; Skolverket, 2005)

	NORWAY	SWEDEN	FINLAND	RUSSIA
Length and start of school	10 years/ 6 years old	9 years/ 7 years old	9 years/ 7 years old	9 years/ 6-7- years old
School subjects based on National Curriculums	Norwegian English Mathematics Science and the Environment Social Studies Arts and Crafts Music Home Economics Physical Education Christian Knowledge and Religious and Ethical Education Compulsory additional subjects	Swedish English Mathematics Geography, History, Religion (combined) Biology, Physics, Chemistry, Technology (combined) Home Economics Physical Education and Health Arts Music Textiles and Wood- and Metalwork Language options Student options	Mother Tongue and Literature Foreign Languages A (En, Ger, Rus) Foreign Languages B (Swe, Fin) Mathematics Physics and Chemistry Biology and Geography Environmental studies History and Social Studies Religion/ Ethics Music Visual Arts Crafts Physical Education Health Education Home Economics Guidance Counselling Optional Studies	Russian Literature Russian Language Mathematics Algebra and Geometry Physics Chemistry Astronomy Russian History World History Geography Biology Foreign Languages (English, German, French or Spanish) Physical Education Cooking, Arts and Crafts (girls) Manual Work (boys) Art of Drawing Music

Comparing the psychosocial support for schoolchildren revealed some differences (Table 4). The information has been gathered from visits to the schools, from inquiries to fellow researchers in the ArctiChildren study and from the official websites of these four countries. In all the countries except Russia the youngest children are provided an after and/or before school day care. In Russia, pupils usually join recreational after-school clubs, but they are not obligatory. In Russia there is usually a school psychologist and a special social teacher in every school; the psychologist also gives weekly lessons to classes. In Finland, school psychologists and school welfare officers are found in the community, whereas in higher grades every school has its own studies counsellors. In Sweden, day care is provided for pupils up to the 5th grade. It is organised in different kinds of activity centres where the pupils can voluntarily go after school. In Swedish schools, teachers are responsible for building up a good psychosocial school environment and support the pupils' psychosocial well-being during the school days. There is also a student health-care system at the community level where nurses, social workers and psychologists are in direct contact with children. In Norway, day care is organised for pupils up to the 4th grade. Teachers are responsible to give remedial support for pupils during the school day. There is also a counselling institution PPT (Pedagogical Psychological Service). They are working with pedagogical, educational and social problems together with teachers and school health care.

This could be interpreted in two ways. One could assume that psychosocial support is better organised in Russia and Finland, where there are named professionals taking care of it. Conversely, it could be interpreted as opposite, where the more structured school systems of Russia and Finland organise psychosocial support by professionals thereby absolving the teachers of the task. In contrast, in Swedish and Norwegian schools the teachers share a more holistic responsibility for their pupils by being nominated to give remedial and psychosocial support for their pupils. Both certainly have their advantages and it would need more careful research on the psychosocial support in these school systems to make further assumptions.

Table 4 Psychosocial support comparison

	RUSSIA	FINLAND	SWEDEN	NORWAY
Psychosocial support for pupils	<p>No day-care for school-children.</p> <p>Social teachers and psychologists on site at schools.</p>	<p>Day care up to 9 years old.</p> <p>Student health care.</p> <p>Student counsellor in the upper grades, psychologists in the community level.</p>	<p>Day care up to 12 years old.</p> <p>Student health care.</p> <p>All the school staff responsible to build up good psychosocial school environment, and support the pupils' well-being.</p>	<p>Day care up to 10 years old.</p> <p>Student health care.</p> <p>Remedial support by school teachers.</p> <p>Psychosocial consultation for the schools.</p>

4.3 Conclusion of the Comparison of the School Systems

In all the countries studied the schooling is built on one overall national system. The national curriculum gives the guidelines for the education organised by communities and supervised by local school authorities. Particularly in the Nordic countries, the quality and quantity of schooling have traditionally been quite homogeneous, with little variance between countries as far as where schools are located and in what form the education has been practically set up. In research about the schools in the Barents Region, the natural conditions and great distances cannot be overemphasised. Even so, according to research visits and discussions with colleagues from all four national regions it can be stated that the schooling in the North does not differ remarkably from the national standards anywhere in the Nordic countries. The Russian school conditions are quite different, but are not much worse than Nordic schools, at least when considering the classrooms inside the school buildings. In Russia the schoolyards have

clearly not been understood as being learning environments, most of the schoolyards were not suitable for any kind of activities. This is understandable, when comparing the schoolyards with any other public areas or urban environments in Northwest Russia. Most of the public areas were in rough condition, and there did not seem to be much interest in developing or paying attention to them.

Another difference to be noted is that according to Telhaug, Mediås and Aasen (2006) the Nordic countries have invested more than other nations in the education sector: the level of education is high, state schools are highly regarded by the population, the principle of equality of opportunity functions as a “talent hunter”, and school standards are reasonably homogenous throughout the different nations. Russia has made an interesting exception in this study when compared to the Nordic countries in many aspects and the school system comparison followed this tradition.

5 METHODS

5.1 General

The research is divided into two parts: the descriptive part and the explanatory part (Figure 2). Quantitative methods of analysis were used to study the similarities and differences in the factors of psychosocial well-being. First the descriptive analyses and results are presented. They can be recognised as conclusive results themselves, but also as a basis for the further explanatory analyses.

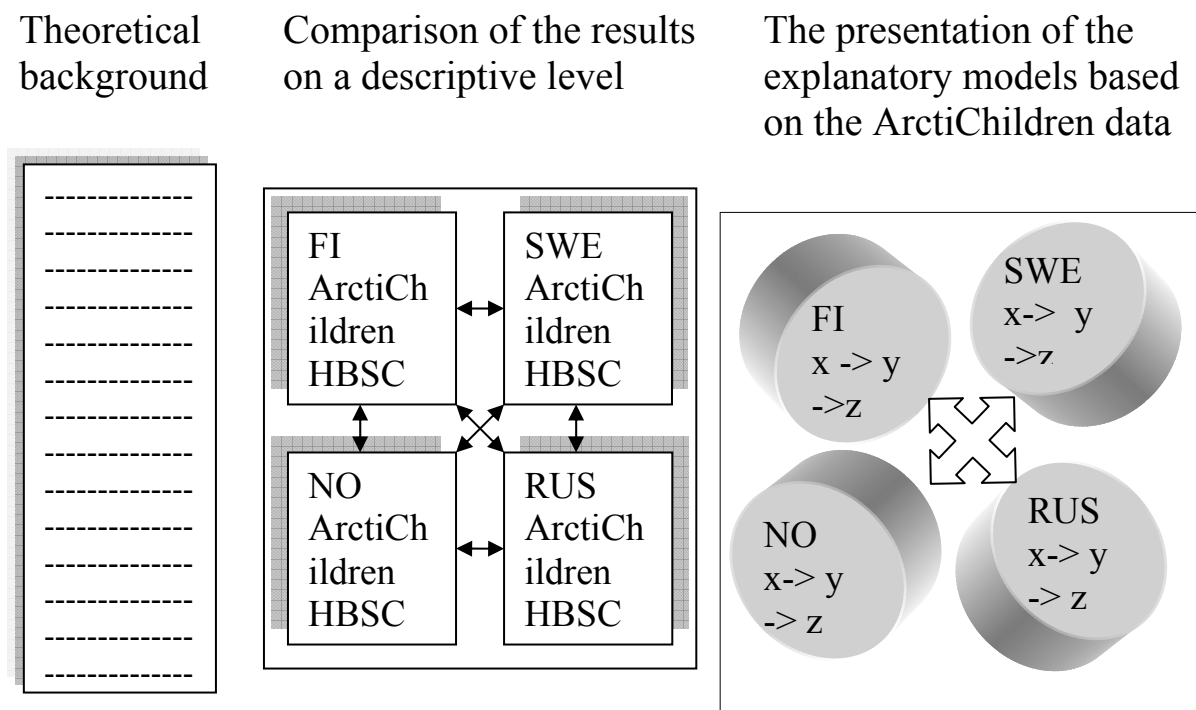


Figure 2 The construction of the dissertation

5.2 Research Paradigm

When thinking over the available paradigmatic engagements, the researcher examines *what* and *how* he/she studies. The research paradigm can be considered *as a frame of reference* or a synonym used to *model* (see Hirsjärvi, 1983, p. 142). According to Kuhn (1994, p. 23) the scientific paradigms are rules or examples that the field of

scientists of *normal science*⁴ do not question. In a scientific work the paradigm acts like an unwritten agreement, it is a tool for argumentation and specification in certain exact conditions (ibid.). The research paradigm has some practical effects, it is related to the researcher's understanding of his/her results and to the goals of the ongoing research.

The author of the present study has a background in educational sciences and pedagogy; thus, the focus of this study is from an educational perspective. In teaching and learning there are usually somewhat clear goals: development, problem solving, achieving a new stage of skills, succeeding in what one is doing, or at least to learn from the mistakes to improve for the next time. One of the most important goals of this research is to clarify the structure of schoolchildren's psychosocial well-being by examining it from various perspectives. Accordingly, the topic has been approached from the viewpoint of several other fields of science, in particular from psychology and health sciences. From the outset it was clear that this study required the use of quantitative research methods.

The aim was to collect comparable data from four different countries, from hundreds of respondents from 27 schools altogether. Furthermore, the use of the large survey by the HBSC questionnaire required the application of quantitative research methods. It can be agreed, like Töttö (2000) argues, that certain questions cannot be answered without quantitative research. There have been an increasing number of arguments against the traditional division of research methods into qualitative and quantitative ones (De Vaus, 2002; Mäkelä, 1996; Töttö, 1997; Töttö, 2000). These arguments apply to the relation between the actual research questions and data; what method could be used to answer the questions in a specific study? The numeric data and the need for comparison and explanation led to a focus on quantitative analysis, which will be expounded on briefly later on.

⁴ Kuhn argued normal science to be cumulative developing science, always being connected to the beliefs and appreciations of the research community. Normal science acts according to certain paradigms until it ends up in a crisis, which brings about new theories (Hirsjärvi, 1983; Kuhn, 1994).

5.3 Comparative Research, Methods and Reliability

5.3.1 Comparative education

Discussions of methods used in comparative research often begin by noting that the background of all scientific work is essentially based on comparison, all social science research is comparative (Harkness, Vijver, & Mohler, 2003; Raivola, 1984). Comparisons are made between past and present, familiar and unfamiliar, this and that method etc. The comparison can always be returned to its basic function: to point to the ways that research targets are different and similar to each other. In the end, every comparative inquiry must be rooted in the researcher's expertise of base, process and aims as the fundamental categories of the comparison (Lauterbach & Mitter, 1998).

Comparative education uses different paradigms based in the field of the study concerned. The main interests of the research in this field have consisted of attempts to find out why educational systems and processes vary in their international development and how they function and develop (Lauterbach & Mitter, 1998). Thus, according to Raivola (1984) comparative education cannot be defined according to methods only. Comparative education is in this sense multidisciplinary, problem-based, coordinating humanistic and pedagogic science. In accordance with Lauterbach's and Mitter's (ibid.) definition, this study focuses on educational processes; however, it is aimed more at the results than the processes themselves.

5.3.2 Former international comparative studies of education and children's well-being

One of the first international periodical studies was conducted by the International Association for the Evaluation of Educational Achievement (IEA). The first IEA study was conducted from 1959-1962 in twelve countries; since then it has been developed and enlarged to include up to 50 countries (in 2003). The main interest of the IEA studies has been on evaluation and comparison of the pupils' academic achievements between countries. The focus of the fields has varied during the years. Several different periodical studies have been

ongoing. For example, studies for mathematics and science TIMSS (Trends in International Mathematics and Science Study) and reading skills PIRLS (Progress in International Reading Literacy Study) are on going in four-year cycles. (International Association for the Evaluation of Educational Achievement, 2005)

The Programme for International Student Assessment (the PISA study) is a relatively new study on the comparison of pupils' assessment. It occurs every three years and is intended to assess the proficiency of knowledge and skills essential for full participation in society of students near the end of compulsory education. The first PISA study was conducted in 2000. The fields of the study are: mathematical literacy, problem solving, reading literacy and scientific literacy. In 2003, 41 countries participated in the PISA study and 58 countries participated in the 2006 study (OECD Programme for International Student Assessment, 2006).

The WHO's Health and Behaviour of School-aged Children (HBSC study) was established in 1980. It is cross-national research conducted with an international network of research teams in collaboration with the WHO (World Health Organization) Regional Office of Europe. The study considers young people's health in its broadest sense – physical, social and emotional well-being, not merely the absence of disease – thus, health is viewed as a resource for everyday living (Currie et al., 2004). The HBSC study is conducted every four years with the last study having been conducted in 2006.

The Education Governance and Social Inclusion and Exclusion in Europe (EGSIE) research project was a comparative study between Australia, Spain, Portugal, Finland and Sweden (Rinne, 2003). The survey data was used to examine the opinions of youth, reflecting the contemporary transitions of states in the direction of neo-liberalism within the framework of welfare state models.

These studies lay the foundation of the field of comparative education research today. In this ArctiChildren research the amount of respondents and countries has not been as large as most of the periodical studies mentioned above. It is most similar to the EGSIE study, where the research and report were more case oriented.

5.3.3 Cross-cultural context in a cross-national survey

Acknowledging that all social science research is based on comparison raises the question of whether we need different methods for different kinds of research (Harkness, Vijver & Mohler, 2003). Is comparative cross-cultural survey research not just like mono-cultural survey research? Those who adopt this view can also point out that statistical analyses of variance and reliability are just as relevant for national surveys as for cross-national ones. In mono-cultural surveys it is possible to assume the questions asked in the questionnaires to have similar meanings to all respondents. In cross-cultural surveys, the different interpretations of the used questions cannot be ignored. In cross-cultural surveys strategies are needed to come to terms with the fact that concepts may not be identical or comparable and that an instrument adequate in one context may not be adequate in another (Harkness et al., 2003).

In this study the cultural differences between the countries were not major. The pupils came from schools that are located in the northern parts of Norway, Sweden and Finland and in Northwest Russia. The culture can be considered Western in Finland, Sweden and Norway, and close to Western in Northwest Russia. In every sense the cultural differences can be considered minor on the large scale. But what freedom does this give to the researcher? It makes it possible to assume that the responses to the questionnaires could be compared; that is, the respondents interpreted the questions similarly or close enough to be comparable. Despite this, it cannot be ignored that in the processes of translation and national questionnaire development even minor cultural connotations can bring out slightly differentiated outcomes.

5.3.4 Methods of comparison

According to Raivola (1984, p. 74) it is not necessary to define the concept of comparison itself; one only needs to choose the contemplation viewpoint, *tertium comparationis*. According to Lauterbach & Mitter (1998, p. 245) “the base of comparison is determined by the comparability of the subjects which have been

taken into account, as well as the *common factor enabling comparison*". According to Franz Hilker (1962) the identification of comparability rests upon establishing a categorical and thematic interrelation between the chosen subjects aimed at similarity (affinity) and diversity (discrepancy) (Lauterbach & Mitter, 1998)

There are several schemes of models of comparative study. Identifying *tertium comparationis* lays the groundwork for the comparative indicators, which are based on the questions to be investigated (Lauterbach & Mitter, 1998). Lauterbach and Mitter reported two schemes of the comparison developed by Franz Hilker (1962) and Saul B. Robinson (1973).

The first one, proposed by Hilker, is referred to as classical patterns and is used for conceptualising and implementing the individual methodological steps in the process of comparison:

- a) the *description* of chosen subjects of comparison, based upon the collection of data and other sources;
- b) the *interpretation* of each subject of comparison in the framework of overall educational as well as political, economic and cultural conditions, with special regard to the historical factor;
- c) the *juxtaposition* consisting of the descriptive and interpretative results of the preceding inquiries on the individual subjects, primarily by the application of schemes in tabular form;
- d) the *comparison* as the comparative interpretation of inquiry in whole. (Lauterbach & Mitter, 1998, p. 245)

This classical pattern has been gradually refined and replaced by classificatory models. The model of Saul B. Robinson (1973) (by Lauterbach & Mitter, 1998, p. 245) took the orientation more towards the methodology of modern social sciences:

- a) the "idea" (analysis of a given situation or problem, examination of available sources), becoming materialised in a *hypothesis*; the *identification* of relevant data;
- b) the establishment of variables and determination of *comparability* (of the chosen subjects);

- c) the repeated *modification* of hypotheses and data collection (according to the demands inherent in the context);
- d) the activation of *previous knowledge*;
- e) the establishment of the *tertium comparationis*.

The aim of the present study is to establish differences and similarities between the countries, areas and genders and report them as one of the results of the study. The steps of Hilker's classical patterns are well suited to the analysing process of this study. The description, interpretation, juxtaposition and comparison were conducted in this order and steps were roughly followed. In addition, the idea and identification of *tertium comparationis* played an important role in the analysis and comparison processes.

5.3.5 Reliability of the comparison in this study

The question of the reliability of a comparative study comes up in the very first step of the research process. In this study the first step of the reliable research was taken when choosing the instrument for the survey. The WHO Health and Behaviour of School-aged Children (HBSC) questionnaire had been used internationally in 35 countries to test and measure similar qualities in different cultural contexts. That study produced a range and depth of information that is unobtainable from most monitoring studies. It has developed a research instrument that has a strong conceptual base and includes a coherent set of indicators of the social and individual determinants of health, as well as of health and behavioural outcomes (Currie et al., 2004). There are certain advantages and disadvantages in using a pre-existing questionnaire; in this case the advantages for this study were clear and supported the use of the already existing questionnaire instead of creating a new one. Even though by creating a new questionnaire it would have been possible to gather more suitable information and more useful variables, the realities such as budget and the reason for gathering comparable data supported the use of the HBSC questionnaire. Harkness et al. (2003) describe some advantages and disadvantages of using an already existing questionnaire. She sees the

pre testing of the questionnaire in cultural contexts as an advantage, whereas the problems of cultural suitability and translation are considered as clear disadvantages when adopting an already existing instrument into a new study and context.

In the planning stage of a comparative study it is necessary to identify common research questions or problems to investigate. Based on Hilker's classical pattern, it is possible to take the first step by describing the chosen subjects of comparison. The subjects of comparison in this study were the survey responses of pupils from four different nations, focusing on those indicators encompassing well-being. The second step, interpretation, raised new questions. The interpretation was done based on the assumption of common understanding of the questions in the questionnaire. In each country the national version of the questionnaire was used, taking into account the possible different connotations in the language of the questionnaire. Still the importance of culture and language should not be underestimated when the definition of concept is required as part of any item used in the survey.

The juxtaposition was the clearest part of this study. The similarities and diversities of the comparison were explicit when compared the factors in a table or a figure. The comparison, as the comparative interpretation of inquiry on the whole, was the most difficult phase from the reliability point of view of the study. The interpretation always has a subjective element of the researcher in it. In this study the researcher comes from Finland and is making his judgments based on his own cultural and educational background. Even so, it was possible to contemplate the data from a researcher's perspective, that is, to identify the *tertium comparationis*. The research perspective was created through deep knowledge of the data and enhanced by an understanding of the local cultures and school systems gained during visits in the schools in northern Norway, Sweden, Finland and Northwest Russia. Last but not least, presentations, research papers and discussions with fellow researchers in the ArctiChildren project have also contributed to the present researcher's knowledge about schooling in the Barents Region.

5.4 Material and Methods in the Descriptive Study

5.4.1 Procedures and participants

ArctiChildren data

The data collection for the ArctiChildren study has been conducted in collaboration with several researchers from four different countries and universities/colleges participating in the project. The areas can be found in the previously presented map of the Barents Region (Picture 1). The selection of the schools was made in co-operation with the universities and regional educational administrators in each country. Some of the schools participated in the ArctiChildren project as pilot schools. In Norway the study was made for schools selected by a stratified selection at a level of school districts. Overall the sample is not representative selection of the children of the Barents Region, but is a case study where the sampling is similar in each participating area from all four countries.

The HBSC⁵ (Health and Behaviour of School-aged Children) questionnaire was chosen for the ArctiChildren project to give reliable and comparable information about the psychosocial health and well-being of school-aged children in the Barents Region. This questionnaire also gave a lot of relevant information about self-reported health and living conditions from the examined communities. Furthermore, it was possible to pay attention to the effect of school and peer relations on personal psychosocial well-being.

The ArctiChildren data have been collected between May 2004 and February 2005 and they have been coded according to the HBSC 2002

⁵ According to the authors of the HBSC Research Protocol (Currie & Smith, 2001), the HBSC study has its disciplinary origins in behavioural and social sciences. At its inception the HBSC study was firmly rooted in a lifestyle approach and as such aimed to analyse the relationship between person and environment from socio-psychological and ecological perspectives, taking into account the macro social context. The WHO Cross-National HBSC study, is a unique inquiry into the health behaviours and health of adolescents across a large number of countries. It is a European and North American study conducted in collaboration with the European Region of the World Health Organization (WHO).

codebook by the researchers in each country. Every effort was made to ensure that the HBSC protocol was followed and that the survey instruments and data collection and processing procedures were consistent. The sampling unit was the school and the class. All the pupils of the chosen classes were asked to respond the questionnaire.

The participants of the ArctiChildren study were 13- and 15-year-old schoolchildren from comprehensive schools in northern parts of, Norway, Sweden and Finland and in the north-western part of Russia. The data was collected by the researchers participating in the ArctiChildren project in each country.

In Finland, Sweden and Russia the data was collected during the researchers' visits to schools. In Norway it was partly collected during researchers' visits to schools and partly by a postal survey, in which the questionnaires were sent schools and distributed to the pupils by the teachers. The pupils answered the national versions of the HBSC questionnaire, which they could answer anonymously. The pupils were provided with an *informed consent* form (see Attachments 23 and 24), they were told about the purpose of the study and basic procedures, selection of the respondents, identity of the research group and a statement that the participation was voluntary (see De Vaus, 2002). The data collection took place during school time therefore no refuses occurred. Specially trained personnel, teachers and researchers administered the completion of questionnaires in school classrooms. The teachers collected the questionnaires from the pupils and handed them directly to the researchers. In the cases when a researcher was not on site at the school collecting the data, the questionnaires were put into a closed envelope by the pupils themselves and sent to the researchers.

There were a total of 950 responses, of which 51% were done by boys (Table 5). The average age of the respondents was 14.0 years. In northern Norway there were 185 respondents from eleven schools, located in the county of *Finnmark*. In northern Finland there were 252 respondents from four schools, located in the county of *Lapland*. In northern Sweden there were 253 respondents from nine schools, located in the county of *Norrland*. And in Northwest Russia there were 260 respondents from three schools, located in the *Murmansk region*.

The pupils' school grade was mainly 6 and 8 in Finland and Sweden, 7 and 9 in Norway and from 6 to 9 in Russia. In each country there were schools that represented both urban and rural districts.

Table 5 Age and gender of the respondents in the ArctiChildren study

DATA	COUNTRY	MEAN/SD AGE	N	% BOYS
ArctiChildren	Norway	14.06/1.05	185	50
	Sweden	13.81/1.03	253	50
	Russia	14.30/1.49	260	48
	Finland	13.94/1.06	252	55
	Total	14.03/1.20	950	51

HBSC data

The author made a data request from the HBSC databank manager, and after their review received the requested data from the Norwegian Social Science Data Services (NSD). The data from the former HBSC study was received from the HBSC databank in the Hemil Centre, of the University of Bergen, Norway.

The HBSC data was collected between December 2001 and April 2002. About 1 500 respondents in each of the three age groups were targeted in every country. The selection was done by using a clustered sampling design, where the initial sampling unit was either the school class or the school. The latter was sampled when class lists were not available. The requirement for minimum recommended sample size was met in the majority of countries and regions.

According to the report (Currie et.al 2005) of the HBSC 2001/02 study every effort was made to ensure that the HBSC protocol was followed and that the survey instruments and data collection and processing procedures were consistent. Specially trained personnel, teachers and school nurses administered the completion of questionnaires in school classrooms. On completion of the fieldwork, the data were prepared, using standard documentation, and submitted to the HBSC International Data Bank at the University of Bergen, Norway. The data were checked, cleaned and returned to the countries for approval before being placed in an international file.

Table 6 Age and gender of the respondents in the HBSC study

DATA	COUNTRY	MEAN/SD AGE	N	% BOYS
HBSC	Finland	14.80/1.05	3459	50
	Sweden	14.48/1.03	2409	50
	Russia	14.53/1.03	5513	46
	Norway	14.44/1.05	3358	50
	Total	14.56/1.05	14739	51

The used HBSC data in this study contained the mandatory variables of the HBSC questionnaire including demographic variables of the 13- and 15-year-old schoolchildren from Finland, Sweden, Norway and Russia. Altogether there were 14 739 respondents of which 51% were boys. The average age of the respondents was 14.56 years (Table 6).

5.4.2 Methods used in the descriptive analyses

Descriptive research deals with *what* things are like, not *why* they are that way (De Vaus, 2002). Good description has an important role as part of research and is the basis for sound theory, without an accurate and thorough description of something the attempts to explain it will be misplaced (De Vaus, *ibid.*). This descriptive-level comparison only used the mandatory variables of the HBSC questionnaire which were common and comparable for the data from all the countries participating in the ArctiChildren study. In the analysis of the data there were 89 common variables, of which 60 were on the Likert scale.

The ArctiChildren data was collected between May 2004 and October 2005. The maximum of four years difference in the time of data collection does not give a full comparability between the two data sets. The differences in the compared variables should be considered more as trends of the inquired phenomena. The former HBSC studies have shown that the results have stayed rather stable between data collection periods in a four-year cycle. The major changes have been reported as mostly long-term trends in the 20-year history of the HBSC survey see (Kannas et al., 2004).

The coded raw data from the ArctiChildren study was collated in winter 2006 and the files were merged for the first common analysis. Some recoding, counting for summed variables and cleaning of the data followed. Some analyses of the comparisons were made for the ArctiChildren project and were published in presentations and articles (see Ahonen, Kurtakko, & Sohlman, 2006). After the first descriptive level analysis some more specific analyses of the data were conducted. Along the way more theoretical background was gathered.

The ArctiChildren data was merged with the HBSC data, resulting in a new data file consisting of 45 common variables (Attachment 23). These variables are presented and compared between the countries. There is also a comparison between the pupils from the northern parts of the countries (ArctiChildren data) and the pupils in the countries at the national level (HBSC 2002 data). The time gap in between the data collection of the HBSC 2002 data and the ArctiChildren data, in maximum 3.5 years, should be taken into account.

The ArctiChildren data was recoded and only the pupils in similar age categories to the HBSC study (13- and 15-year-old) were used in the comparative analysis. Due to the different timetable of the data collection, there is half a year difference in the average age of the respondents between the ArctiChildren (14.01 years) and HBSC study (14.56 years). The age was not standardised, because the dependence on the pupils' age group and class level was seen to be a more important factor than the actual age in months.

Frequencies and percentages of the variables were calculated using the SPSS (Statistical Package for the Social Sciences) program. The statistical significance of the mean differences was tested by the variance analysis of One Way ANOVA. The statistical differences of the cross tabulations were tested with Pearson Chi Square (χ^2) tests. In addition, some summed variables were computed. The reliability was tested by the SPSS reliability analysis, Cronbach's alpha. The significance values are displayed by the p-value or by the *-symbol. The representation of the symbols is as follows: ***p<.001, **p<.01, *p<.05 or non significant, n.s. The comparisons were made by cross tabulations, and frequency analysis, and analysis of variance. The results are presented in counts and percentages and as figures created by the Microsoft Excel program, some of the graphs and tables are placed as attachments.

The descriptive level results are presented as *having*, *loving* and *being* factors, in line with the theories presented earlier. This comparison was intended to provide a general overview of the different stages of the well-being factors in the studied ArctiChildren data. A comparison was also made between the results of the 2002 HBSC study and the ArctiChildren study. In the descriptive part the results are presented and compared by frequencies and percentages in cross tabulations. The methods used in the study are presented in Table 7. Chapter 6 gives a descriptive-level comparison between the ArctiChildren data and the HBSC data; one goal of this comparison is to explore the similarities and differences between the northern areas and countries in general.

Table 7 Methods used in the descriptive analyses

Research task/ problem	Used method/ SPSS	Result's format
Approximate differences of the single well-being variables between the countries and datasets	Frequency analysis, Cross tabulations	Frequency tables; Cross tabulations
Computing summed variables	Principal component analysis, Reliability analysis, Cronbach's Alpha, Computation	List of summed variables, with α -coefficients
Comparison of the variables on a descriptive level, Mean comparisons	Cross tabulations, Pearson Chi Square tests, One Way Anova tests, T-tests, F-tests, Post-hoc test (Sheffe, Tukey)	Mean tables, Frequency tables, Cross tabulations, Graphs, Significance values (p-values)

5.5 Material and Methods in the Explanatory Study

5.5.1 Procedures and participants

The explanatory analyses were made only for the ArctiChildren data. The research procedure was the same as described earlier. The only difference in this part is that all the responses of the ArctiChildren data were contained in the analysis, so altogether there were 1398 respondents from 27 schools from the Barents Region. The respondents (Table 8) were from three age groups 13-, 14- and 15-year-olds, from grades 6 to 8 in Finland and Sweden, 7 to 9 in Norway and 6 to 10 in Russia.

Table 8 Respondents in the AC data for the explanatory analyses

DATA	COUNTRY	MEAN/SD	N	% BOYS
ArctiChildren	Finland	13.96/.89	398	55
	Sweden	13.86/.84	395	50
	Russia	14.22/1.32	341	48
	Norway	14.04/.89	264	50
	Total	14.01/1.01	1398	51

5.5.2 Methods used in the explanatory analyses

Prediction and explanation are central concepts in scientific research, roughly speaking prediction requires only a correlation, but the explanation needs more (Pedhazur, 1982). ‘Explanation provides understanding, but we can predict without being able to understand, and we can understand without necessarily being able to predict’ (Pedhazur, 1982, p. 136). According to Kaplan (1963) it remains true that if we can predict successfully on the basis of certain explanations we have a good reason for accepting the explanations. In this part of this study the goal was to gain enough understanding to be able to find explanations.

Reflecting on the definition of psychosocial well-being led to the challenge and goal of uncovering some reasons behind it. There was a special interest in how school and the elements of everyday school life are connected to the psychosocial well-being of pupils. These

questions are reviewed separately in the ArctiChildren data of each of the four countries. This is because the data were collected with the national HBSC questionnaire of each country, and there were small differences in it between countries, so that only the mandatory questions were common and comparable for all. All the questions were retrieved from the international HBSC codebook from the 2001/02 survey (Currie & Smith, 2001). The intentions of these analyses were to find the best possible explanatory model of the data for each country that participated in the AC study. This is why the variables and the models differ from each other. These models are intended to represent the best possible solution for explaining psychosocial well-being according to this data.

Analyses were made separately in the ArctiChildren data from each country. First, a Principal Component Analysis (PCA) was done to get an overview of the data and to explore how the variables grouped together. PCA belongs to the Factor Analysis methods. The difference to the other Factor Analysis methods is that in PCA the aim is to group the variables rather than to find the latent variables from the data (Nummenmaa, 2004). Based on these analyses, former studies and theories, summed variables were calculated to represent certain fields of interest in the data. These summed variables were tested by the SPSS program's reliability analysis. The reliability and the internal consistence of the variables were analysed by Cronbach's alpha, which is considered to be a good tool for measuring the reliability of the research instruments and data (Metsämuuronen, 2004; Nunnally, 1978). Generally the Cronbach's alpha's value of 0.60 has been argued to be the lowest acceptable, but more important is the knowledge of the confidence interval, which is related to the size of the sample and variables (*ibid.*). In this part of the study the sample size has been between 264 and 398, which is enough to get rather good reliability values in case the value of the Cronbach's alpha was not high enough. In this study the lowest acceptable α -coefficient was 0.60, but most of the values varied between 0.70 and 0.85.

The summed variables, together with other correlating variables were put into a linear regression analysis, using hierarchical order with enter-method. Regression Analysis (RA) is a basic analysing method in which one or more variables explain one dependent variable. RA is a method of analysing the variability of the dependent

variable by resorting to information available on one or more dependent variables (Pedhazur, 1982). Through RA it is possible to examine the proportion of the already known important factors in predicting another variable (Nummenmaa, 2004). Behind the regression analysis there is an assumption that the data is normally distributed, this was tested in each model by the SPSS program's residual statistics, and no weakening factors were found.

Methods in creating the linear regression model

In explaining School and Life satisfaction such a regression model was used that having factors were placed as antecedents together with demographic variables and loving and being factors were set as consecutive mediators. Four steps needed to be met in order to establish mediation. First, having factors needed to be correlated with School and Life satisfaction. Second, having factors were related to mediators. Third, mediators affected School and Life satisfaction. And fourth, the effect of the antecedent on School and Life satisfaction was reduced in comparison to Step 1, indicating that part of its effect was mediated by loving and being factors. In the case of complete mediation the effect of the antecedent was reduced to zero. Steps 3 and 4 were estimated in the same regression equation.

Correlations of having, loving and being factors with School and Life satisfaction, in separate analysis, indicated whether steps 1 and 2 met. Regressing School and Life satisfaction on being, loving and having factors indicated whether the effect of having factors on School and Life satisfaction were mediated by loving and being factors (steps 3 and 4). In the conceptual model loving and being factors were placed as consecutive mediators presuming paths from loving factors to being factors. These paths were separately examined by regressing being on loving and having factors, and the loving factors on having factors. Before variables were selected for regression analyses, the possible multi-collinearity among the predictors was checked. Collinearity was not a problem in the analyses.

The main findings of regression analyses are displayed in Figures 19-22. In the Regression model the R^2 -values (Squared Multiple

Correlation, SMC) represent the explanation percentage of the variance of the dependent variable. The Beta (β)-coefficient represents the effect that the variable has in the regression equation. They are standardised and therefore scale-free indices; they could be compared between different variables. The bigger the coefficient is the greater is the predicting force in the equation is. The β -values can vary from -1 to 1. The statistical significances of the β -coefficients that have been used when taking the predictors in regression equations are presented below each model.

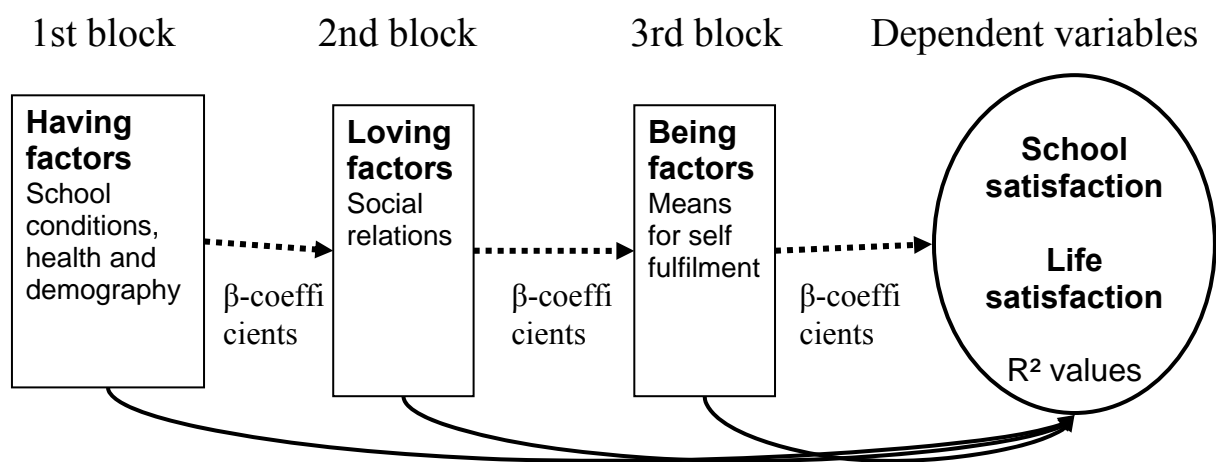


Figure 3 The construction of the explaining model of well-being in this study

The construction of the analysis for creating the regression model is shown in Figure 3. The direct prediction of the dependent variables is shown by curved arrows and the mediated prediction is shown by the direct dashed-line arrows. The analyses were conducted in blocks, where the predictors of school satisfaction and life satisfaction were analysed separately. No path was estimated between School and Life satisfaction.

6 DESCRIPTIVE-LEVEL FINDINGS AND COMPARISONS OF THE FACTORS OF PSYCHOSOCIAL WELL-BEING IN NORTHERN NORWAY, SWEDEN AND FINLAND AND NORTHWEST RUSSIA

6.1 Comparison of the Having Factors

This chapter aims to answer the first two research questions:

1. What is the state of psychosocial well-being of the pupils in the schools of all the four countries in the Barents Region? (Specified: What indicators best describe the psychosocial well-being of schoolchildren in this data?)
2. What are the differences and similarities in the factors of psychosocial well-being when comparing the ArctiChildren and national HBSC data between the four countries?

The following sections present the well-being factors that were placed in the *having* category. These variables were divided into three parts: Firstly, those concerning material welfare and living conditions; secondly, school performance; and thirdly those concerning health.

6.1.1 Living conditions and material welfare

The dimensions of an individual's well-being can be seen through *needs* and *resources*. Needs are always related to the society, history and time, and are for that reason relative (see Karisto, 1984). According to Allardt (1980) well-being is a state of living in which the human being is able to fulfil his/her basic needs. *Quality of life* is related to the social relations and the *Living standard* refers to material and non-personal resources (ibid.). A lack of fulfilment in both the needs and resources can be seen as weakening factors in the complexity of individuals' well-being (Allardt, 1980; Karisto, 1984). Discussion about the objective and subjective viewpoints of well-being has raised the question of whether it has to be measured by asking about people's subjective experiences or by just measuring the objective indicators such as material welfare. There has been a fairly

large consensus about the need for both dimensions, with pros and cons for each (Konu, 2002).

Living conditions have their own relevant impact on one's well-being. Some results from comparisons of the material welfare factors in this study follow. Here, it has to be kept in mind that there can be major cultural differences in how the material goods affect the well-being of the individuals. The former study of Ahonen & Rajala (2008) showed that material well-being had a strong direct effect upon social well-being of the schoolchildren in the Barents Region. In Russia the effect was the strongest of all. Likewise, Morgan, Malam, Muir and Barker (2006) found in their study in England that families' wealth was an important predictor in pupils' self-reported health and well-being. They also found that perceived family wealth had a stronger influence than more objective measures, which supports the earlier presented subjectivity of well-being as a whole. Furthermore, the structural model of the study of Ahonen & Rajala (2008) indicated that material well-being is an important factor in forming schoolchildren's leisure time activities.

Following are the indicators of material well-being and other having factors in the ArctiChildren data, and then comparisons to the HBSC data are made. The results are presented mainly by frequency analysis and cross tabulations. Some of the results are illustrated by tables and figures. The statistical differences between the countries, data sets and genders were analysed and are presented along with the results. The tables and graphs of the more specific analysis will be presented as attachments.

When asked about the working situation of the pupils' mothers, there were no significant mean differences between the countries in the ArctiChildren data. Over 80% of the pupils' mothers in all the countries were working (see Attachment 1 and 2). The comparison of the working situation of the fathers was a bit more complicated (Figure 4). Between Nordic countries in the AC data, there were no significant differences and over 84% of the fathers were working. In the AC data 16% of the Russian pupils were not in contact with their father, which makes the percentage of the working fathers lower. When comparing the ArctiChildren data to the HBSC data there were no significant differences in the employment of the fathers elsewhere than in Russia. In Russian AC data both parents of participants did not

have regular employment as commonly as in the HBSC data. Overall there was also significant difference in the Fathers' work situation between the AC and the HBSC data (Pearson Chi Square, degrees of freedom) ($\chi^2(3)=8.153$, $p<.05$) but not in the Mothers' ($\chi^2(3)=2.916$, n.s).

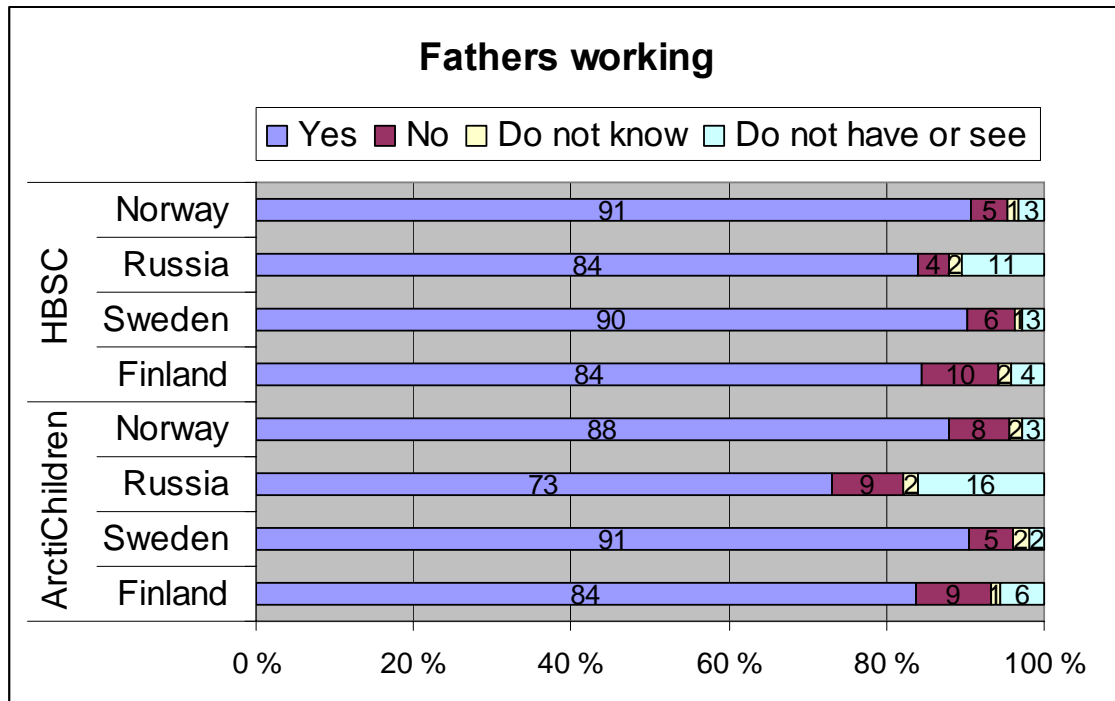


Figure 4 Fathers working

To get an idea about material welfare, participants were asked about the number of cars and computers their home had and the possibilities for their own bedroom. The northern Swedish pupils reported having the most cars, about 75% reported that their family had two or more cars. Whereas in Northwest Russia only 9% of the pupils reported their families having two or more cars and 53% of the NW Russian families did not have a car at all.

The comparison with the HBSC data showed significant differences between the amount of cars in the north and the country in general in all countries but Norway based on cross tabulation and Pearson Chi Square (χ^2) tests (see Table 9). In Sweden they had more cars in the north (AC) and elsewhere less than in the country in general (HBSC).

Table 9 Number of cars in the family

DATA		% WITHIN COUNTRY				TOTAL
		Finland	Sweden	Russia	Norway	
AC	None	7.5	1.5	53.4	4.6	16.4
	One	52.3	23.6	37.2	44.6	39.0
	Two or more	40.3	74.9	9.4	50.8	44.5
	Total	100.0	100.0	100.0	100.0	100.0
HBSC	None	5.5	4.8	39.2	3.3	17.5
	One	45.7	40.8	48.8	41.8	45.2
	Two or more	48.8	54.4	12.0	54.9	37.3
	Total	100.0	100.0	100.0	100.0	100.0
between data sets	χ^2	8.645	41.994	22.116	.642	21.200
	df	2	2	2	2	2
	p	<.05	<.001	<.001	n.s.	<.001

There were significant differences ($p < .001$) between all the countries of the ArctiChildren study on the subject of whether the pupils had their own bedroom (See Figure 5). In NW Russia 64% of the pupils had their own bedroom and in northern Finland 86% per cent of the pupils had their own bedroom. In northern Sweden and Norway about 97 % or more of the pupils reported having their own

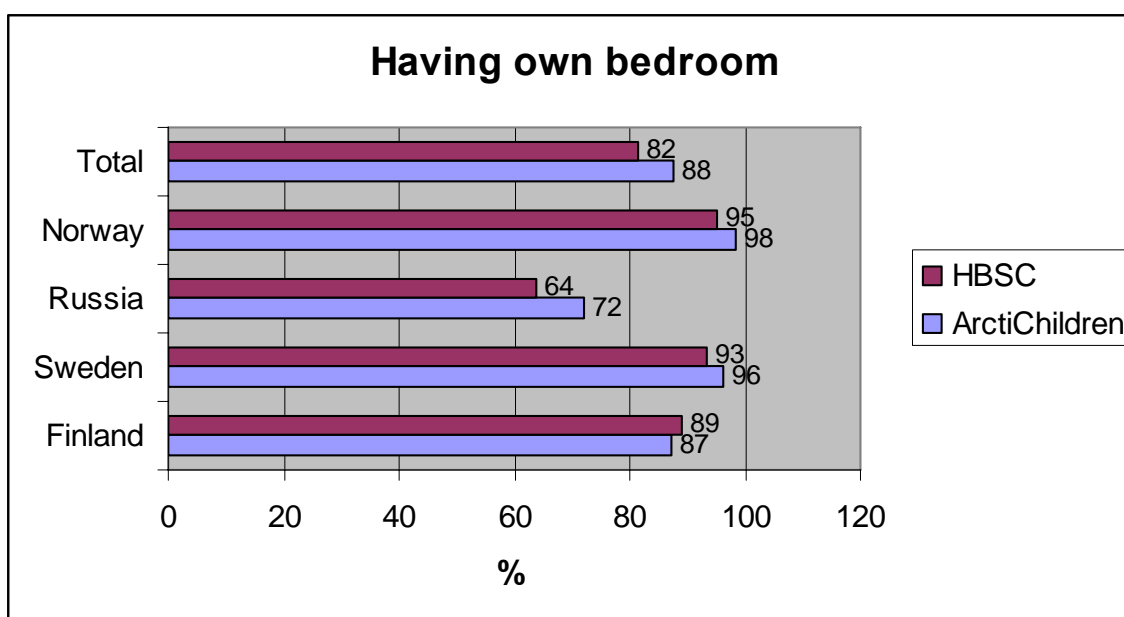


Figure 5 Own bedroom

Table 10 Number of computers

DATA		COUNTRY %				TOTAL
		Finland	Sweden	Russia	Norway	
AC	None	11.6	0.8	51.6	3.0	16.7
	One	55.3	29.8	41.1	35.4	40.8
	Two	24.6	36.9	5.6	29.7	24.4
	More	8.5	32.6	1.8	31.9	18.1
		100.0	100.0	100.0	100.0	100.0
HBSC	None	10.3	2.6	51.0	4.4	23.0
	One	55.3	43.4	41.9	42.7	45.5
	Two	23.7	33.6	5.5	32.5	20.5
	More	10.6	20.5	1.6	20.5	11.1
		100.0	100.0	100.0	100.0	100.0
	χ^2	2.165	15.104	1.355	28.662	46.903
	df	3	3	3	3	3
	p	n.s.	<.01	n.s.	<.001	<.001

bedroom. In comparison with the HBSC study, which was also done according to countries, there were significant differences when cross tabulating the Having own bedroom variable in Russia ($p<.05$) and Norway ($p<.01$) (See Attachments 3a-c). Generally the pupils in the AC (88%) data reported having their own bedroom more often than pupils in the HBSC data (82%), and the difference was significant according to Pearson Chi Square test, ($\chi^2(1)=23.68$, $p<.001$).

Regarding the number of computers⁶ the pupils had in their homes, there were significant statistical differences ($p<.001$) between the two data sets in Sweden and Norway (Table 10). In NW Russian homes more than half of the pupils did not have any computers, whereas in northern Norway and Sweden less than 3% of the pupils reported not having a computer at home.

⁶ The data of the ArctiChildren study were collected between May 2004 and April 2005 and the measures of the WHO study in 2001-02. The development of equipping homes is rapid, so the differences could have decreased since the time of the data collection.

In northern Finland about 12% of the pupils reported not having a computer. In northern Sweden and Norway 32% of the pupils reported having several computers at home, in northern Finland only 9% and in NW Russia only 2% had several computers at home. The differences were clear in every sense. Comparing the AC data to the HBSC data revealed significant differences in the amount of computers between the two data sets in Sweden and in Norway. In both countries the pupils reported their families having more computers in their home in the north than in the countries in general. Overall, when comparing the two data sets the pupils in the north reported having more computers in their homes with significant difference $\chi^2(3)=46.903$, $p<.001$.

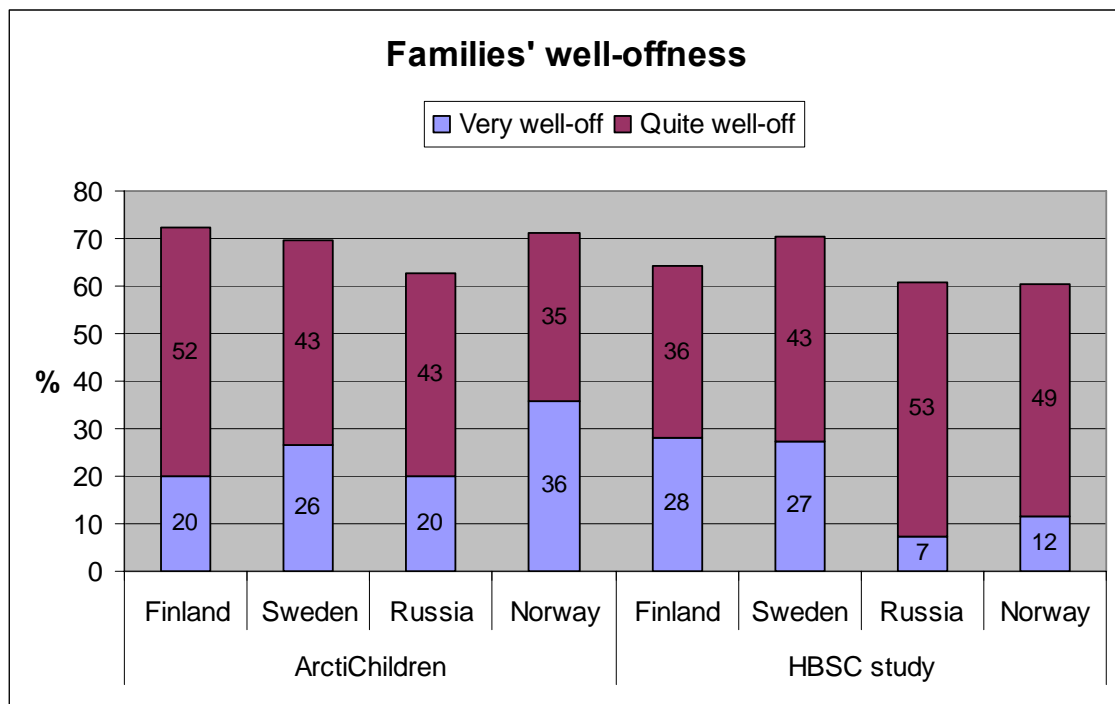


Figure 6 Families' well offness

The pupils were also asked about their own opinions about their families' affluence (well-offness) (see Figure 6). The question was formulated: *How well-off do you think your family is?* The response options varied between 1) *Not so well-off* to 5) *Very well-off*. Most of the pupils considered their family to be quite well-off or very well-off in all the countries. This probably tells the most about the subjectivity of the families' affluence. Regardless, there were significant differences between the countries and data sets. Comparing

ArctiChildren data and the HBSC data showed a significant difference $\chi^2(4)=49.202$, $p<.001$. In the AC data the pupils reported their families as being better-off. The pupils in Norwegian AC data thought their families' being the most often very well-off when looking at their responses on being very well-off or quite well-off (see also Attachment 4). Furthermore the Russian pupils in both data sets reported their families' affluence being the weakest.

6.1.2 School performance

The respondents' School performance was placed in the having category as a variable named *Academic achievement*. It is considered to be part of the conditions of actual well-being, not the goal itself, like it has very often been interpreted. Pupils' school performance was measured by the variable m102: *In your opinion, what does your class teacher(s) think about your school performance compared to your classmates?* The variable was reversed for analyses. The response options were 1) *Below average*, 2) *Average*, 3) *Good* and 4) *Very good*. (see Figure 7).

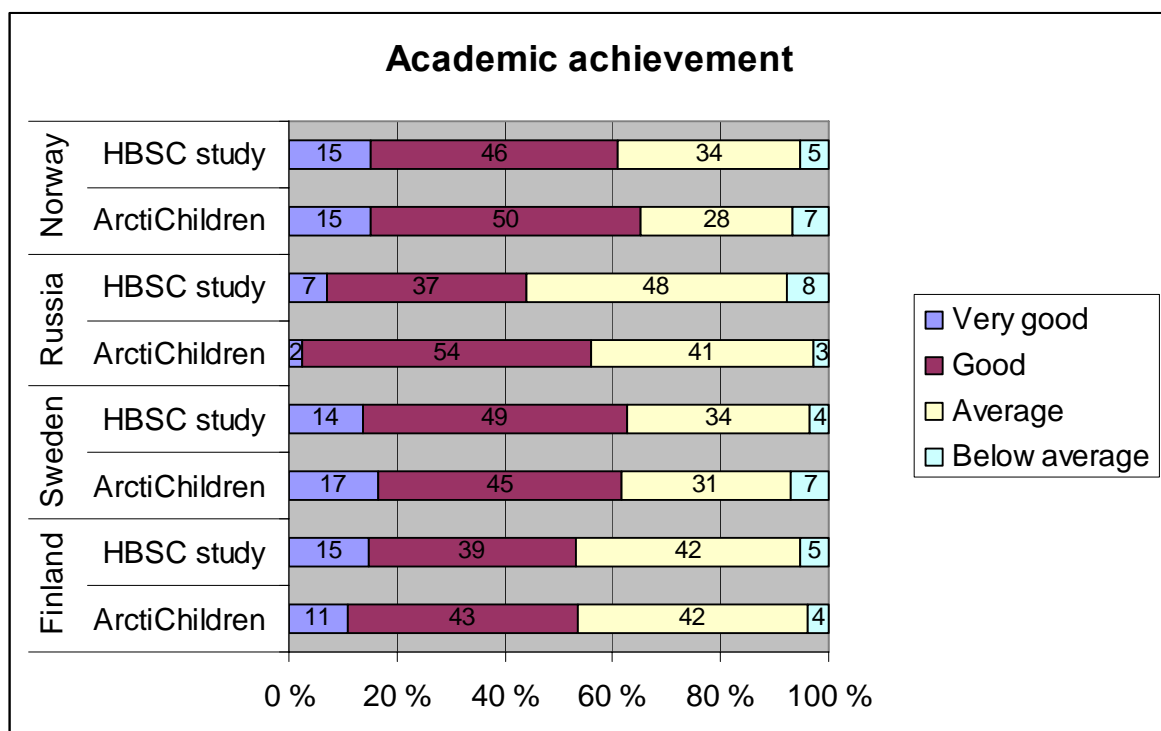


Figure 7 Academic achievement comparison

According to pupils' own responses their academic achievement was on a good level; most of the pupils rated their own school performance as being better than average. When cross tabulating the academic achievement with countries, the differences were significant in both data sets (see Attachments 5 a-c). The academic achievement was rated as being the highest in the Swedish AC data where 17% of the pupils rated their achievement as being very good, the lowest rating was in the Russian AC data where only 2% rated their achievement as very good. The only significant difference in the pupils' academic achievement between the AC and HBSC data sets was in Russia, where the NW Russian pupils reported better achievement. The only significant gender difference was found in the Russian HBSC data, where the girls reported their school performance as being better compared to the boys ($\chi^2(3)=61.718$, $p<.001$). Otherwise no significant difference between the genders occurred.

6.1.3 Health related factors

Health has for the most part been separated from other aspects of school life (Konu & Rimpelä, 2002). Yet, health services have been available for schoolchildren for a long time, at least in Western societies. According to Allardt (1980) health is a resource and an essential part of well-being and he placed it in the having category in the general well-being model. Konu and Rimpelä (2002) placed health in a separate category because they saw it as a personal state rather than part of the having category. Health is a wide concept and it is sometimes difficult to say whether well-being is part of health or vice versa. Here, health is understood to be in accordance with Allardt, that is, it is included in the having category.

The WHO defines health as a resource for living a productive life (Ottawa Charter for Health Promotion, 2006). Poor health may significantly impair functional ability and prevent the achievement of life goals. In modern society, some of the most challenging health problems – such as musculoskeletal pain, chronic fatigue and depression – are related to functional impairment rather than to defined diseases. Multiple recurrent health complaints may represent a significantly heavier burden on daily functional ability and well-being

than single symptoms (Välimaa & Danielson, 2004).

Subjective health and well-being was measured by three types of subjective indicators, those were psychosomatic symptoms, substance use and self-related health ratings. The variables were based on the HBSC mandatory questionnaire and they were m30 *Smoking*, m34 *Been drunk*, m100 *Self rated health* and eight variables of psychosomatic symptoms m93–m99 *Headache*, *Stomach-ache*, *Back ache*, *Feeling low*, *Irritability or Bad temper*, *Feeling nervous*, *Difficulties in sleeping* and *Feeling dizzy*.

In substance use it was noticeable that smoking and drunken experiences were the most common among the Finnish pupils in the HBSC data, but in the AC data it was most common among Russian pupils. Among the Finnish pupils in the HBSC data, over half of the 15-year-olds reported having been drunk more than two times. When in the northern part of Finland 36% of the girls and 23% of the boys reported two or more severe drunken experiences. Swedish pupils reported the fewest experiences both in smoking and alcohol usage in both the AC and HBSC data. Comparing the results of the Arctic Children data to the HBSC data shows differences in the results of 15-year-old pupils. The comparison is presented in Table 11.

Table 11 Comparison of the substance use of 15-year-olds

COUNTRY /STUDY	SMOKING > ONCE A WEEK		SMOKING > ONCE A WEEK		BEEN DRUNK > TWO TIMES		BEEN DRUNK> TWO TIMES	
	AC %		HBSC %		AC %		HBSC %	
	BOY/GIRL		BOY/GIRL		BOY/GIRL		BOY/GIRL	
Russia	41.1	38.8	27.4	18.5	35.0	38.8	39.1	29.4
Finland	16.2	27.9	28.3	32.2	23.1	36.0	53.3	55.7
Sweden	7.5	8.3	11.1	19.0	7.5	14.5	39.8	38.1
Norway	20.0	31.0	20.1	26.6	18.0	31.0	38.5	40.7

Pupils in the north appeared to smoke and drink less than pupils in general in all the countries except Russia. The drunken experiences were fewer in northern Finland ($\chi^2(4)=20.557$, $p<.001$) and in northern Sweden ($\chi^2(4)=25.272$, $p<.001$) and severe in NW Russia

($\chi^2(4)=68.698$, $p<.001$). In northern Finland and Norway the girls smoked more than the boys, but not with statistically significant difference. When interpreting these results it is needed to remember the half-a-year difference in the average age between the AC and HBSC data sets; respondents from the HBSC data being older at the of data collection.

In addressing psychosomatic symptoms, inquiries were made about the eight different subjective health complaints mentioned earlier. Response options were reversed as: 1) *Rarely or never*, 2) *About every month* 3) *About every week*, 4) *More than once a week* and 5) *About every day*. These variables were summed in one new variable, which could have counts between 8 and 40, where the bigger mean value had a meaning of more common suffering of the psychosomatic symptoms. When comparing the summed variable of all these symptoms it seemed that the Russian pupils suffered the least from psychosomatic health complaints in both data sets (see Figure 8).

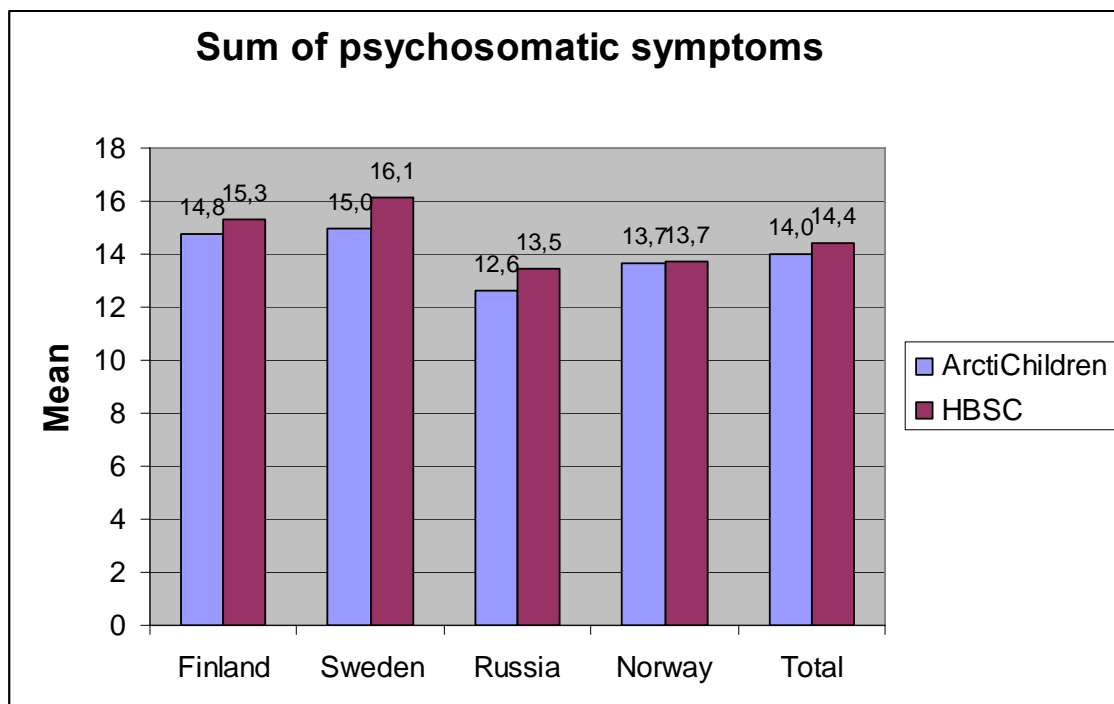


Figure 8 Psychosomatic symptoms comparison

There was a small, but statistically significant mean difference ($F=4.91$, $p<.05$) on the summed psychosomatic symptoms between the AC (mean 14.0) and HBSC (mean 14.4) data, which means that in general the pupils were suffering a little less from psychosomatic

symptoms in the north than in these countries in general (see Attachments 6a,b). There were also significant differences between genders in the both data sets. The girls reported more psychosomatic health complaints than the boys, AC girls' mean was 15.3 and boys' mean 12.7 and the difference according to F-test ($F=61.58$, $p<.001$). HBSC girls' mean was 15.6 and boys' mean 13.1 and test values $F=769.81$, $p<.001$ (also see attachment 6c). Multiple recurrences of psychosomatic symptoms were also measured. Multiple recurrent health complaints may represent a significantly heavier burden on daily functional ability and well-being than single symptoms (Välimaa & Danielson, 2004).

The amount of pupils who reported having two or more psychosomatic symptoms more than once a week was examined. This was done by computing a new variable in the SPSS program. The variables were selected from the aforementioned eight psychosomatic health complaint variables by computing those responses to the categories *1) About every day* or *2) More than once a week* on two or more variables. When cross tabulating the recurrence of multiple psychosomatic health complaints of the 15-year-olds it appeared that in the AC study the Norwegian girls (45%) had more of these complaints than in the HBSC study and Russian girls (33%) had less than in the HBSC study (Figure 9). The amount of psychosomatic complaints was compared by the amount of responses for suffering the symptoms more than once a week. There was no statistically significant mean difference between the two data sets ($F=3.23$, $p=.07$, n. s.).

In the amount of psychosomatic complaints there was significant mean difference ($p<.001$) between the boys and the girls in both data sets, where the girls had these complaints more often (see Attachments 6d-f). From Figure 9 it can be interpreted that generally almost 40% of the girls suffered multiple recurrent symptoms weekly, where among boys the percentage was around 20%. This is in line with the results from the former HBSC study (see Välimaa, 2004), according to which, the amount of girls suffering from symptoms has increased to almost double in last twenty years, when at the same time the amount of boys has remained steady. When compared, the multiple recurrences of the symptoms between the countries showed that the Swedish pupils reported suffering them the most often in both

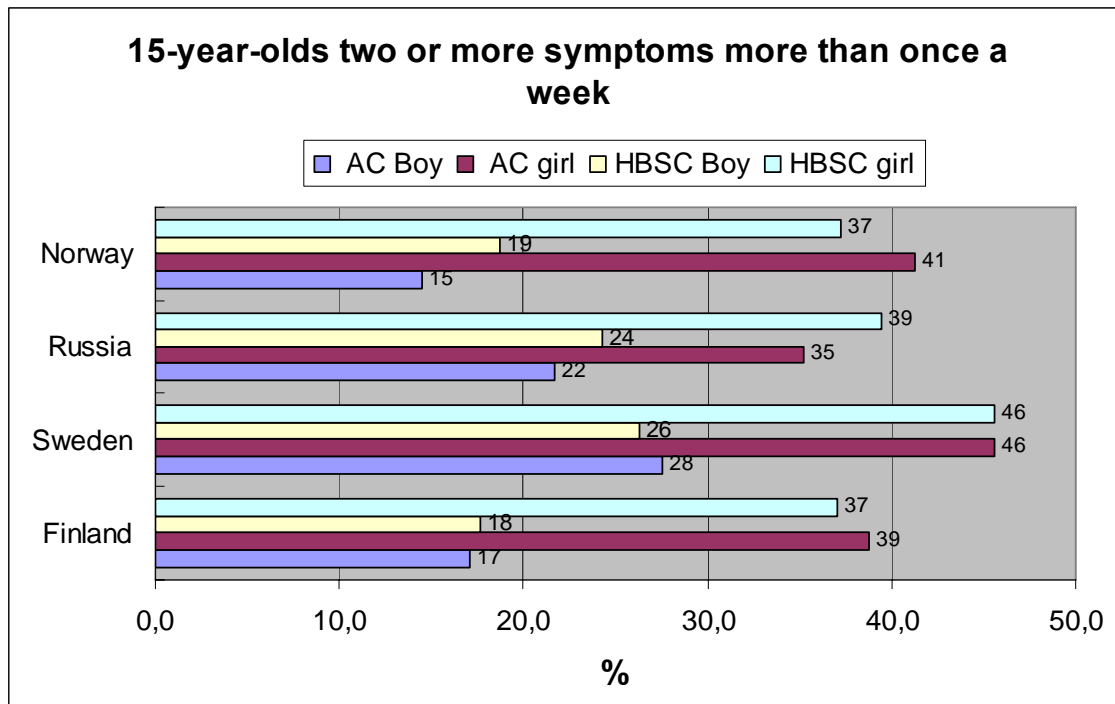


Figure 9 15-year-old pupils' multiple recurrent symptoms.

data sets, thus there were significant differences in the mean comparison based on the analysis of variance only in the HBSC data (see attachments 6a-d).

In measuring self-rated health, the Russian pupils rated their health as most poor in both data sets (Figure 10). The question was asked in the mandatory variable m100: *What do you say your health is?: 1) Poor 2) Fair 3) Good and 4) Excellent*. There were no differences in the self-rated health between the AC and HBSC data sets, when compared with cross tabulations and Chi Square test. In general, health was reported as being the highest in Sweden, where over 40% of the pupils rated their health to be excellent, followed by Norway, Finland and Russia respectively. The differences between the countries were statistically significant ($p < .001$) in both data sets (see Attachment 7).

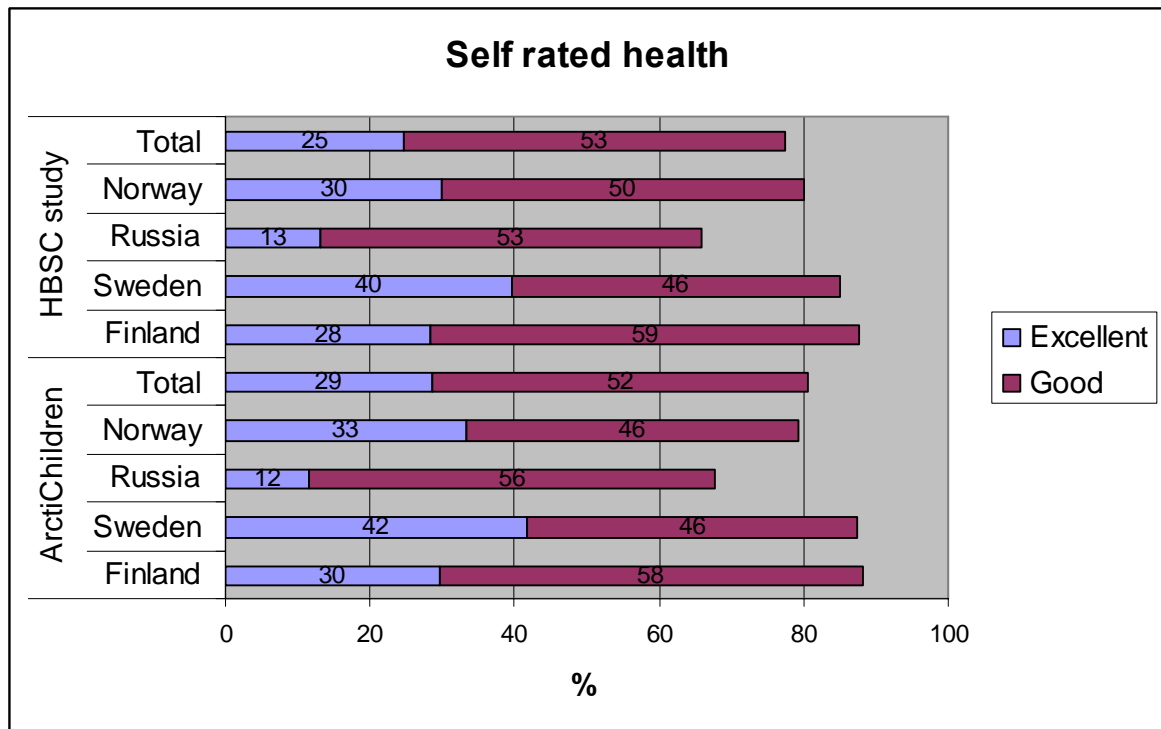


Figure 10 Self-rated health

6.2 Comparison of the Loving Factors

This chapter presents the results of the well-being factors belonging to the loving category. The loving factors represent the social relations and interaction of the schoolchildren; they are divided into two parts; *Social relations* and *Peer support and bullying*.

6.2.1 Social relations

Social relations were analysed based on the pupils' own reports. The analysed variables concerned the time and ways the pupils were in contact with their friends/schoolmates. Furthermore, the amount of friends was examined because a lack of friends can naturally lead to loneliness. Children understand the emotion of loneliness to be unpleasant (Qualter, 2003). The loneliness in this study was related to peer relations, but there can be several other interpretations of loneliness (Woodward & Queen, 1988). Peer-related loneliness has been defined as a negative emotion in discrepancy between a desired

and achieved amount of social contacts, also prolonged loneliness has been shown to lead to internal problems such as depression (Goossens & Beyers, 2002).

When asked about how many female or male friends the pupils had, it appeared that there were significant differences between the countries. This was measured by summing two variables m87 *How many close male friends do you have?* and m88 *How many close female friends do you have?* The response options were 1) none 2) one 3) two and 4) three or more. This sum was divided by two. In the ArctiChildren data the Finnish pupils had the least friends of all countries, the mean was 2.97 (SD=0.82). In Sweden the mean was 3.27 (SD=0.75), in Russia 3.30 (SD=0.78) and in Norway 3.56 (SD=0.67) (see Figure 10). The difference was significant ($p<.001$) between Finland and all other countries, also there were significant differences ($p<.001$) between Norway and all other countries according to analysis of variance and F-tests. Between the HBSC and AC data there was significant difference ($p<.001$) in Sweden, and ($p<.01$) in Russia in the amount of friends between the north and countries in general (see Attachments 8,9 and 10), but not generally between the data sets.

The time spent with friends was measured in a variable m89: *Evenings with friends*. It was asked: *How many evenings a week do you usually spend out with your friends?* The response options were from 0 to 7. It appeared that in Russia the pupils spent the most, on average 5.08 (SD=2.37), evenings a week out with their friends. Based on AC data the differences were significant ($p<.001$) between all other countries except between Russia and Finland according to One Way Analysis of Variance. In northern Norway the pupils spent on average 4.24 (SD=2.17) and in northern Finland 4.17 (SD=2.28) evenings with their friends, in northern Sweden the pupils spent the least 2.95 (SD=2.14), evenings with their friends. In the AC data set the pupils spent more ($F=80.174$, $p<.001$) time (mean 4.11) with their friends in the evenings compared to the pupils in the HBSC data set (mean 3.45). The differences were similar also between the data sets in each country. (See Attachments 8,9 and 10)

The pupils were also asked about their E-communication⁷ with their friends. E-communication was asked with question m91: *How often do you talk to your friends on the phone or send them text or e-mail messages?* The response options were 1) *Rarely or never*, 2) *1 or 2 days a week*, 3) *3 or 4 days a week* 4) *5 or 6 days a week* and 5) *Every day*. In the AC data the Norwegian (mean 4.06, SD=1.17) and Russian (mean 4.06 SD=1.44) pupils were the most active using e-communication, they were in contact with their friends by e-communication on average 4-5 days a week. In Finland the mean was 3.55 (SD=1.34) and in Sweden 3.41 (SD=1.33) (see Figure 11).

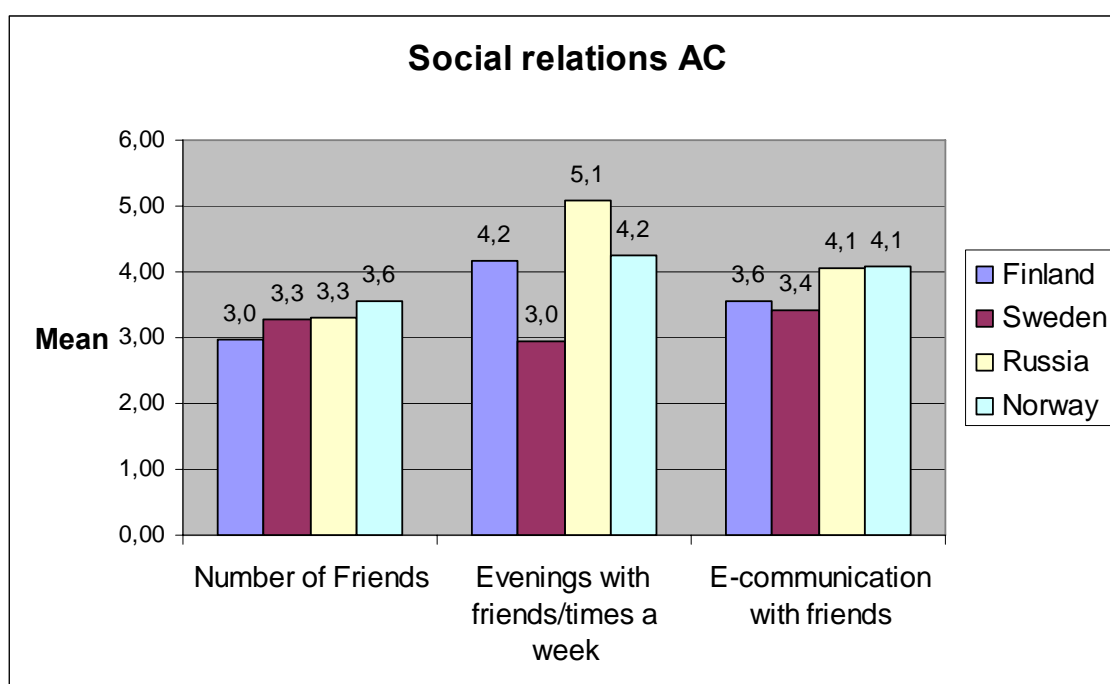


Figure 11 Social relations in the ArctiChildren data

The differences in the AC data were significant ($p < .001$) between all the countries except between Sweden and Finland and between Russia and Norway. Between AC and HBSC data sets there were no significant differences in the activities in the e-communication in general, only between Russian data sets was there significant mean difference $F = 16.412$ ($p < .001$) so that pupils in the Russian north were more active (mean 4.01) in e-communication than pupils in the

⁷ E-communication includes contact by telephone, e-mail messages by computer or text messages by cellular phone.

Russian national data (mean 3.67). The mean differences were tested by One-way analysis of variance and F-test. There was also a small group (less than two per cent) of pupils in each country who had no contacts with friends or had no close friends at all. There were no significant mean differences between the countries or data sets on the size of this group.

6.2.2 Peer bullying and peer support

Peer bullying at schools is not an exceptional or marginal issue, unfortunately it is a common phenomena in every school almost all over the world (Salmivalli, 2003). Peer bullying has not shown any signs of decreasing since systematic research on the topic started in the beginning of 1970s (Olweus, 1993; Salmivalli, 2003). Being bullied at school two, three times or more times during the previous couple of months is a measure of repeated victimisation, indicative of young people at higher risk (M.Craig & Harel, 2004). Depending on the measure, the percentage of pupils being bullied in comprehensive schools of the Nordic countries is between five and fifteen (Salmivalli, 2003). For example, according to a Finnish school health study 9-10% of 15-year-old boys and 6-7% of girls had been bullied once a week or more often (Luopa et al., 2005).

The questions on bullying used in the HBSC survey were those developed by professor Dan Olweus. A definition of bullying preceded the questions:

We say a student is being bullied when another student, or a group of students, says or does nasty and unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she doesn't like, or when [he or she is] deliberately left out of things. But it is not bullying when two students of about the same strength quarrel or fight. It is also not bullying when the teasing is done in a friendly and playful way. (M.Craig & Harel, 2004, p. 133)

This comprehensive definition includes the concept of intentional

exclusion as a form of bullying and helps to reduce as far as possible the challenge of translation, particularly into languages with no specific word to describe bullying. Two questions followed the definition, one on being bullied and one on bullying others: 1. *How often have you been bullied at school in the past couple of months?* 2. *How often have you taken part in bullying another student(s) at school in the past couple of months?* The response options for both were almost the same: 1) I haven't been bullied (or bullied another student(s)) at school in the past couple of months, 2) It has only happened once or twice, 3) two or three times a month, 4) About once a week, 5) Several times a week (see Figure 12)

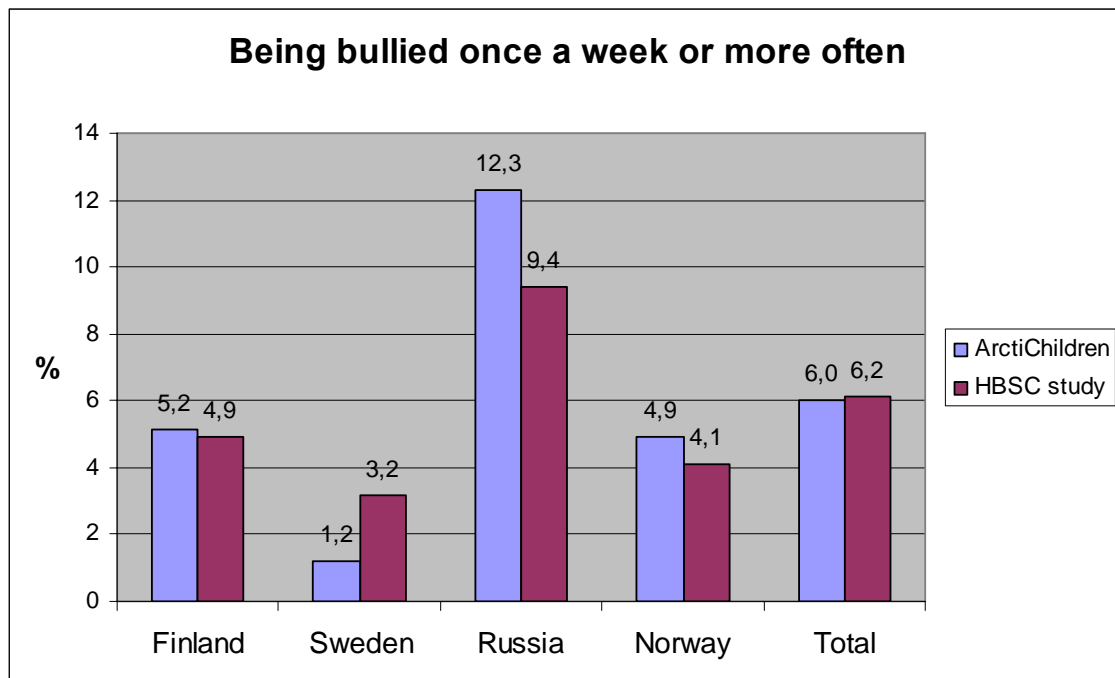


Figure 12 Bullying recurrence comparison

Figure 12 only shows the being bullied results, the bullying others followed somewhat similar paths. In bullying, the Swedish pupils had the most favourable results. The NW Russian pupils bullied each other the most often. Only 1.2% of the Swedish pupils had been bullied in the last couple of months, once a week or more often according to the AC data. In contrast, 12.3% of NW Russian pupils and 5.2% of northern Finnish pupils had been bullied once a week or more often. In northern Norway 4.9% of all the pupils had been bullied once a week or more often. In general, there was no significant mean

difference in the amount of bullying between boys and girls. There were weak but statistically significant differences between the AC and HBSC data sets in Sweden ($\chi^2(4)=10.554$, $p<.05$) and in Finland ($\chi^2(4)=10.365$, $p<.05$), but not in the other countries or between the data sets in general. The main and statistically significant ($p<.001$) differences occurred between all the countries in both data sets (also see Attachment 11a-c).

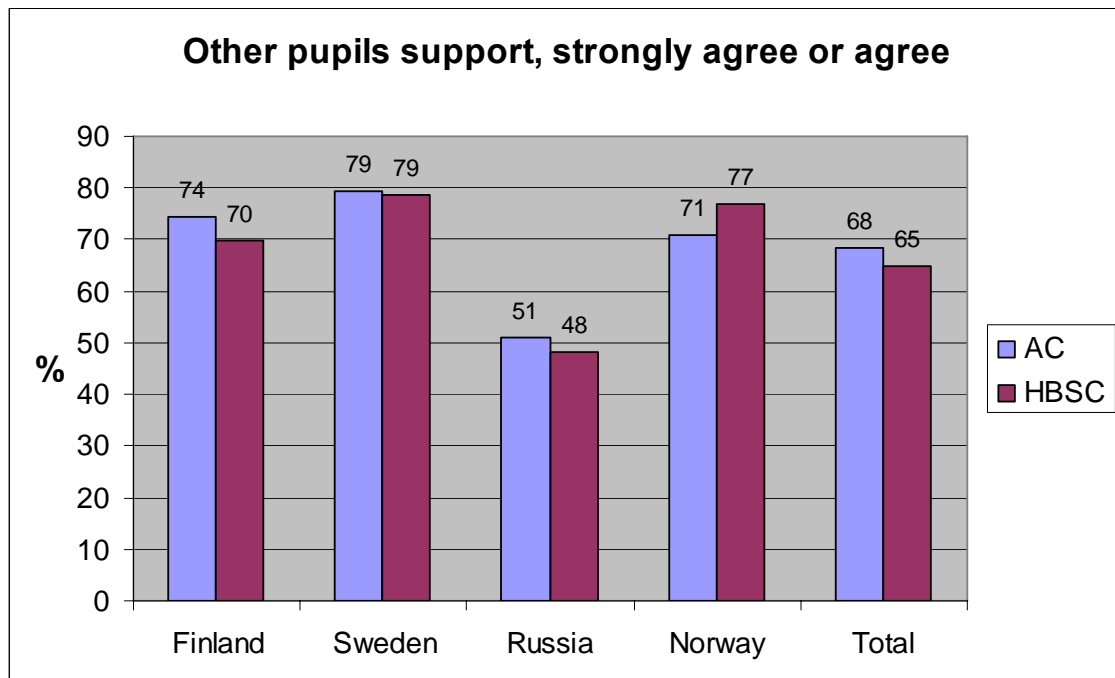


Figure 13 Peer support

Peer support has been seen as a positive factor in schoolchildren's psychosocial well-being; it has an impact on school atmosphere and pupils' academic achievement (AWARTANI et al., 2008; Samdal, Wold, & Bronis, 1999). The other pupils' support for school work was studied by a sum of variables m104-106: *Students being together*, *Students kind and helpful*, *Students accept me*. The scaling was: 1) *Strongly agree*, 2) *Agree*, 3) *Neither nor*, 4) *Disagree* and 5) *Strongly disagree*. The mean differences were counted by F-test, which showed there was a significant mean difference ($F=11.95$, $p<.001$) between the two data sets (see attachment 12d-e). The pupils in the north (mean 6.63) reported getting more support from their schoolmates than in the countries in general (mean 6.90) (Figure 13). The sums were also counted on rounded variables, divided on the original scale (1-5), and

analysed in cross tabulations. The Russian pupils reported getting less support from their schoolmates both in the ArctiChildren and HBSC data, according to cross tabulations and χ^2 tests (see Attachments 12 a-c). At least 70% of the Finnish, Norwegian and Swedish pupils agreed that they got support from other pupils for their school work. About 50% of the Russian pupils also agreed with that.

School atmosphere was also possible to measure and compare, but only in the AC data and between all the other countries except Russia. Due to the importance of this variable for this whole study the results of that comparison will be presented here. The variable *School atmosphere* was summed from three variables Si 4-6: *School is a nice place to be*; *Feel I belong*; *Feel safe*. The scale was 1) *strongly agree*, 2) *agree*, 3) *neither nor*, 4) *disagree*, 5) *strongly disagree*. The sums were recoded into 1=low (11–15), 2=medium (7–10.99) and 3=high (3–6.99). When examining with cross tabulations there were significant differences between the countries ($\chi^2(4)=19.041$, $p<.001$), (also see Attachments 13a-b). As can be seen in Figure 14, Finnish pupils gave the least ratings for high atmosphere and Norwegian pupils the most ratings for low atmosphere. The ratings for the highest atmosphere were the most severe in northern Sweden, where 52% of the pupils' responses for the atmosphere were counted as high.

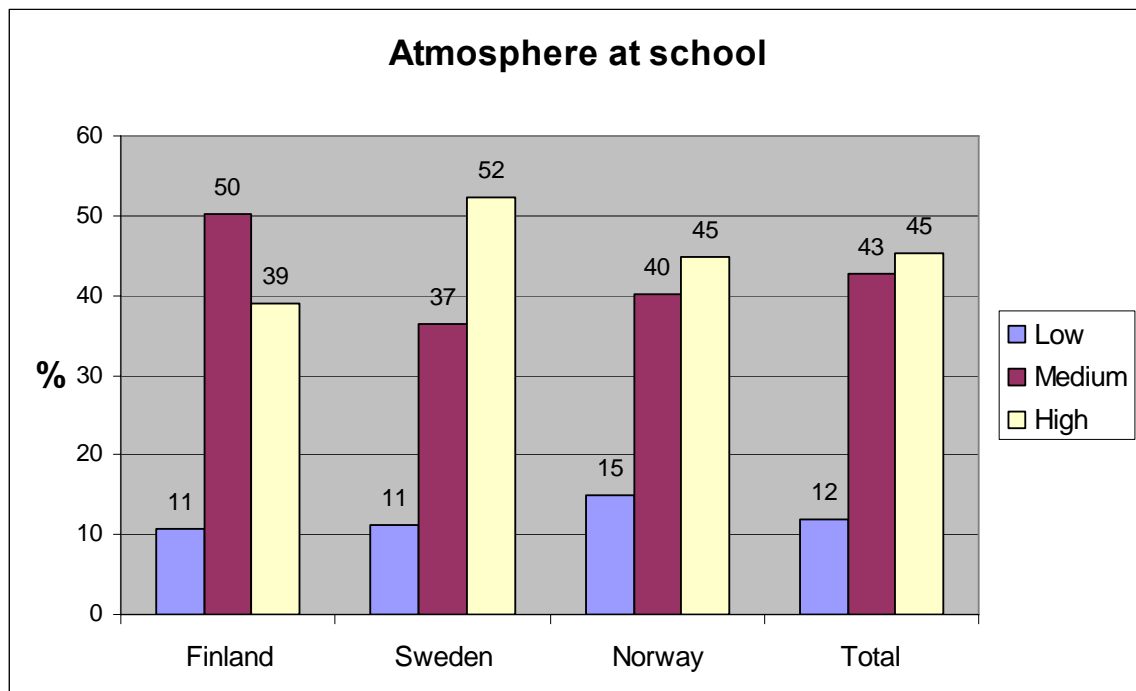


Figure 14 Atmosphere at school AC-data

6.3 Comparison of the Being Factors

The being factors are supposed to measure the well-being of the individual at the most personal and deepest level. The being factors included the indicators of the people's possibilities in terms of personal growth and relations to society. The being factors were represented in the variables measuring school satisfaction, schoolwork causing pressure and general life satisfaction. School satisfaction has been found to have an impact on pupils' psychosocial health (Berntsson & Gustafsson, 2000; Berntsson et al., 2001), and general well-being (Engels et al., 2004)

The pupils' school satisfaction was measured in the variable m103: *How much do you like going to school?* The scale was 1) *I like a lot*, 2) *I like a bit*, 3) *I do not like* and 4) *I do not like at all*. Between HBSC and AC data sets there was no significant difference in general, only significant difference ($p < .05$) was found in the Swedish data, where the pupils in the AC data were less satisfied with school than pupils in the HBSC data.

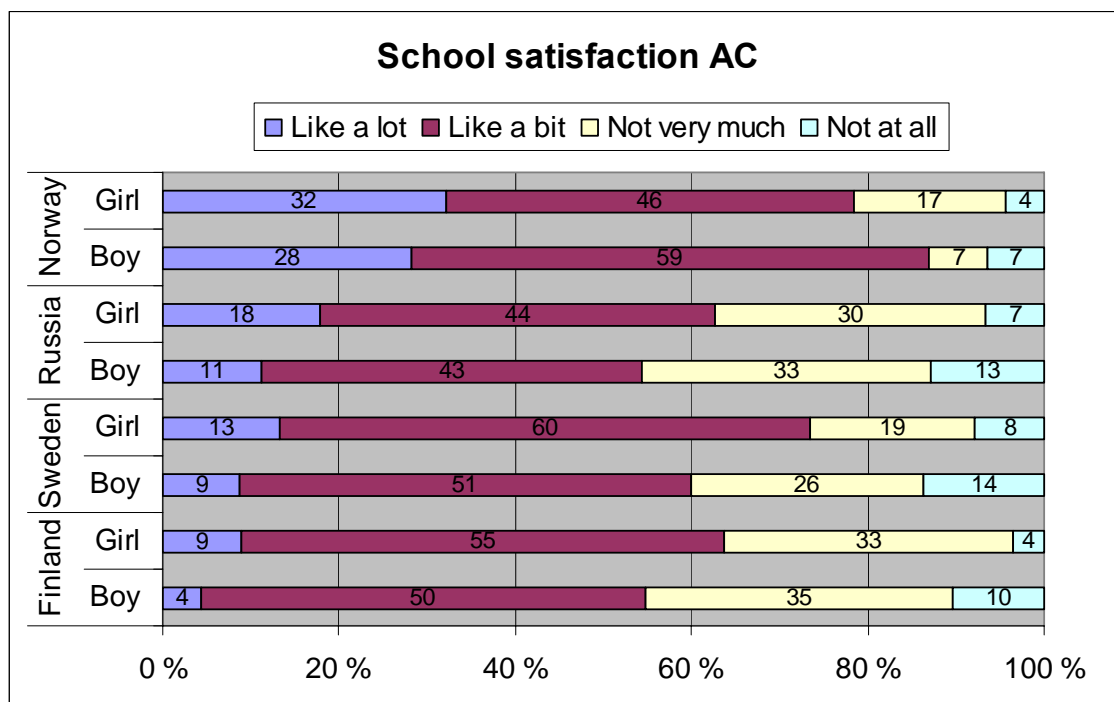


Figure 15 School satisfaction by country and gender in the ArctiChildren data

The differences occurred mainly between the countries. As seen in

Figure 15, school satisfaction was weakest in Finland, which means that almost half of the Finnish pupils did not like going to school. The Norwegian pupils were the most satisfied with their school. According to cross tabulations and χ^2 tests there were significant differences between the pupils' school satisfaction between the countries both in the AC and HBSC data set (see Attachments 14a-e). The school satisfaction was on the highest level in Norway, where over 30% of the pupils liked school a lot in both data sets. In contrast only 6-7% of the Finnish pupils liked school a lot. There was also a significant difference between genders in school satisfaction of the both data sets (AC $p < .01$, HBSC $p < .001$). In every country and both data sets the girls were more satisfied with school than the boys (Figures 15 and 16). But it is recognisable that the Norwegian boys were still a lot more satisfied to school when compared with the girls from the rest of the countries.

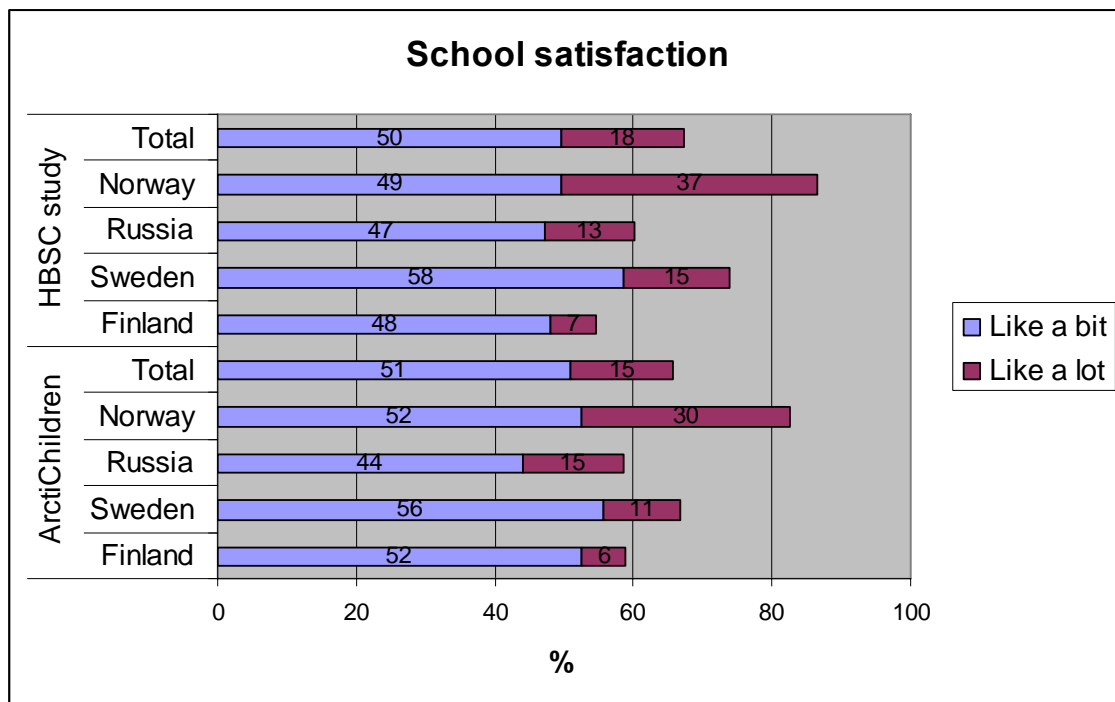


Figure 16 School satisfaction by country and data

The pressure that schoolwork causes has been found to have a significant role in pupils' school satisfaction and well-being. The pressure that exceeds the pupils' capability is likely to be negative and cause failure, which could influence motivation and achievement. If pupils are successful in achieving their goals, they feel happy,

satisfied and pleased, if opposite, they feel sad, guilty and shamed (Rajala, 2008). In an earlier study by Ahonen (2007) the pupils who had the lowest ratings in academic achievement, reported that school caused the most pressure, whereas those pupils who performed well in school did not feel they were being pressured by schoolwork at all. According to the HBSC 2001/02 study, pressure was higher among older pupils and girls and pressure was connected to and reduced by peer and teacher support (Samdal et al., 2004). Pupils learn more effectively if they are happy with their work, believe in themselves, like their teachers and feel their school supports them (Weare, 2000). All this leads to the question of support: how could school support pupils so they do not feel that schoolwork causes too much pressure for them?

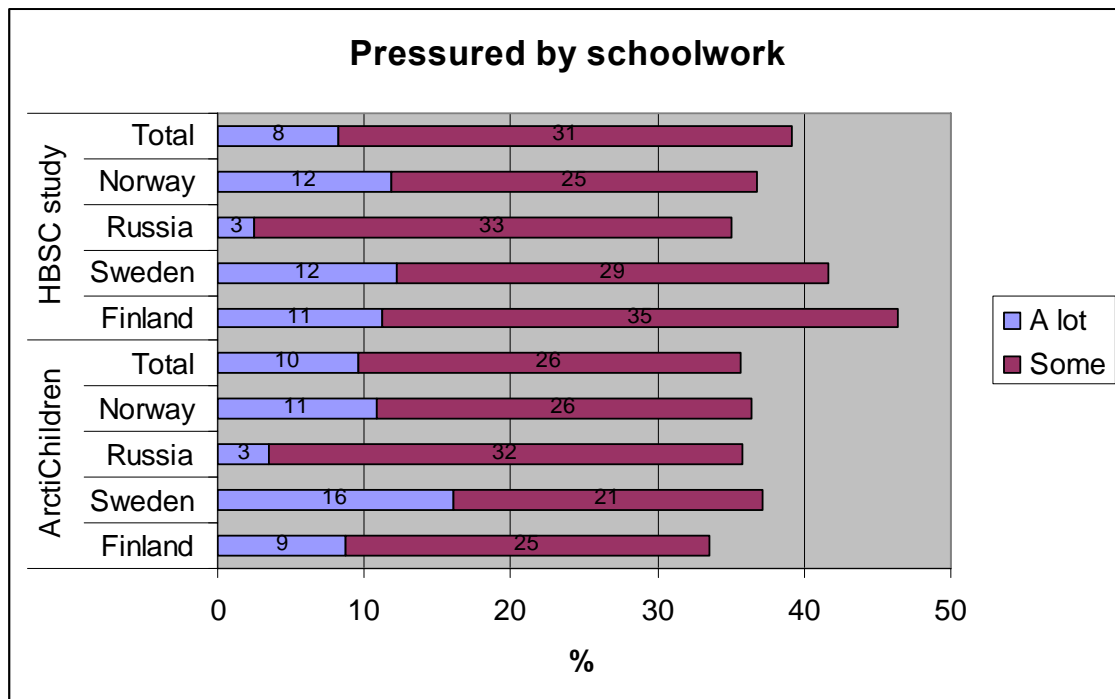


Figure 17 Pressured by schoolwork

The pressure schoolwork caused for pupils was asked in the questionnaire in variable m107. *How pressured do you feel by the schoolwork you have to do?* The response options were 1) *Not at all* 2) *A little* 3) *Some* and 4) *A lot*. In northern Sweden 16%, Norway 11% and in Finland 9% of pupils felt school caused a lot of pressure for them, whereas in NW Russia only about 3% reported this (see Figure 17). The pressure pupils felt schoolwork caused for them did not differ

as much between the countries as did school satisfaction, but there were significant differences in the pressure schoolwork caused between the countries both in AC data ($\chi^2(9)=45.81$, $p<.001$) and HBSC data ($\chi^2(9)=992.04$, $p<.001$) (see Attachments 15a,b). Between the two data sets there was no significant difference.

The life satisfaction indicator provided a direct assessment of the extent to which young people can fulfil their developmental action tasks related to peers, parents and education. In young people, social relationships with parents/peers have been found to be among the most important correlates of life satisfaction (Välimaa & Danielson, 2004). Life satisfaction has been a topic in psychological research, and it is more widely related to the studies and measures of pupils' subjective well-being SWB and Perceived Quality of Life (PQOL) studies (Huebner et al., 2004; Seligson, Huebner, & Valois, 2005). PQOL is part of subjective well-being and it refers to a persons' subjective evaluation of the degree to which his or her most important needs, goals and wishes have been fulfilled (Huebner et al., 2004). Subjective well-being is commonly discussed in terms of happiness, quality of life and life satisfaction (Seligson et al., 2005). Some studies suggest that even though life satisfaction is indirectly related to negative and positive affects, it should be examined separately from them (Diener, Suh, Lucas, & Smith, 1999). Individuals with a decreased level of life satisfaction have been found to be at higher risk of both social and psychological problems, therefore life satisfaction measures have displayed valuable predictive abilities in this respect (Seligson et al., 2005).

The life satisfaction indicator was derived from the measurement technique known as the Cantril Ladder, see Figure 18 (Välimaa & Danielson, 2004, p. 56). It has ten steps: the top of the ladder indicates the best possible life, and the bottom, the worst possible life. Young people were asked to indicate the step of the ladder at which they would place their lives at present.

m 101

Here is a picture of a ladder.

The top of the ladder '10' is the best possible life for you and the bottom '0' is the worst possible life for you.

In general, where on the ladder do you feel you stand at the moment?

Tick the box next to the number that best describes where you stand.

	10	Best possible life
	9	
	8	
	7	
	6	
	5	
	4	
	3	
	2	
	1	
	0	Worst possible life

SOURCE: Cantril, H. (1965). The pattern of human concern. Rutgers University Press.

Figure 18 Life satisfaction variable in the HBSC 2001/02 Questionnaire (Currie & Smith, 2001)

Comparing the mean values of life satisfaction (Figure 19) in all four countries revealed that life satisfaction was at a reasonably high level. Furthermore, pupils in the north were clearly more satisfied with their life than pupils in the countries in general. In Finland, life satisfaction was at the highest level, especially in the ArctiChildren data, where the mean was 8.15, followed by northern Sweden (7.67) then NW Russia (7.40) and northern Norway (7.36). There were significant mean differences ($p < .001$) in pupils' life satisfaction between Finland and all the other countries according to the AC data (see Attachment 17a-c). In general, the mean difference between AC and HBSC data was also significant ($F = 43.305$, $p < .001$), so that pupils in the north (mean 7.67) reported higher life satisfaction than the countries overall (7.25).

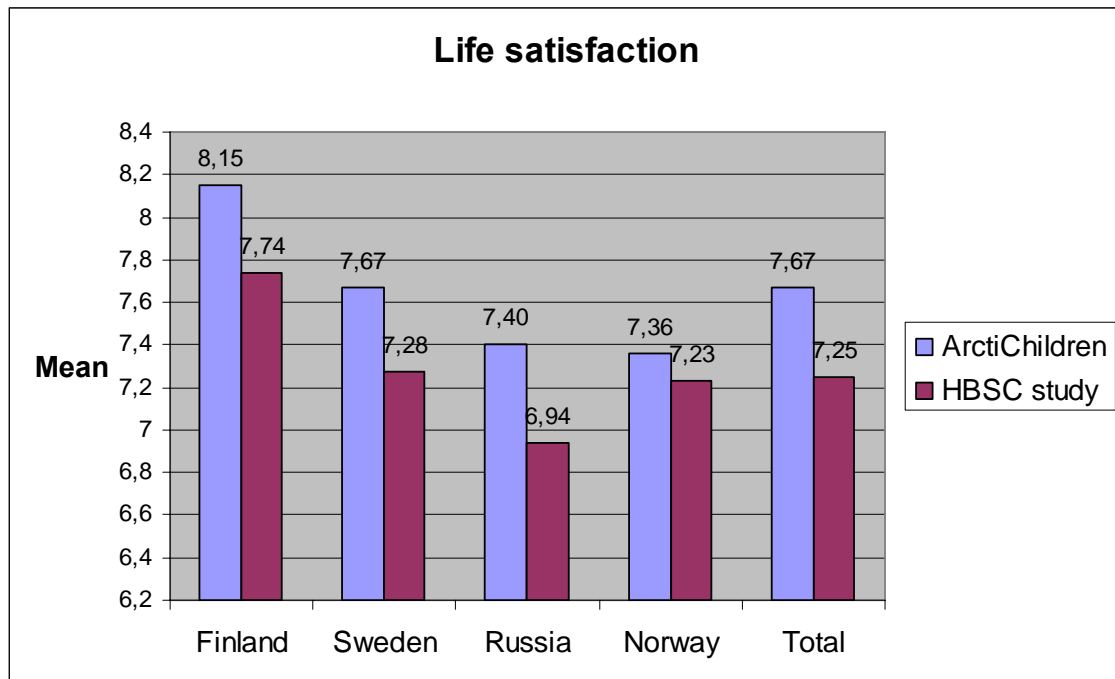


Figure 19 Life satisfaction comparison

When the common effect of the being factors in this study was examined, it could be noted that even though Finnish pupils were the least satisfied with school and felt pressured by schoolwork, they were the most satisfied with their life. All these variables, *Life satisfaction*, *School satisfaction* and *Schoolwork's pressure*, correlated weakly but significantly. Correlations varied in absolute values from 0.16 to 0.25*** in both data sets (see Attachment 16). This could tell about the interconnected relation around the measured elements of schoolwork and pupils' subjective well-being. They all have effects on each other and it is quite difficult to state which of these comes first, that is, what causes what.

6.4 Conclusions of the Findings from the Descriptive level Comparisons

The aim of the first two research questions was to find indicators of schoolchildren's psychosocial well-being in the Barents Region and to compare these indicators between the countries and the national WHO data. Next, an overview and conclusion of the findings based on the descriptive comparison is presented. The central findings from the

descriptive-level comparison are formulated in a few topics divided according to the analysed blocks of variables as follows.

6.4.1 Having factors

- The pupils' perceptions of their families being well-off were reported as being higher in the AC data compared to the HBSC data in the subjective measurements.
- Furthermore, most of the objective welfare measurements showed the pupils' families wealth being higher in the north when compared to the countries in general.
- Russian pupil's physical health was weakest in both data sets, but psychosomatic symptoms were more common among Finnish and Swedish pupils.
- The girls reported having weaker health and suffering more from psychosomatic symptoms. No differences between the AC and HBSC data were found.
- The pupils' perception of their academic achievement was rated as being at a good level in all the countries with girls' being higher than boys'. The achievement was at the highest level in Sweden and at the lowest in Russia.

Material welfare formed a great part of the having factors in the descriptive study. The material welfare indicators showed well-being to be at a considerably good level in the north, better than in the countries generally. A family's affluence alone did not explain the differences in subjective indicators of a pupil feeling their family to be well-off. Subjectively the Russian pupils rated their health to be at a similar level as their Norwegian neighbours but when measured by the objective indicators the Norwegians clearly had higher affluence. The comparison of the material welfare factors showed that the Swedish and Norwegian pupils had the best material conditions.

This is in line with the HBSC 2001/02 report where Norwegian pupils had the highest family affluence of all the studied 35 countries (Boyce & Dallago, 2004). In that study of family affluence Sweden was in 4th place, Finland in was 16th and the Russian Federation was in the second last, 34th, place. Comparing the ArctiChildren data with the

HBSC data did not show any major differences in the living conditions of the pupils living in the northern areas compared to the pupils in the country in general. The subjective ratings of the families' wealth did not give as clear a picture; the Norwegian pupils rated the feeling of their families' being well-off at the same level as the Russians. Likewise, Finnish pupils rated the feeling of their families' being well-off at the same level as Swedish pupils.

The subjective health was generally on a rather good level at least in the Nordic countries. The health was also rated as being better in the north than in the countries in general. The Russian pupils rated their health the lowest, but they did not suffer as much from psychosomatic symptoms as pupils from the other countries. The Swedish and Finnish girls reported suffering the most from psychosomatic symptoms. It can be assumed that the Russian pupils' health problems occur in more concrete sicknesses and not so much in psychosomatic complaints. In general the girls had more subjective health complaints than the boys. This is also a common result in most of the former studies (Luopa et al., 2005; Välimaa & Danielson, 2004).

This study revealed that quite a large percentage of pupils in the 8th grade (15-year-olds) had already used a lot of alcohol and tobacco. Generally, according to the HBSC data, the Finnish pupils had used the most, but according to AC data pupils from Northwest Russia had used more alcohol and tobacco than the others. Among daily smokers there were more girls than boys in every country but Russia. Likewise, drinking was more common among girls than among boys. This is a common trend in the substance use of 15-year-old adolescents (Godeau, Rahav, & Hublet, 2004). It is good to remember that several studies reveal that an early start of alcohol consumption increases the risk of problem-causing alcohol usage in adulthood (Pulkkinen, 2002). Moreover, the prevalence of substance use is connected with poorer academic performance (Tot et al., 2004).

The pupils' school performance was not rated from the teachers' perspective, but in the students' own opinion. Generally the pupils rated their school performance as being better than average. The Russian pupils' performance was lower than their Nordic neighbours. Academic achievement is related to school satisfaction and thus, more generally to subjective well-being (Samdal et al., 1999, 2004). Again, according to Samdal (2004) academic achievement is important for

pupils' present and future lives in terms of possibility to participate in democratic society. Academic achievement also has effects on pupils' well-being through the school characteristic referred to as instruction and knowledge acquisition, which were primarily effective for achievement but also affected pupils' well-being indicators (Opdenakker & Van Damme, 2000). The comparisons in this study showed that the differences in academic achievement between the studied countries did not follow the ratings on school satisfaction or general life satisfaction. Fries, Schmid and Hofer (2007) studied the value orientations role in the pupils' academic achievement and found them to be effective for both achievement and well-being, but they suggested that the values should be studied as results of a nation's culture as well as economical and political processes.

6.4.2 Loving factors

- The Russian pupils were the most active in social interaction with their friends and the Swedish pupils the least. Social interaction was also more common in the AC data.
- The pupils gave good support for each others' schoolwork, it was weakest in Russia.
- Bullying was the most common in Russia, and least common in Sweden.

The social relations of the pupils, which belongs to the loving factors, were compared by studying the number of friends and the time the pupils spent with their friends. Usually children understand the emotion of loneliness to be unpleasant (Qualter, 2003). Generally the girls had less social contacts than the boys. The Russian and Norwegian pupils reported spending most of their free time with their friends, and they also communicated with their mates the most out of the studied countries. Swedish pupils reported spending the least time with their friends. The results for e-communication were similar. Comparing the ArctiChildren and HBSC data sets showed that the pupils in the north spent more time with their friends than pupils in these countries generally.

Peer bullying was a much more common problem in Russia than elsewhere. In Sweden the pupils bullied each other the least. This is a good result for Swedish schools, even though the teachers in Sweden see bullying as one of the most serious problems in their schools (Forsman 2003; 2006). Bullying was also about as common among boys and girls. Bullying is a serious problem and the consequences for victims of bullying can be severe; for example, increase in depression, ideas of suicide, loneliness, and lower self-esteem and grades. This is where something can and should be done, as there are available effective programs and successful interventions against bullying. One example of an effective intervention is the Olweus Bullying Preventing Program (Olweus, 1993).

The Olweus anti-bullying programme is of Swedish-Norwegian origin and has been widely used in Swedish schools. The programme's potential is apparent from looking at the figures for the amount of bullying in these countries. Even so, the Swedish teachers see bullying as the biggest problems in their schools. In Finnish schools an anti-bullying programme is finally starting. It is called *KiVa Koulu* (Nice School) and is organised by The Finnish Ministry of Education and Turku University and directed by Professor Kristiina Salmivalli (see Kivakoulu.fi, 2008). The *KiVa Koulu* programme, with its specially planned lessons, themes and games is intended to be put into practice in every Finnish school in year 2009. In Russia the bullying situation was the worst, but so far there has been no information about how the bullying problem has been reacted to in the Russian schools. According to this study there is a clear need for a response; an anti-bullying effort is more than needed in Russian schools as soon as possible.

Peer support for schoolwork was measured as a part of the loving factors. It appeared that generally pupils felt that pupils were supporting each other very well. In Finland, Sweden and Norway over 70% of the pupils reported getting support and acceptance from other pupils in both data sets. The Russian pupils reported getting less support, when about 50% reported being supported by peer pupils. There was also a difference between AC and HBSC data sets in that pupils in the north reported getting more support than in the countries generally. The peer support for pupils' schoolwork was in line with the bullying. Even though the pupils generally felt they got a lot of

support from their schoolmates, the situation in Russia was a lot weaker compared to the Nordic countries. Only about half of the Russian pupils agreed that they got support from other pupils. This result together with the high amount of bullying gives a reason for serious discussion about the social climate in the Russian classrooms.

6.4.3 Being factors:

- The Norwegian pupils reported being most satisfied and the Finnish pupils least satisfied with school.
- Russian pupils reported school causing the least pressure in both data sets.
- Life satisfaction was at a reasonably high level in all the countries and in both data sets. The pupils in the AC data reported higher life satisfaction than pupils in the HBSC data. The northern Finnish pupils reported the highest life satisfaction of all and the Russian HBSC pupils the lowest.

The being factors were measured through pupils' satisfaction with life and school and in the pressure that schoolwork caused them. The Norwegian pupils reported being the most satisfied and the Finnish pupils the least satisfied with school. The girls were more satisfied with school than the boys in every country and both data sets. Norway was in this sense an interesting exception; school satisfaction was at the highest level and also most of the boys were satisfied with school in both data sets.

Life satisfaction was at a reasonably high level in all the countries and in both data sets. The pupils in the AC data reported higher life satisfaction than pupils in the HBSC data. Pupils in the north reported higher life satisfaction in all the countries. The results of the life satisfaction comparison showed that the Finnish pupils were most satisfied with their lives in both data sets. Previous research has shown that school satisfaction is connected to pupils' psychosocial health (Berntsson & Gustafsson, 2000; Berntsson et al., 2001) and general well-being (Engels et al., 2004), of which life satisfaction is a part. Low ratings attributed to school experiences and school satisfaction

have direct implications for pupils' well-being (Huebner et al., 2004; Seligson et al., 2005). This brings out questions why Finnish pupils in both data sets seemed to be the most satisfied with their life even though they were the least satisfied with their school.

The comparison of life satisfaction in the HBSC 2001/02 study of 35 OECD countries indicated that Finland (2nd) was almost at the top level, while Sweden (21st) and Norway (24th) were about average and Russia (31st) was a lot below average (Currie & Smith, 2001). In this study it can be recognised that the northwest Russian pupils reported their life satisfaction clearly higher than in the HBSC study. Also the high level of the northern Finnish pupils' life satisfaction is recognisable.

The purpose of the descriptive-level comparative research was to gain knowledge about the state and factors of psychosocial well-being of the pupils in the comprehensive schools of the Barents Region. The idea was to analyse the different connotations between school-related factors, social life, material conditions and psychosocial well-being in different countries and areas. The presented findings give a general overview of the possible mediating factors of the pupils' psychosocial well-being. Furthermore, categorising the factors with Allardt's formulation gives a little more systematic picture of the otherwise difficult and multidimensional phenomena. The differences and similarities in the findings do not give a promise for any clear and direct statements; rather they open up some paths for discussion and questioning. According to De Vaus (2002) descriptive research plays a key role in highlighting the existence and extent of social problems, it can stimulate social action and provide a basis for social policy interventions. Descriptive level findings and comparisons do not give any exact answers, but they do provide a base for further analysis. The results could also help in understanding some of the differences occurring in the whole picture. What kind of affect can school have? What is the role of school in everyday work? How do school atmosphere, social relations and support from others affect pupils' psychosocial well-being? What kind of role do home and material conditions have? The next chapter is an attempt to find explanations for one side of pupils' psychosocial well-being.

7 EXPLANATORY FACTORS BEHIND SCHOOLCHILDRENS' PSYCHOSOCIAL WELL-BEING IN NORTHERN NORWAY, SWEDEN AND FINLAND AND NORTHWEST RUSSIA

7.1 Background and Explained Variables

This chapter aims to answer the two research questions:

3. By what factors can the indicators of psychosocial well-being be predicted and explained in each country according to AcrtiChildren data? (Specified: How do the factors predict the pupils' school satisfaction and life satisfaction?)
4. What are the similarities and differences in the predictors of psychosocial well-being of schoolchildren according to the explanatory models of the four countries?

In this study, two dependent variables are used in explaining psychosocial well-being, these are: *School satisfaction* and *Life satisfaction*. Depending on the data sets of the countries the dependent variables were measured either by using a single variable or by creating a summed variable of a few suitable variables. There are several reasons why psychosocial well-being was chosen to be defined through the two variables. This decision can be disputed as being too narrow or too simple a definition of the multidimensional phenomena of psychosocial well-being, but it is an essential question for the whole study and therefore it needs to be briefly justified. Indeed it can be argued that all the elements that have been included in this study have their own impact on the development of children's psychosocial well-being; but in trying to find some explanations, it was necessary to place some variables as dependent, those which could be predicted by other important variables neglected to pupils' well-being. After several trials and much consideration the decision ended in these two variables.

Life satisfaction as a dependent variable

Life satisfaction measurements have been used widely in psychometric studies. Usually life satisfaction has been measured as part of the more comprehensive subjective well-being (see Huebner et al., 2004; Malin & Linnakylä, 2001; Seligson et al., 2005). Rigby and Slee (1993) also used self-esteem, happiness and school satisfaction as dependent variables when measuring pupils' psychological well-being. Life satisfaction has frequently been identified with happiness and widely thought to have at least comparable value to happiness (Haybron, 2007). Haybron (ibid.) continues that happiness (or life satisfaction) is so closely aligned to well-being that we can for the most part use it as a standing for well-being.

In several psychological studies life satisfaction is described to be a relevant measure of the level of one's subjective well-being (Seligson et al., 2005). Life satisfaction is an indicator to measure young people's global evaluation of their lives. It provides a direct assessment of the extent to which young people can fulfil their developmental tasks related to peers, parents and education. In young people, social relationships with parents/peers are among the most important correlates of life satisfaction (Välimaa & Danielson, 2004).

Positive affect, negative affect, and life satisfaction are the three interrelated components that comprise subjective well-being according to Seligson et al. (2005). Comparatively, while affect is defined in terms of aggregated emotional responses, life satisfaction is expressed more cognitively. Life satisfaction, which may be indirectly influenced by affect, has been largely defined as an evaluative response to life as a whole or with reference to specific life domains, such as family, friends, or school (see Diener, 1984). Further support for the independence of life satisfaction and affect lies in the maintenance of separate correlates and distinct variation across time (Pavot & Diener, 1993). Based on the distinct nature of positive affect, negative affect and life satisfaction, it is suggested that each component of subjective well-being should be examined separately (Diener et al., 1999).

School satisfaction as a dependent variable

Based on former research, school satisfaction has been found to have an impact on pupils' psychosocial health (Berntsson & Gustafsson, 2000; Berntsson et al., 2001), general well-being (Engels et al., 2004) and academic achievement (Samdal et al., 1999). One remarkable finding was also made by Opdenakker and Van Damme (2000) who found that the school characteristics involving instruction and knowledge acquisition were also effective for some well-being indicators. Even though school satisfaction is only one narrow factor, the predictors of it most probably predict the pupils' psychosocial well-being in a wider perspective as well.

School satisfaction is close to work satisfaction and motivation, which is known to be an indicator of subjective well-being. In a study by Linnakylä and Malin (1997), pupils' plans for further education were closely related to their school satisfaction. They suggested that school should provide joyful learning experiences to prevent bad social and economic development in the future. The school environment or the psychosocial school climate has been studied mostly from the perspective of increasing young people's academic achievement, but is also of great interest from a health perspective. Young people who enjoy school are more likely to feel good about themselves and to report high subjective well-being (Samdal et al., 2004). Conversely, young people who do not enjoy school are more likely to perform unsatisfactorily, which may result in feelings of stress (ibid.).

7.2 Predictions and Explanations for the Psychosocial Well-being of Schoolchildren in Northern Norway

7.2.1 Analysis and interpretation

Analysed variables in the Norwegian data

In the Norwegian AC data there were several variables possible to compute into new well-defining summed variables for use in this study. The variables with α -coefficients are listed below. In this sense the Norwegian national questionnaire used in the AC study was well designed and highly psychosocially orientated. The summed variables were divided into *having*, *loving* and *being* categories, which are presented below, but also several single variables were used in the analysis. Some of the variables were reversed due to a different order of coding in the original questionnaire. Some reflection was done about which categories the used variables should be placed in. The variables *Scholarly competence*, *Social competence* and *Problem solving skills* were very important and did not occur in the data sets of the other countries, therefore the categorising was not obviously clear. Final placing got support in the regression model and it gave promise to place them as presented below.

Background and health variables (Having)

- *Psychosomatic symptoms* (11 variables, $\alpha = .82$) Headache; Stomach ache; Back ache; Feeling low; Irritability or bad temper; Feeling nervous; Difficulties in sleeping; Feeling dizzy; Neck and shoulder pain; Feeling exhausted; Being scared
- *Good living in local area* (7 variables $\alpha = .64$) In general I feel safe in the place where I live; Is the place where you live a good place to live?; People stop and talk to each other where I live; It is safe for children to play here; We can trust the people where I live; It is a good place to stay in leisure time; I can ask my neighbour for help if I need it

The variable *Good living in local area* represents very well the having category by describing the living surroundings from the pupil's own perspective. The internal consistence ($\alpha = .64$) was not very high, but enough to calculate a reliable summed variable. In the having category there were also several single variables used in the analyses. They were in the fields of economic wealth, health, and living conditions. They are all presented in the correlation matrix (Table 14).

In the field of social relationships (Loving)

- *School atmosphere* (3 variables $\alpha = .83$) School is a nice place to be; Feel I belong; Feel safe
- *Other pupils' support for schoolwork* (4 variables $\alpha = .80$) Students being together; Students kind and helpful, Students accept me; When somebody in my class has trouble there is always somebody trying to help
- *Time with friends* (3 variables $\alpha = .69$) After school with friends; Evenings with friends; E-communication with friends
- *Social Competence* (5 variables $\alpha = .72$) I find it difficult to find friends (reversed); I have many friends; It is difficult for others to like me (reversed), I am popular among the others; I feel like I am accepted by others

Social competence was a good variable for describing the social skills and social contacts from the pupils' own perspective. There were no similar variables in the data sets of the other countries. There were also single variables about peer bullying in this category.

In the field of 'means for self fulfilment' (Being), the following variables were computed:

- *School rules* (3 variables, $\alpha = .55$) Students take part in making rules; Rules are fair; Students treated too strictly (reversed)

- *Pupils' involvement* (4 variables, $\alpha = .60$) Pupils are allowed to work at their own speed in school; Pupils themselves choose other students to cooperate with; Pupils participate in deciding how to use the time in school; Pupils participate in deciding what kind of activities to work with
- *Teachers' support* (4 variables, $\alpha = .69$) Teacher encourage students express views; Teacher treats students fairly; Extra help from teacher when needed; Teacher interested in student
- *Pressured by schoolwork* (4 variables, $\alpha = .74$) I have too much homework; I find the schoolwork very difficult; I get tired of schoolwork; Pressured by schoolwork (reversed)
- *Problem solving skills* (9 variables, $\alpha = .77$) I manage to solve difficult problems; If someone is working against me I will find a way out; It is easy for me to hold onto my plans; I feel safe in solving unexpected problems; Because of my resources I feel safe in handling unexpected situations; I can solve most problems if I try; When I encounter a problem I usually find more than one solution; When I am in trouble I usually find a way out; I usually handle anything that happens it well.
- *Scholastic competence* (5 variables $\alpha = .70$) I feel as smart as the others at school; I finish homework very late (reversed); I am doing very well at school; I have troubles to find the right answers at school (reversed); I feel intelligent;

The being category got most of the summed variables in the Norwegian data. Some variables, like *Problem solving skills* and *Scholastic competence*, did not exist in the data sets of the other countries. Both these variables were placed in this category after a slight hesitation, because they do have elements that could also be seen as a resource in this study, similar to, for example, *Academic achievement*. In the end, the Problem solving skills and Scholastic competence variables were placed in the being category due to the element of development and self actualisation in both of them. Two of

the variables got slightly low α -values, *School rules* $\alpha = .55$ and *Pupils involvement* $\alpha = .60$. They were taken into the analysis because of their importance as part of the being category. After checking the 95% confidence interval, which was (.43–.64) in the School rules and (.52–.68) in Pupils' involvement, it was possible to use the variables in the analysis, while still recognising the slightly weak internal consistence.

Explained variables

- *School satisfaction* (6 variables $\alpha = .85$) Liking school; I am happy to go to school; I like staying at school; Many things with the school I do not like (reversed); I wish I did not have to go to school (reversed); I like what we are doing at school
- *Life satisfaction* (10 variables, $\alpha = .86$) I am satisfied with life; My life is going well; My life is how I like it to be; I would like to change something in my life (reversed); Like my life to be something else (reversed); I have a good life, I like what happens in my life, I have what I wish to have in my life, I have a better life than most of the others; Life satisfaction

There were several good variables possible to compute the dependent variables in the Norwegian data. When both dependent variables were summed, they got good reliability coefficients and therefore represented very well the measured issues.

7.2.2 Results and modelling

Correlations

School-related factors correlated strongly with school satisfaction in the Norwegian AC data (Table 15). Overall, the correlations were on a fairly high level. The summed variables generally correlated the strongest with school and life satisfaction. In the Norwegian AC data it was possible to compute more detailed summed variables of pupils' social interaction, which made the possibility for more careful analysis

and created more high correlating relations between the variables. *Pressured by schoolwork* ($r = -.82$) and *School atmosphere* ($r = .72$) correlated strongly with *School satisfaction*. *Life satisfaction* got the highest correlations with *Psychosomatic symptoms* ($r = -.57$) and *Good living in local area* ($r = .47$).

Table 12 Correlations with School and Life satisfaction, northern Norway

	School satisfaction (sum)	Life satisfaction (sum)
Having		
Gender	n.s.	.24***
Family well off	n.s.	.29***
Physical activity (sum)	n.s.	.16*
Health	.15*	.29***
Smoking	-.22***	-.23***
Been drunk	-.32***	-.31***
Academic achievement	.18**	.20**
Mother SES	.14*	n.s.
Father SES	.20**	n.s.
Computer use weekdays	-.24***	n.s.
Time homework weekdays	-.20**	-.17*
Good living in local area (sum)	.41***	.47***
Psychosomatic symptoms (sum)	-.31***	-.57***
Loving		
School atmosphere (sum)	.72***	.53***
Other pupils support (sum)	.28***	.46***
Bullied	-.19**	-.24**
Bullied others	-.13*	-.16*
Social competence (sum)	.19**	.39***
Being		
Teachers' support (sum)	.52***	.31***
School rules (sum)	.52***	.26***
Pressured by schoolwork	-.82***	-.43***
Pupils' involvement (sum)	.30***	n.s.
Scholastic competence (sum)	.25***	.25***
Problem solving skills (sum)	.24***	.45***

(Pearson correlation, $r = *** < .001$, $** < .01$, $* < .05$, n.s.)

Regression model

In the Norwegian AC data it was possible to explain 69 per cent of the variance of School satisfaction and 55 per cent of the variance of Life satisfaction in the final regression equations see (Figure 22). The correlating variables from all three blocks were entered in the regression analysis in hierarchical order in three blocks. Step by step the non-significant predictors were removed from each block at a time until the final equation with statistically significant predictors was achieved. The final regression model for predicting School satisfaction included following variables: 3rd block being variables *Pressured by schoolwork* and *School rules* 2nd block loving variable *School atmosphere* and 1st block having variable *Good living in local area*.

In the antecedents-mediators model (see Attachment 20a-d) the having factor/*Good living in local area* had a direct effect on *School satisfaction* and also a mediated effect via *School atmosphere*. The *School atmosphere* also had a direct effect on *School satisfaction* and was furthermore mediated via *Pressured by schoolwork* and *School rules*.

Life satisfaction was predicted by the being variable *Problem solving skills* from the 3rd block, loving variables *School atmosphere* and *Other pupils support* from the second block. Additionally, the having variable *Psychosomatic symptoms* from the first block predicted *Life satisfaction* directly in the final regression equation. In the antecedents-mediators model (see Attachment 20e-h) the having factor/*Psychosomatic symptoms* had a mediated effect on Life satisfaction via *School atmosphere* and *Problem solving skills*. Furthermore, *School atmosphere* also affected Life satisfaction via *Problem solving skills*.

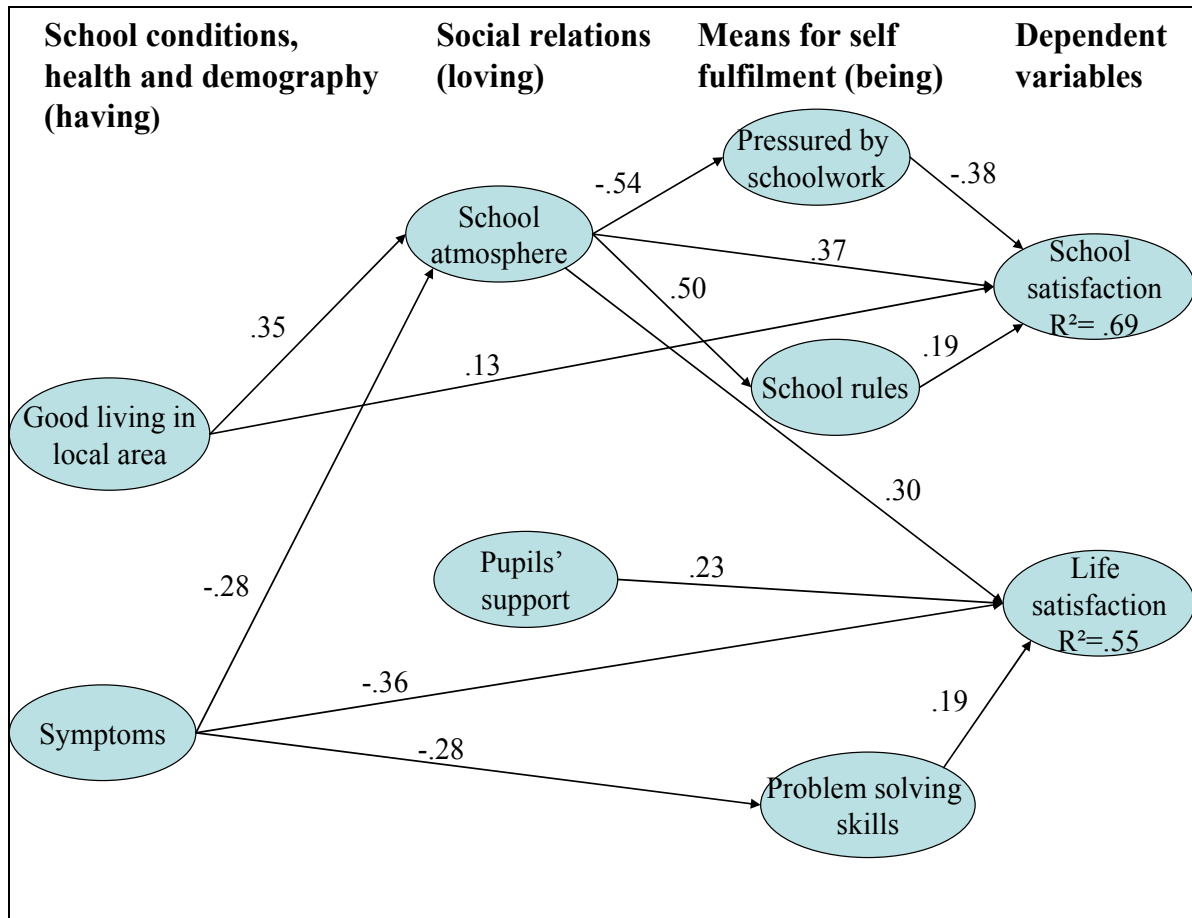


Figure 20 Linear Regression model, northern Norway (β , $p < .05$)

The model shows that lower pressure from schoolwork and better perception of the school rules indicated better school satisfaction. School atmosphere had an effect on both the pressure schoolwork caused and on the perception of the school rules. The pupils' experiences of their living neighbourhood also connected to how they felt their school atmosphere was and how satisfied they were with their school. Better experiences in local area indicated a better atmosphere at school and also a higher school satisfaction.

Northern Norwegian pupils' life satisfaction seemed to be the higher the better were their problem solving skills were, the better the school atmosphere was, the more support they had from peer pupils for their schoolwork and the less they suffered from psychosomatic symptoms. Psychosomatic symptoms negatively affected pupils' problem solving skills and decreased their perceptions of school atmosphere.

7.3 Predictions and Explanations for the Psychosocial Well-being of Schoolchildren in Northern Sweden

7.3.1 Analysis and interpretation

Analysed variables

In northern Sweden it was possible, after the successful result in the PCA, to compute several good variables for further analysis. The summed variables follow. The α -coefficients showed good consistence and validity. The summed variables were divided into *having*, *loving* and *being* categories, which are presented below, but also several single variables were used in the analysis. Some of the variables were reversed due to a different order of coding in the original questionnaire. Some of the variables were reversed due to a different order of coding in the original questionnaire.

Health and Background variables (Having)

- *Good living in local area* (7 variables $\alpha = .83$) Feel safe in local area; Local is a good place to live; People say hello; Safe to play outside; Can trust people; Good places to go; Can ask for help
- *Psychosomatic symptoms* (11 variables $\alpha = .83$) Headache; Stomach ache, Back ache; Feeling low; Irritability or bad temper; Feeling nervous; Difficulties in sleeping; Feeling dizzy; Neck and shoulder pain; Afraid; Tired and exhausted

There were also several single variables concerning demographic factors, living conditions and wealth issues analysed in the study. They are all presented in the correlation matrix presented later on.

In the field of social relationships (Loving)

- *School atmosphere* (3 variables $\alpha = .83$) School is a nice place to be; Feel I belong; Feel safe
- *Parents support* (3 variables, $\alpha = .66$) Problems at school, parents help; Parents willing to talk to teacher; Parents encourage to do well at school
- *Other pupils support for schoolwork* (3 variables $\alpha = .77$) Students being together; Students kind and helpful, Students accept me
- *Spending time with friends* (3 variables, $\alpha = .60$) Evenings with friends; After school with friends; E-communication with friends

There were also single variables concerning peer bullying used in the analysis of the loving category.

In the field of “means for self fulfilment” (Being) the following variables were computed

- *School rules* (3 variables, $\alpha = .65$) Students take part in making rules; Rules are fair; Students treated too strictly
- *Teachers support* (4 variables, $\alpha = .81$) Teachers encourage students to express views; Teachers treat students fairly; Extra help from teacher when needed; Teacher interested in student
- *Pressured by schoolwork* (4 variables $\alpha = .83$) Pressured by schoolwork (reversed); Have too much school work; Find school difficult; Find school tiring

Explained variables

- *School satisfaction* was constructed from five variables ($\alpha = .90$): Liking school; Like being at school; Look forward to go to school; Many things in school do not like (reversed); Wish do not have to go to school (reversed).

- *Life satisfaction* was constructed from 7 variables ($\alpha = .79$): Like the way things are going for me; Life is going well; Like to change many things; Wish different life; Have a good life; Feel good about what is happening; Life satisfaction.

In the Swedish AC data the dependent variables School satisfaction and Life satisfaction were possible to count as summed variables. Both variables got high α -coefficients in the reliability analysis. Using summed variables as dependent variables also have some effect on the statistical connections by raising the correlations between the dependent variables and the predictors.

7.3.2 Results and modelling

Correlations

The correlations of the analysed variables in the Swedish AC data are presented in Table 14. There were many considerably high correlations with school satisfaction, most of which were connected directly to school. Of the being factors *Teacher's support* ($r = .54$), *Schoolwork's pressure* ($r = -.68$) and *School rules* had the strongest correlations to school satisfaction. *School's atmosphere* ($r = .61$) also correlated strongly. From the demographic variables only *Age* had some effect on *School satisfaction*. Life satisfaction correlated the strongest with *Psychosomatic symptoms* and *Health*. Generally it can be interpreted that School satisfaction got stronger correlating factors than Life satisfaction. There were also several strong correlations, but also several important factors of well-being which did not correlate at all with either of the dependent variables.

Table 13 Correlations with School and Life satisfaction, northern Sweden

	School satisfaction (sum)	Life satisfaction (sum)
Having		
Age	.34***	n.s.
Gender	.17*	.11*
Crade	.36***	n.s.
Academic achievement	.35***	.26***
Health	.16*	.36***
Symptoms (sum)	-.33***	-.42***
Plans for further education	n.s.	.20***
Family well-off	.32***	.32***
Computer use weekdays	-.24***	-.16**
Time homework weekdays	-.20**	n.s.
Been drunk	-.23**	-.17**
Smoking	-.15**	-.19**
Good living in local area (sum)	.26***	.37***
Loving		
School atmosphere (sum)	.61***	.31***
Pupils support (sum)	.37***	.30***
Parents support (sum)	.34***	.31***
Bullied others	-.20***	n.s.
Spending time with friends (sum)	.15*	n.s.
Being		
Teachers support (sum)	.54***	.32***
Pressured by schoolwork	-.68***	-.32***
School rules (sum)	.66***	.29***

(Pearson correlation, $r = *** < .001$, $** < .01$, $* < .05$, n.s.)

Regression model

In northern Sweden the regression equation could explain 46 per cent of the variance of school satisfaction and 43 per cent of the variance of Life satisfaction (see Figure 21). The regression analyses were conducted in the same manner as in the data from northern Norway, presented earlier. The final regression model for predicting School

satisfaction included the following variables: 3rd block being variable *Teachers' support*, 2nd block loving variable *School atmosphere* and 1st block having variable *Family well-off*.

In the antecedents-mediators model (see Attachment 19a) the having factor/*Family well-off* had a direct effect on School satisfaction and also mediated effects through *School atmosphere* and *Teachers' support*. The *School atmosphere* also had a direct effect on School satisfaction and was furthermore mediated via *Teachers' support* (see Attachments 19b-d). The Beta coefficients are put in the figure along with the arrows pointing in the direction of mediation, the p-value of the Beta-coefficients used in the model was <.05.

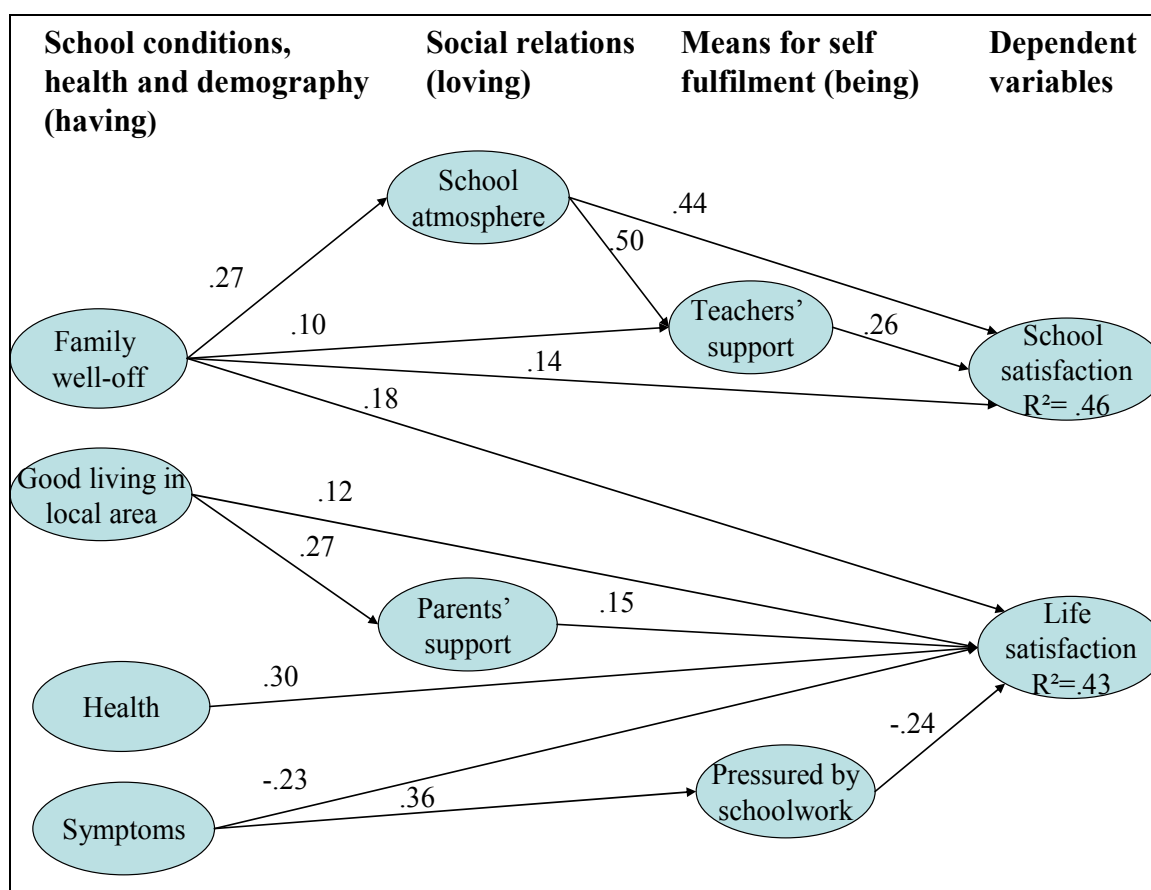


Figure 21 Linear Regression model, northern Sweden (β , $p < .05$)

Life satisfaction was predicted by being variables *Pressured by schoolwork* from the 3rd block and loving variable *Parents support* from the second block. Furthermore having variables *Psychosomatic symptoms*, *Health*, *Good living in Local area* and *Family well-off* from the first block predicted Life satisfaction directly in the final

regression equation. In the antecedents-mediators model (see Attachment 19e-f) the having factor/*Good living in local area* had mediated effect on Life satisfaction via *Parents' support*. Moreover, *Psychosomatic symptoms* affected Life satisfaction via the *Pressured by schoolwork* variable.

School satisfaction was better the more the pupils from northern Sweden felt they received support from their teachers and the better they perceived the school atmosphere and their families' wealth. The better-off a family indicated better school atmosphere and better support from teachers. Likewise, better school atmosphere indicated better support from teachers for pupils' schoolwork.

Pupils felt their life satisfaction to be higher if they were less pressured by schoolwork, did not suffer from psychosomatic symptoms, were healthy, got support from their parents and lived in a good area. Living area also affected the amount of support pupils' received for their schoolwork. Furthermore psychosomatic symptoms affected the amount of pressure schoolwork caused.

7.4 Predictions and Explanations for the Psychosocial Well-being of Schoolchildren in Northern Finland

7.4.1 Analysis and interpretation

Analysed variables in the Finnish data

In the Finnish data summed variables were calculated to represent the well-being factors in the questionnaire used. The variables were chosen so they suited being together and measured similar factors in a similar manner. It was a positive surprise how high a level the reliability coefficients actually were; most of the variables got a Cronbach's Alpha value of over 0.80, which was a considerably good level, and showed that created summed variables were reliable and adequate. The summed variables are presented as follows with the name of the variable, original variables and α -values. The variables are also divided into the *having*, *loving* and *being* categories. Some of the variables were reversed due to a different order of coding in the original questionnaire.

Health, demographic and other (Having)

- *Psychosomatic symptoms* (15 variables, $\alpha = .88$): Headache; Stomach ache; Neck and shoulder pain; Back ache; Feeling low; Irritability or bad temper; Feeling nervous; Difficulties in sleeping; Feeling dizzy; Tired and exhausted; Lack of appetite; Tension, Feeling down; Waking up during the night; Afraid
- *Physical activity* (2 variables, $\alpha = .88$) Physically active last 7 days; Physically active usual week

There were also several single variables about the demographics and living conditions used in the analysis, they are all presented in the correlation matrix (Table 12).

In the field of social relationships (Loving)

- *Support from other pupils* (3 variables, $\alpha = .77$) Students being together; Students kind and helpful; Students accept me
- *Support from parents* (4 variables, $\alpha = .85$): Problems at school, parents help; Parents willing to talk to teacher; Parents encourage to do well at school; Parents interested in what happens
- *Spending time with friends* (3 variables, $\alpha = .70$): After school with friends; Evenings with friends; E-communication with friends

Along with these summed variables there were also some single variables analysed in the loving category, these concerned peer bullying and the feeling of loneliness.

In the field of ‘means for self fulfilment’ (Being)

- *School atmosphere* (3 variables, $\alpha = .80$): School is a nice place to be; Feel I belong; Feel safe
- *Self esteem* (8 variables, Cronbach Alpha = .83): Feel as capable as others; Have good qualities; Often feel failure (reversed); Can manage things as well as others; Feel all right; Satisfied with myself; Sometimes feel totally useless (reversed); Sometimes think no good at all (reversed)
- *School rules* (3 variables, $\alpha = .62$): Students take part in making rules; Students treated too strictly (reversed); Rules are fair
- *Teachers support* (4 variables, $\alpha = .81$): Teachers encourage students to express views; Teachers treat students fairly; Extra help from teachers when needed; Teachers interested in students

Explained variables

- *School satisfaction*, single variable
- *Life satisfaction*, single variable

Both variables were used as single variables, because in the Finnish data set there were no suitable variables for calculating summed variables. The connections between the independent and dependent variables are presented in the following correlation matrix (Table 14).

7.4.2 Results and modelling

Correlations

The correlation matrix is presented first, with all the variables being enclosed in the different blocks of regression analyses. The direct correlations show natural differences between the variables of school and life satisfaction. School related factors were the most connected to school satisfaction and home and family related factors were the most

connected to life satisfaction. Even so, most of the stronger correlating factors like *Atmosphere at home* and *School atmosphere* were related to both dependent variables. Demographic factors did not have a strong effect on school or life satisfaction. This shows that the reasons behind these factors of psychosocial well-being were more conditional and situational than socioeconomic.

Table 14 Correlations with School and Life satisfaction, northern Finland

	School satisfaction	Life satisfaction
Having		
Family well-off	.15**	.42***
Academic achievement	.34***	.29***
Smoking	-.22***	-.22***
Been drunk	-.28***	-.20***
Time homework weekdays	-.29***	-.13**
Computer use weekdays	-.13	n.s.
Physical activity	.10*	.11*
Feeling tired school mornings	-.21***	-.17**
Plans for further education	.16 **	.20***
Psychosomatic symptoms (sum)	-.21 ***	-.33***
Age	.10*	.16**
Gender	.15**	n.s.
Grade	n.s.	.16**
Loving		
School atmosphere (sum)	.47***	.35***
Support from other pupils (sum)	.10*	.16**
Support from parents (sum)	.27***	.37***
Spending time with friends (sum)	.14**	n.s.
Bullied others	-.11*	n.s.
Atmosphere at home	.20***	.57***
Feeling lonely	n.s.	-.45***
Being		
Self esteem (sum)	.28***	.46 ***
School rules (sum)	.30***	.20***
Teachers support (sum)	.27***	.32***
Pressured by schoolwork	-.40***	-.29***

(Pearson correlation, $r = *** < .001$, $** < .01$, $* < .05$, n.s.)

A linear regression model for predicting psychosocial well-being in northern Finland

In northern Finland (Figure 20) it was possible to explain 29% (R^2) of the variance of *School satisfaction* with linear regression model. The correlating variables from all three blocks were entered in the regression analysis in hierarchical order in three blocks. Step by step the non-significant predictors were removed from each block at a time until the final equation with statistically significant predictors was achieved. The final regression model included the following variables: 3rd block being variable *Pressured by schoolwork*, 2nd block loving variable *School atmosphere* and 1st block having variable *Academic achievement*. In the antecedents-mediators model (see Attachment 18a e) the having factor/*Academic achievement* had a direct effect on *School satisfaction* and also mediated effects through *School atmosphere* and *Pressured by schoolwork* variables. The effect of *School atmosphere* was furthermore mediated via *Pressured by schoolwork* on *School satisfaction*. The Beta coefficients are put in the figure along with the arrows pointing in the direction of mediation, the p-value used in the model was $<.05$.

It was possible to explain 46% (R^2) of the variance of *Life satisfaction* with the linear regression model. The following variables were included in the final equation: Being factor/*Self esteem*, loving factors/*Home atmosphere*, *School atmosphere* and *Feeling lonely*, and having factor/*Family well-off*. Along with *Self esteem* loving factors/*Home atmosphere*, *School atmosphere* and *Feeling lonely* and having factors/*Family well-off* had direct effect on *Life satisfaction*. *Family well off* had also mediated *Life satisfaction* through *Home atmosphere* in the model. Furthermore *Home atmosphere* and *School atmosphere* had a mediating effect on *Life satisfaction* via *Self esteem* (also see Attachment 18e-f).

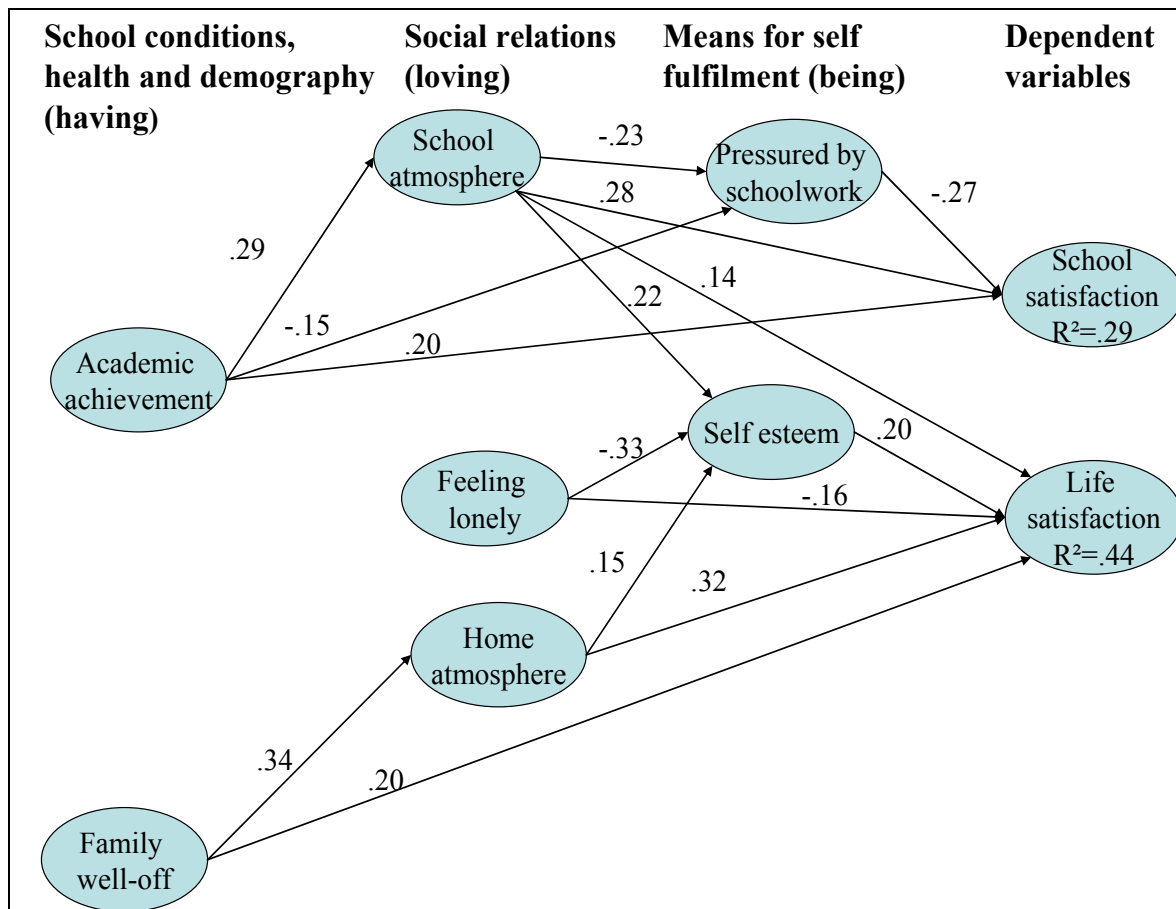


Figure 22 Linear Regression model, northern Finland (β , $p < .05$)

In the Finnish AC data the atmosphere both at school and at home had an effect on pupils' psychosocial well-being in this interpretation. School atmosphere directly predicted the school satisfaction and also had a mediating effect via Pressured by schoolwork. Furthermore it could be interpreted that the better the pupils' academic achievement was, the better they felt the school atmosphere was and the less they were pressured by schoolwork. Finally the less the pupils were pressured by schoolwork the more satisfied they were with school.

Pupils' life satisfaction was higher the better their atmosphere at home and school were and the better their self esteem was. Their self esteem was better if they did not feel they were lonely and their home and school atmosphere was better. Finally the better-off the pupils reported their families to be, the higher their life satisfaction, atmosphere at home and self esteem were.

7.5 Predictions and Explanations for the Psychosocial Well-being of Schoolchildren in Northwest Russia

7.5.1 Analysis and interpretation

Analysed variables in the Russian data

Compared with the AC data of the other countries studied, the questionnaire in the Russian AC data was oriented a bit more towards describing several psychological, social and somatic health problems in pupils' lives. Therefore it was not possible to find as many suitable summed variables for the analyses for this study in the PCA as it was possible in the other countries. With the slightly different questionnaire it was still possible to compute some summed variables into *having*, *loving* and *being* categories. Due to the lack of suitable other options, two variables were used in the analyses even with slightly low α -coefficients: *Other pupils' support for schoolwork* and the dependent variable *Life satisfaction with* ($\alpha = .59$). Both of these variables still fulfilled the limits of consistence and were reliable enough. The summed variables are listed below.

Background and health variables (Having)

- *Physical activity* (2 variables, $\alpha = .86$) Physically active last 7 days; Physically active usual week
- *Psychosomatic symptoms* (8 variables $\alpha = .77$) Headache; Stomach ache, Back ache; Feeling low, Irritability or bad temper; Feeling nervous; Difficulties in sleeping; Feeling dizzy

In the field of social relationships (Loving)

- *Other pupils support for schoolwork* (3 variables $\alpha = .59$) Students being together; Students kind and helpful; Students accept me
- *Time with friends* (3 variables $\alpha = .69$) After school with friends; Evenings with friends; E-communication with friends

In the field of ‘means for self fulfilment’ (Being)

- *Plans for successful life in the future* (10 variables $\alpha = .86$)
Future plans- university degree; Future plans- special education; Future plans- well paid job; Future plans- own apartment; Future plans- enjoying work; Future plans- happy family; Future plans - good health; Future plans- possibility to live wherever; Future plans- respect from the society; Future plans- close friends
- *Problems in life control* (2 variables, $\alpha = .63$) Don't care what's happening; Worried, Desperate

Explained variables

- The dependent variable *Life satisfaction* was possible to be counted as a summed variable: (2 variables $\alpha = .59$)
Feeling about life in general (reversed), Life satisfaction
- *School satisfaction* was measured by a single variable

7.5.2 Results and modelling

Correlations

In the Russian ArctiChildren data there were more single variables used in the analysis than in the other countries. The reason was simply that in the data of the other countries the single variables were computed into the summed variables; whereas here they are used as separate variables. Therefore the correlations were also a little weaker, but still many significant correlations occurred. In general the correlations in the Northwest Russian data were not very high. *School satisfaction* was the most connected with school related factors, like *Academic achievement* ($r = .18$) and the *Feeling safe in school* ($r = .25$). *Life satisfaction* correlated the strongest with the variables related to pupils' individual lives: *The feeling of a family being well off* ($r = .42$) and pupils' *Self-reported health* ($r = .18$). The being variable *Plans for successful life in the future*, was also connected ($r = .33$) with Life satisfaction. All the being variables correlated significantly with Life

satisfaction, but not with School satisfaction. Generally, fewer variables overall correlated with School satisfaction than correlated with Life satisfaction. Correlations in the NW Russian data are presented in the following, Table 15.

Table 15 Correlations with School and Life satisfaction, NW Russia

	School satisfaction	Life satisfaction (sum)
Having		
Family car	n.s.	.20***
Gender	.13*	n.s.
Family well off	n.s.	.42***
Mother job	n.s.	.13*
Family car	n.s.	.20***
Father job	n.s.	.12*
Academic achievement	.18***	.16**
Computer use weekdays	n.s.	.22***
Smoking	n.s.	.12*
Been drunk	-.14*	n.s.
Health	n.s.	.36***
Physical development	.12*	.26***
School achievement	.23***	.25***
Number of computers	n.s.	.14**
Feeling relaxed	n.s.	.14**
Time homework weekdays	-.16***	n.s.
Physical activity (sum)	n.s.	.15*
Psychosomatic symptoms (sum)	n.s.	.29***
Loving		
Feeling lonely	-.13*	-.35***
Bullied others	-.17**	n.s.
Bullied	n.s.	-.11*
Time with friends(sum)	.12*	.24***
Other pupils support (sum)	.23***	.31***
Being		
Plans for successful life (sum)	n.s.	.33***
Pressured by schoolwork	-.19***	-.15**
Feeling safe in school	.25***	.16**
Problems in life control (sum)	-.14**	-.21***

(Pearson correlation, $r = *** < .001$, $** < .01$, $* < .05$, n.s.)

Regression model

In the Russian AC data it was possible to explain 18 per cent of the variance in School satisfaction and 36 per cent of the variance in Life satisfaction by the other variables in the final regression equation (Figure 23). The regression analyses were conducted in a similar manner to those presented in the Finnish data set earlier. The final regression model for predicting School satisfaction included the following variables: 3rd block being variables *Pressured by schoolwork* and *Feeling safe in school*, 2nd block loving variables *Time spent with friends* and *Other pupils support* and 1st block having variables *Time used for homework weekdays* and *School achievement on teacher's opinion*.

In the antecedents-mediators model (see Attachment 21a-d) the having factor/*School achievement* had direct effect on School satisfaction and also mediated effect via *Pressured by schoolwork* and *Other pupils' support*. The *Other pupils' support* also had a direct effect on School satisfaction and was furthermore mediated via *Pressured by schoolwork* and *Feeling safe in school*.

The final regression model for predicting Life satisfaction included the following variables: 3rd block being variable *Future plans*, 2nd block loving variables *Feeling lonely* and *Other pupils' support* and 1st block having variables *Family well-off*, *Health* and *School achievement on teacher's opinion*.

In the antecedents-mediators model for predicting the mediators of the Life satisfaction (see Attachment 21e-h) the having factor/*School achievement* had direct effect on School satisfaction and also mediated effect via *Other pupils' support*. *Family well-off* also had a direct effect and mediated effect via loving variables *Other pupils support* and *Feeling lonely*. Furthermore *Family well-off* had a mediated effect via being factor/*Future plans*. As well, the having factor/*Health* had a direct effect on School satisfaction and a mediated effect via *Future plans*.

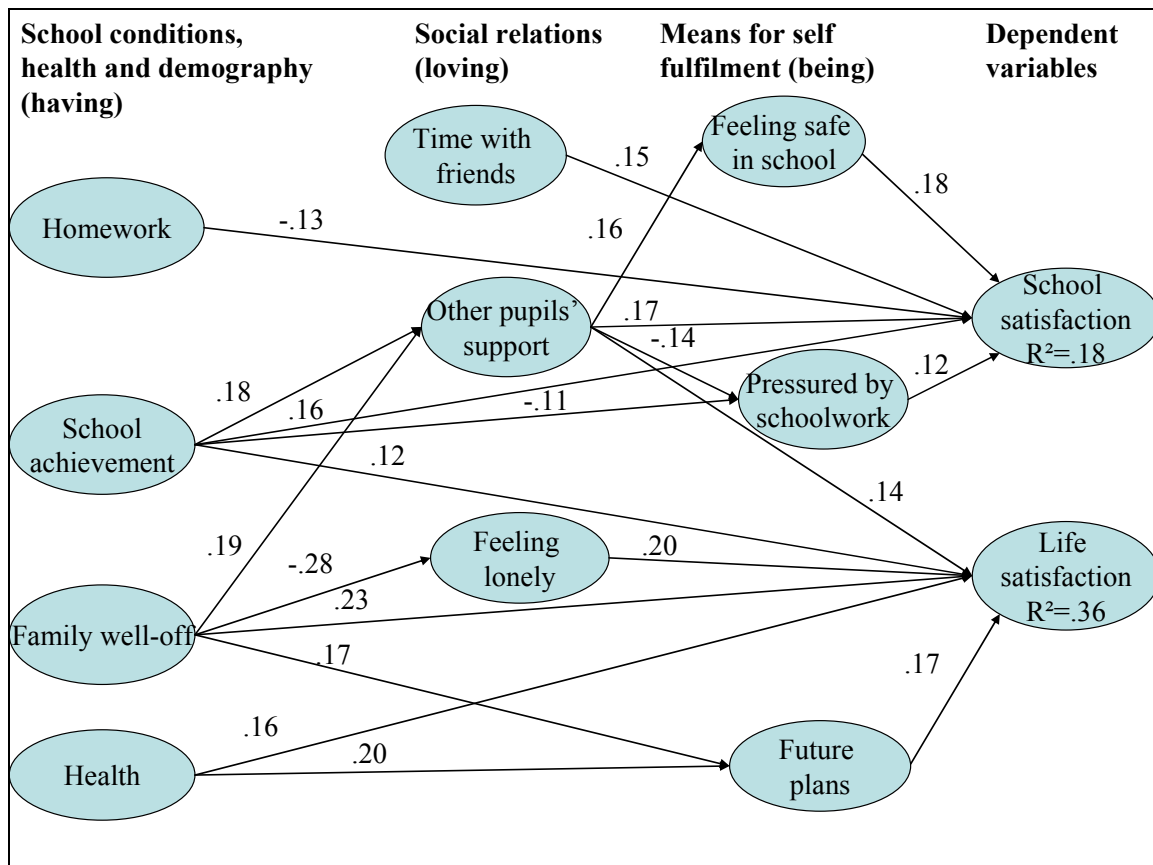


Figure 23 Linear regression model, Northwest Russia (β , $p < .05$)

The pupils from Northwest Russia were more satisfied with their school the more safe they felt at their school, the less pressure the schoolwork caused, the more time they spent with their friends, the more support they received from other pupils, the less they used time for homework and finally the better was their school achievement. The more they received support from other pupils the safer they felt at school. Furthermore, the better was the pupils' school achievement the more they gained support from other pupils and the less they felt pressure from schoolwork.

Pupils were more satisfied with their life the better their plans were for a successful future, the less they felt loneliness, the healthier they were, the better their families' wealth and the better their school achievement were. The better-off their families' were, the better their plans were for a successful life in the future and the less they felt being lonely. Finally, better health indicated better plans for the future.

7.6 Conclusion of the Comparison: Predictions and Explanations for the Psychosocial Well-being of Schoolchildren in Northern Norway, Sweden and Finland and Northwest Russia

When comparing the regression models for explaining psychosocial well-being through school and life satisfaction in the four countries, the pictures of the models were useful for setting the *tertium comparationis*, a viewpoint for contemplation. The purpose was to present how the structures of well-being were formulated in each country, and by what way and what means they differ from each other and what they had in common.

The presented explanatory models in this chapter showed that most of the central elements of the pupils' psychosocial well-being were possible to find by explaining the two dependent variables (see Konu & Rimpelä, 2002). Being variables measured issues like support and pressure in schoolwork, safety in school, self esteem and problem solving skills. The loving part was represented by variables measuring peer support, school and home atmosphere, parents' support and social interaction. The having part was represented by variables measuring material welfare and conditions, academic achievement, quality of the living area and health related issues. All these factors with the elements connected to one's well-being have also been formulated in the studies of Allardt (1980; 1989) and Konu (2002).

In the regression models used to explain psychosocial well-being, life and school satisfaction as dependent variables, each country had its specified model with slightly different variables. The data consisted of the responses from the ArctiChildrern survey, and therefore they represent only the northern or northwestern parts of the countries. The factors were divided into the three blocks of well-being: having, loving and being. The key-findings of these explanatory models are presented in the following, separately for the each country that participated in the AC study.

Northern Norway

School atmosphere had a central role in the explanatory model of northern Norway by predicting both dependent variables. The explanation percentages were highest of all for both dependent variables. This tells about the good consistency of the national questionnaire. School atmosphere had a strong effect on both Life and School satisfaction. Likewise schoolwork's pressure had a strong effect on school satisfaction. Different to Swedish data the *Good living in local area* variable had an effect on school satisfaction both directly and via school atmosphere. The living area did not affect pupils' life satisfaction.

Problem solving skills was a variable that did not exist in the analysis of the other countries. Problem solving skills was a predictor for life satisfaction and was also mediated by Psychosomatic symptoms. This means that the recurrence of symptoms decreased the ability for problem solving. Problem solving skills is defined several ways in the literature. One very basic definition is: 'Problem solving is cognitive processing directed at achieving a goal when no solution method is obvious to the problem solver.' (Adams & Wieman, 2007, p.18). Problem solving has been a topic in cognitive psychology and many learning theories. Hope (2002) argued that there is also a dual relationship between learning theory and problem solving theory. This means that problem solving is central for learning, and our beliefs about people's learning strategies strongly influence our beliefs on how people solve problems. Still the variable *Problem solving skills* was, interestingly, a predictor of Life satisfaction but not School satisfaction.

Northern Sweden

In the northern Swedish data the school satisfaction was explained with a model of three predictors: Teachers' support, School atmosphere and Family well-off. School atmosphere had a strong predicting role, when predicting teachers' support. Health related factors were of greater importance in the northern Swedish model when compared to others. Self-rated health and psychosomatic

symptoms both directly predicted the life satisfaction in the final regression equation. The pupils' perception of their families' affluence in the variable family well-off also had a great importance in the northern Swedish explanatory model. The family well-off variable directly predicted both life and school satisfaction, and had a mediated effect on school satisfaction via school atmosphere and teachers' support. In this sense the northern Swedish model differed from the Nordic neighbours, only in the NW Russian model the Families' affluence had an effect on both dependent variables. Psychosomatic symptoms had an effect on how pressured the pupils felt by schoolwork. Self-rated health and psychosomatic symptoms had a direct effect on life satisfaction, which was a different finding compared to other countries. The living area had an effect on life satisfaction both directly and via parents' support. This was a natural finding and shows the importance of the family setting in the formation of pupils' well-being.

Northern Finland

The interesting discrepancy between the low school satisfaction and high life satisfaction got some light in the northern Finnish regression model. The predictors for school satisfaction were all related directly to schoolwork. Life satisfaction's predictors were those more related to home and family factors, and also to self esteem. Academic achievement was also connected to school satisfaction through better school atmosphere. School atmosphere was also related to life satisfaction directly and via self esteem. Interestingly, it was found that predictors of school satisfaction had an effect on life satisfaction, but school satisfaction was not effected by any of the life satisfaction predictors.

One central finding was that academic achievement was connected to school atmosphere and directly to school satisfaction. Those who were doing well at school were satisfied with school and did not feel they were pressured by schoolwork.

Life satisfaction was best predicted by the atmosphere at home and self esteem. Recent research has shown that family plays a key role in children's individuation and identity formation. Adolescents'

subjective well-being is based on both cognitive and emotional aspects (Joronen & Åstedt-Kurki, 2005). In the explanatory model of northern Finland, the pupils' perceptions of their families' affluence had a direct effect on pupils' life satisfaction and also their home atmosphere. Furthermore, home atmosphere had an effect on pupils' self esteem; the home atmosphere was a variable that was not available in the data sets of the other countries. Home atmosphere, together with how well-off families were, seemed to have a great importance in explaining pupils' life satisfaction in northern Finland.

Northwest Russia

The Northwest Russian model comprised most of the predictors. A remarkable conclusion from the Russian prediction model was the strong effect of the perception of families' wealth and school achievement. The explanatory percentage for school satisfaction was weaker compared to other countries, and there were also more predictors. This could be explained by the weakness of the national questionnaire, but also the dependent variable could be explained by factors not possible to reach by this kind of survey.

School achievement seemed to have a great importance in the final regression equations, for explaining the both school and life satisfaction. This was a different finding compared to the others. Furthermore, families' affluence had a great importance in the model. It predicting life satisfaction directly, and school satisfaction via *Other pupils' support*. The loving variable *Other pupils' support* had a central role in the model, when predicting directly both life and school satisfaction, but also had a mediated effect on school satisfaction via safety at school and pressure that schoolwork caused. When the variables of *Loneliness* and time spent with *Friends* were included in the model, it can be concluded that the social sphere of life was emphasised in the explanatory model for pupils' psychosocial well-being in Northwestern Russia.

8 DISCUSSION

8.1 General Evaluation of the Research

8.1.1 Reliability and validity

The reliability of this research rests upon the quality of the used questionnaire and measurements used. The reliability analyses in this study were conducted using Cronbach's alpha (see Metsämuuronen, 2004; Nunnally, 1978), which is a measurement of internal consistence. The alpha coefficients have been presented along with the analyses when calculating new summed variables. When using one-item indicators, it was only the possible to measure reliability indirectly, that was to compare the correlations within the conceptually close variables.

The validity of the research means that the used questionnaires and measurements used do study the facts that were originally meant to be studied (Metsämuuronen, 2004). The validity of a study can be questioned through two aspects 1) *internal (construct)* validity and 2) *external* validity (Cook & Campbell, 1979). The construct validity refers to multiple comparisons with existing, valid measurements of the same concept (also Dane, 1990). We can ask the following questions: Are the concepts accurate? Is the theory coherent? Are the measurements correct, and do they measure what they are meant to? (See Metsämuuronen, *ibid.*). According to (Cook & Campbell, 1979, p. 38) construct validity of causes or effects refers to 'approximate validity with which we can make generalizations about higher constructs of research operations'. The external validity refers to the approximate validity with which the conclusions are drawn about the ability to generalise the causal relationships to and across populations of persons, settings and times (Cook & Campbell, 1979).

The construct validity for this research can be assumed to be on a good level. The used questionnaires used have been designed to measure the elements of school-aged children's well-being and health, and they have been widely used and tested internationally. The questionnaire and the variables can be considered as being accurate in measuring what they are meant to. When only parts of the measuring instrument were used in the analyses, it was possible to use only the valid and coherent variables for the purposes of this study. The

theoretical background was gained to match the multidisciplinary field of research. In the explanatory analyses based on the ArctiChildren study, the construct validity was possible to examine being based on the coefficients of the hierarchical regression analysis between the variables of three conceptual blocks: Having, Loving and Being. The correlations showed the measurements to be valid (see attachments 18-21)

The external validity of this study can be evaluated through the generalisation of the results. Even though the sample in the ArctiChildren study was a *non-probability* one, which clearly is a weakening factor for the external validity, the sample in the ArctiChildren study was normally distributed and it is possible to generalise the results based on the statistical analyses to a certain extent. On a descriptive level it was possible to recognise similar structures and trends in the HBSC and AC studies based on the central concepts of this study. Also the repetition of the research is an argument for the validity of research. The data collection was conducted with proper procedures. The research procedures and questionnaires and measurements used are presented as clear that the repetition of this study is technically possible.

8.1.2 Limitations of the research

It has to be remembered that research of the ArctiChildren data is a case study, which had comparative data from the nationally representative HBSC study with a *probability* sample, rather than a representative analysis on the state of well-being in the area. The limitations of the descriptive study and comparisons should be recognised. The ArctiChildren data was a non-probability or a so called *purposive* sample, the school and pupils were not selected randomly and the data can therefore not be taken as a representative or probable sample of the pupils in the schools of the Barents Region (see De Vaus, 2002, p. 90). Nevertheless, the chosen schools still represented both urban and rural environments widely in the selected areas of all the four countries. In the descriptive study one limitation was that even though the HBSC questionnaire was used in all the countries, the differences in the national questionnaires caused some

minor variation in the variables. Therefore some of the conceptually important variables could not be analysed and compared between all the participating countries, and they had to be left out of the analyses.

In the explanatory study, limitations also come from the variation between the national data sets used in the ArctiChildren study. The explanatory analyses were made from the variables of the full national questionnaires when there was variation in the content between the countries. Each regression model had a unique structure and therefore they were not fully comparable. For example, for one country some factor of well-being could have been measured by using one-item variable, whereas for another country a summed variable of several items could be used. This has an effect on the correlations, and therefore the regression models in the explanatory analyses are not fully comparable between the countries. On a conceptual level the structures were still rather similar and made the common conceptual and theoretical review possible.

8.1.3 Ethical considerations

When considering the research ethics in this study the most important task is to consider the informants as being children. Even though they were provided with an informed consent form, the full freedom to deny responding to the questions has not been proved. The data collection took place during school time, and answering the questionnaire could have been understood as being a school assignment. Statistical testing has showed the data to be reliable; problems or misbehaviour in the answering did not exist.

The data collection for the ArctiChildren was conducted by several researchers and in four different countries. The researching culture differed according to the countries' own regulations and conventions. For example in Norway the research was nominated as medical research and research permission had to be applied for from the ethical committee for medical research. In Finland, the research permission was applied for directly from the counties' school boards. Using the HBSC questionnaire certainly improved the ethical approval of the research in the schools. When the questionnaire has been well built and internationally tested, it certainly raises the safety of the

responding situation. The comparison unit of this study has been the area of each participating country. The names and areas of the schools or respondents' individual answers have not been presented in any parts of the research. It can be argued that the participants and their responses stay anonymous throughout the research.

8.2 Discussion of the Results in the Descriptive and Explanatory study

The psychosocial well-being of schoolchildren was formulated uniquely in each country, and one common picture was not possible to form. Some common features were found and some differences raised some further questions. In some cases the explanatory analyses shed some light on the differences found in the descriptive analyses, but also some were unexplained.

Most of the northern Norwegian pupils were very little or not at all pressured by schoolwork. The Norwegian pupils showed the highest satisfaction with school but lowest satisfaction with life. According to Seligson et al. (2005) a high level of school satisfaction does not necessarily predict a high level of general life satisfaction, it is needed to recognise the different elements of the satisfaction scales.

Moreover, the results from northern Norway correspond to the findings from research on the adult work environment showing that a high level of control and influence, reasonable job demands and good social support from management and colleagues, enhance job satisfaction as well as high productivity (see Samdal et al., 1999). Therefore, higher satisfaction with school seems to be an important goal in itself, since it is positively related to academic achievement as well as the students' quality of life at school (ibid.). There has been discussion in Norway about how to improve the low scores in the PISA tests, but also voices saying not to forget the high scores in school satisfaction. It might be difficult to attain both good school performance and high satisfaction when they seem to be such opposite phenomena; but it is always worth trying. According to Samdal et al. (2004) pupils' school satisfaction had a strong connection to academic achievement. Furthermore, based on their study the pupils who liked school mostly had a healthy self-respect and expressed that they were

doing well.

When examining the being factors together with the descriptive-level factors of psychosocial well-being of the Norwegian pupils, contrast to the Finnish situation becomes apparent. The Norwegian pupils were the most satisfied with school, feeling only a little pressure from schoolwork, but they were a lot less satisfied with their lives than Finnish pupils. In the loving factors the Norwegian pupils were active in socialising with their friends and reported getting strong support from other pupils at school. The lower life satisfaction could be linked to low ratings on the subjective perception of families being well-off, which was not supported by the objective measures; no other clear links to the weaker life satisfaction were found. Berntsson et al. (2001) found that the Norwegian pupils' school satisfaction had the least effect on their psychosomatic complaints when compared with the Nordic countries.

The Norwegian pupils were very satisfied with school even though the other areas of life were not as satisfactory. Theories of social capital and social competence offered an explanation for the finding (Pulkkinen, 2002; Salmivalli, 2005). The connections between family wealth, social competence and problem solving have been described as part of the sociolinguistic determinants (Bernstein, 1977). According to Bernstein (ibid.) lower socioeconomic groups have different language structure compared to higher groups. Lower class families use direct orders more in educational situations, whereas the upper class families use argumentation more. This could have implications for problem solving, in that it could be interpreted as being part of the language games referred to by Wittgenstein (1978), (see also Hope, 2002).

The northern Swedish pupils' psychosocial well-being was in all perspectives the most harmonious. The northern Swedish pupils were quite satisfied with school. They were a little, but not the most, pressured by their schoolwork and were relatively satisfied with their lives. Even so, the Swedish pupils still suffered the most from psychosomatic symptoms. There was also a difference compared to others in the stronger role of health related factors in the explanatory model. This is not in line with Berntsson et al. (2001), where the Swedish pupils reported the least psychosomatic complaints in the Nordic comparison. They offered an explanation of the better state-

sponsored day-care in Sweden and Denmark compared to other Nordic countries. Probably the generally more child-centred pedagogical approach and work in the health promotion of children (see Kostenius & Nyström, 2008) play a role in this rather good situation in Swedish schools. Could it also be interpreted that when life is mostly in balance and there are no big worries, “little” worries like psychosomatic symptoms raised their heads? The Swedish school system has one clear focus in fundamental democratic values; everyone has a voice and the right to use it. The “golden mean” describes well the Swedish school system; they did not score the best learning results, and their pupils did not seem to really enjoy school, but most of the pupils were doing relatively fine.

Teachers’ support for pupils’ schoolwork also had an important role in the northern Swedish explanatory model. The teacher’s support for pupils was a sum of four variables: *Teachers encourage pupils express their own views*, *Treat pupils fairly*, *Give extra help when needed* and were *Interested in pupils*. This emphasises teachers’ role as a caring and supportive person and adult in the classroom. These goals are not likely to be reached in very formal educational settings. They are expressed in the teacher’s caring attitude towards their pupils’ and teaching (see Noddings, 2005). Opdenakker and Van Damme (2000) have also suggested that the effects of school for pupil’s well-being should be examined at the level of teachers; how do teachers co-operate in questions concerning teaching methods and pupils’ counselling? Teachers who teach their pupils with respect encourage them and contribute considerably to their well-being (see Engels et al., 2004).

The Finnish pupils were not satisfied with school and felt it caused a lot of pressure, but at the same time their life satisfaction was at the highest level. The structure of the explanatory model in northern Finland showed that school and life satisfaction predictors were separated from each other. Is there something that is different in the Finnish school system compared to other Nordic countries, or do the differences reflect the differences on a societal level? Finnish school is highly orientated towards knowledge and high quality teaching. The learning of socio-emotional skills is not emphasised in the curriculum, but is in the responsibility of the teachers’ own will. This could lead to an undervaluation of these skills when there are so many important

learning goals to fulfil.

Home atmosphere and families' wealth were important predictors for life satisfaction in northern Finland. According to Pulkkinen (2002) the trustful behaviour of a child is developed in a family with trustful and open relations between both parents, also other members of the family can have meaningful supportive roles in the child's development. The perception of a family being well off had a direct effect on the home atmosphere in this study, it also had a direct effect on life satisfaction and more widely on the whole psychosocial well-being. Jerome and Åstedt-Kurki's study (2005) also found that a loving atmosphere in the family was one key element of the adolescent's subjective well-being.

An essential goal in these Finnish schools should be to pay attention to the atmosphere at schools. The discussion of school atmosphere has been related to the terms culture, climate, ethos and spirit (see Donnelly, 2000; Smith & Lang, 1998; Solvason, 2005). Even though the school atmosphere was described as being on a rather good level in northern Finnish schools, the findings from the explanatory model proved that uplifting the school climate would also improve pupils' well-being as a whole. The School atmosphere was a sum of three variables: *School is a nice place to be*, *Feel I belong* and *Feel safe*. These factors reflect well the basic elements of a school's positive atmosphere. It is important for pupils to get the feeling of belonging, feel they are safe and have a feeling that school is a nice place to be. The feeling of safety is essential for enjoying one's time at school and also for the motivation for their studies (Olkinuora & Mattila, 2001).

The Russian pupils were not very satisfied with school, and even though they felt that school caused the least pressure in both data sets, life satisfaction was at the lowest level in Russia. This brought up the question about the role of school in the life course of the Russian pupils. The low life satisfaction could be linked with the low material well-being and health, but also some connection to the school sector was found. The Russian pupils' well-being was also more comprehensively related to the having factors, which have their own effect on school life. The whole system of upbringing in Russian society is undergoing a remarkable change, moving from the old towards new ways (Darmodekhin, 2003b). The problem of children being neglected is also remarkably more widespread in Russia

compared to the other countries (Darmodekhin, 2003a).

The Northwest Russian pupils' well-being was the most related to families' affluence; it had a more emphasised role in the predicting model, when compared to others. It appeared that there were not such great differences in their psychosocial well-being compared to others, but nothing was quite similar either. In NW Russia, families' wealth was not remarkably lower in subjective measures than in the other countries, but it had stronger effect on pupils' well-being. It raises the question of whether the improvements in the families' subjective wealth could lead to better psychosocial well-being. The Northwest Russian pupils' life in general seemed to be harsher, their health was lower, their free time was more accompanied with alcohol and smoking, they did not get as much support for their schoolwork, and they also suffered the most from bullying. This caused lowest satisfaction of all with life, but not with school where the Finnish pupils were even less satisfied.

School could have a great impact on the development on the pupils' own resources by increasing their social capital (Pulkkinen, 2002). School can also prevent the weakening of the social capital. Eventually the best environment for increasing the social capital of pupils is a school where the atmosphere is positive and motivating. According to Ireson & Hallam (2005) the feeling of acceptance, the feeling of belonging and support from classmates and teachers build up the pupils' conception and relationship towards school. Teachers and headmasters are in key positions when developing the school's atmosphere, but it is necessary to enlarge pedagogical thinking to include the idea that pupils are individuals. It is important that teachers could meet the pupils as individuals, even though in the school situation, the real meetings between a pupil and a teacher usually tend to be very rare. According to Hovila (2004) it is possible to arrange the teachers to meet pupils as individuals if it is set as an important goal for every teaching and learning period.

It can be concluded that this study has showed differences in the structures and the state of pupils' psychosocial well-being between the four studied countries in the Barents Region. The psychosocial well-being of the schoolchildren was mostly related to the loving factor/ *School atmosphere* in Northern Finland, Sweden and Norway. Being factor/ *Pressured by schoolwork* predicted either one or both life and

school satisfaction in all the countries. The importance of family's wealth was characteristic for northern Finnish, Swedish and Northwest Russian models. The living area was a predictor for *School satisfaction* in the northern Norwegian model, but predicted *Life satisfaction* in northern Swedish model. The health related factors were predictors in the models of all other countries except northern Finland.

8.3 The State of Well-being in the Barents Region Compared to Countries in General

One goal of this study was to compare the state of the pupils' psychosocial well-being between the northern areas (ArctiChildren data) and the studied countries in general (HBSC data). The structure of psychosocial well-being was fairly similarly built in both data sets, but even so some differences were found. Families' affluence was reported as being on a higher level in the north overall, being the highest in Norwegian AC and lowest in Russian HBSC data. The pupils in the north reported suffering less from psychosomatic symptoms compared to the countries in general. Substance use was usually less common in the AC data, but Northwest Russian pupils reported severe use compared to Russia generally. The academic achievement was also reported being higher in NW Russia, but not in the other countries.

When examining the loving factors, pupils in the AC data reported spending more time with their friends and getting more support from their school mates than pupils in the HBSC data. No differences were found in the pupils' school satisfaction or in schoolwork's causing pressure. But there was a clear difference in pupils' life satisfaction: Pupils in the AC data were more satisfied with their lives when compared with the HBSC data.

The explanatory analyses in the ArctiChildren data showed that there were differentiated structures in explaining life and school satisfaction, and that all three factors of well-being had impact on them. To conclude, it is important to be aware that differences in living conditions and schooling systems exist within each country as well as between the countries. According to the Arctic Human

Development Report (AHDR) about Human Health and Well-being (Hild & Stordahl, 2004), health challenges are unique to each Arctic community and there is a need for flexibility in community based services. As well there is a need for flexibility and common understanding to point out the reasons behind the state of psychosocial well-being, the state of school systems and different cultural foundations.

8.4 Suggestion for Further Research

This study provided an overall picture of the state of psychosocial well-being in the schools located in northern areas in Finland, Sweden and Norway and Northwest Russia. It showed some differences but also a lot of similar structures. The predictors of the indicators of psychosocial well-being proved school atmosphere to be a key element behind pupils' psychosocial well-being. The growing expectations for schools and education systems are moving towards the development of the whole person and his/her well-being. This is why it was both interesting and important to study the connections between the factors of psychosocial well-being and pupils' school and life satisfaction. This raised questions about the elements of the school cultures and pedagogical work in the studied countries.

This size of the survey yields a lot of data, which cannot be fully used or analysed in one research report. The analyses now presented have shown an overview of well-being factors, and showed a lead towards their prediction. There are still some attractive stones left to be turned when researching the elements of psychosocial well-being between the studied countries. This data points to individual well-being profiles as an interesting research question. It could be possible to create certain key indicators and count values, which could be used for grouping the pupils according to their well-being profile. The quality of those profiles could be analysed and compared between the countries, genders and school types. The use of multi-level modelling could reveal some new explanations, while stressing the connections between the factors. Analysing the data hierarchically by countries, schools and classrooms could bring more relevant information on the internal connections about the factors of well-being.

If going beyond this survey, it would be interesting to study the structure of school education and pedagogical practices in the direction of pupils' school and life satisfaction in the studied countries. How are elements such as feeling of belonging, safety and satisfaction taken in account in the schools' pedagogical work? Schools' intend to attain good learning results, support well-being and prevent displacement. *Pedagogical well-being* could be a concept and tool for assessing these kinds of processes; it is quite a new topic in the field of educational research. Pedagogical well-being research combines interaction between schools, families and individuals and aims to clarify the elements behind them. A study concerning these dimensions is underway at the University of Joensuu (Havu-Nuutinen, Mäkihonko, Haring, Niiranen, & Haapala, 2008; Lappalainen, Kuittinen & Meriläinen 2008).

Another research topic could consist of ethnographical work in schools. The data could be collected through ethnographical observations in the schools from different countries. The observations could be made on everyday schoolwork, paying special attention to interaction, socio-emotional goals and factors of psychosocial well-being in the different school cultures. Use of structured observations, interviews and questionnaires could bring elements of schooling into a new forum of discussion. It would also be important to listen to the children's voices. How do they themselves define their experiences of everyday life at schools? The different outcomes of the rather similar school systems especially in the Nordic countries are definitely questions worth answering.

The time could be ripe for a critical evaluation of the achievements of the neo-liberal education policy along with the PISA results (see Rinne et al., 2002). It would be very welcomed for future school studies and comparisons to include positive attitudes, atmosphere and support along with or instead of only academic skills and learning results. The idea would be to learn from each other and the different school cultures, hopefully this study is one step on that path.

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ATTACHMENTS

Attachment 1 Mothers' working situation comparison by cross tabulation, and χ^2 test

Data			Country				Total
			Finland	Sweden	Russia	Norway	
ArctiChildren	Mother job	Yes	82,5%	85,7%	80,8%	84,2%	83,3%
		No	17,5%	12,1%	16,0%	12,7%	14,7%
		Do not know		,8%	,9%	2,3%	,9%
		Do not have or see		1,5%	2,4%	,8%	1,2%
	Total		100,0%	100,0%	100,0%	100,0%	100,0%
HBSC study	Mother job	Yes	82,5%	87,0%	85,0%	84,8%	84,7%
		No	15,8%	11,8%	13,3%	13,2%	13,6%
		Do not know	,6%	,4%	,5%	1,1%	,7%
		Do not have or see	1,1%	,8%	1,1%	1,0%	1,0%
	Total		100,0%	100,0%	100,0%	100,0%	100,0%

Data * Mother job Crosstabulation

			Mother job				Total
			Yes	No	Do not know	Do not have or see	
data	ArctiChildren	Count	788	137	9	13	947
		% within data	83,2%	14,5%	1,0%	1,4%	100,0%
		Std. Residual	-,5	,7	1,0	1,0	
		HBSC study	Count	12326	1981	95	149
% within data	84,7%		13,6%	,7%	1,0%	100,0%	
Std. Residual	,1		-,2	-,3	-,3		
Total	Count		13114	2118	104	162	15498
	% within data	84,6%	13,7%	,7%	1,0%	100,0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2,916(a)	3	,405
Likelihood Ratio	2,695	3	,441
Linear-by-Linear Association	2,461	1	,117
N of Valid Cases	15498		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6,35.

Attacment 2 Fathers working situation comparison by cross tabulation and χ^2 test

Data * Father job * Country Crosstabulation

Country			Father job				Total
			Yes	No	Do not know	Do not have or see	Yes
Finland	data	ArctiChildren	83,8%	9,5%	1,2%	5,5%	100,0%
		HBSC study	84,3%	9,9%	1,5%	4,3%	100,0%
Swede	data	ArctiChildren	90,6%	5,5%	2,0%	2,0%	100,0%
		HBSC study	90,2%	6,2%	,9%	2,7%	100,0%
Russia	data	ArctiChildren	73,2%	8,9%	1,9%	16,0%	100,0%
		HBSC study	83,9%	4,0%	1,6%	10,5%	100,0%
Norway	data	ArctiChildren	87,9%	7,7%	1,6%	2,7%	100,0%
		HBSC study	90,6%	4,8%	1,3%	3,3%	100,0%

Data * Father job Crosstabulation

			Father job				Total
			Yes	No	Do not know	Do not have or see	Total
data	ArctiChildren	Count	791	75	16	65	947
		% within data	83,5%	7,9%	1,7%	6,9%	100,0%
		Std. Residual	-,9	2,3	,7	,9	
		HBSC study	Count	12647	866	202	896
		Count	12647	866	202	896	14611
		% within data	86,6%	5,9%	1,4%	6,1%	100,0%
		Std. Residual	,2	-,6	-,2	-,2	
		HBSC study	Count	12647	866	202	896
Total		Count	13438	941	218	961	15558
		% within data	86,4%	6,0%	1,4%	6,2%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8,153(a)	3	,043
Likelihood Ratio	7,614	3	,055
Linear-by-Linear Association	3,431	1	,064
N of Valid Cases	15558		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 13,27.

Attachment 3 Comparison of having own bedroom, cross tabulations and χ^2 test

3a data * Own bedroom cross tabulation

Country				Own bedroom		Total
				No	Yes	
Finland	data	ArctiChildren	Count	32	218	250
			% within data	12,8%	87,2%	100,0%
			Std. Residual	,7	-,3	
		WHO study	Count	383	3051	3434
			% within data	11,2%	88,8%	100,0%
			Std. Residual	-,2	,1	
	Total		Count	415	3269	3684
			% within data	11,3%	88,7%	100,0%
Sweden	data	ArctiChildren	Count	10	243	253
			% within data	4,0%	96,0%	100,0%
			Std. Residual	-1,5	,4	
		WHO study	Count	157	2229	2386
			% within data	6,6%	93,4%	100,0%
			Std. Residual	,5	-,1	
	Total		Count	167	2472	2639
			% within data	6,3%	93,7%	100,0%
Russia	data	ArctiChildren	Count	72	185	257
			% within data	28,0%	72,0%	100,0%
			Std. Residual	-2,1	1,6	
		WHO study	Count	2000	3498	5498
			% within data	36,4%	63,6%	100,0%
			Std. Residual	,5	-,3	
	Total		Count	2072	3683	5755
			% within data	36,0%	64,0%	100,0%
Norway	data	ArctiChildren	Count	3	180	183
			% within data	1,6%	98,4%	100,0%
			Std. Residual	-1,9	,4	
		WHO study	Count	162	3185	3347
			% within data	4,8%	95,2%	100,0%
			Std. Residual	,4	-,1	
	Total		Count	165	3365	3530
			% within data	4,7%	95,3%	100,0%

3bChi-Square Tests Own bedroom

Country		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Finland	Pearson Chi-Square	,632(b)	1	,427		
	Continuity Correction(a)	,478	1	,489		
	Likelihood Ratio	,611	1	,435		
	Fisher's Exact Test					
	Linear-by-Linear Association	,632	1	,427		
	N of Valid Cases	3684				
Sweden	Pearson Chi-Square	2,664(c)	1	,103		
	Continuity Correction(a)	2,239	1	,135		
	Likelihood Ratio	3,011	1	,083		
	Fisher's Exact Test					
	Linear-by-Linear Association	2,663	1	,103		
	N of Valid Cases	2639				
Russia	Pearson Chi-Square	7,450(d)	1	,006		
	Continuity Correction(a)	7,091	1	,008		
	Likelihood Ratio	7,729	1	,005		
	Fisher's Exact Test					
	Linear-by-Linear Association	7,448	1	,006		
	N of Valid Cases	5755				
Norway	Pearson Chi-Square	3,990(e)	1	,046		
	Continuity Correction(a)	3,304	1	,069		
	Likelihood Ratio	5,201	1	,023		
	Fisher's Exact Test					
	Linear-by-Linear Association	3,988	1	,046		
	N of Valid Cases	3530				

a Computed only for a 2x2 table

b 0 cells (,0%) have expected count less than 5. The minimum expected count is 28,16.

c 0 cells (,0%) have expected count less than 5. The minimum expected count is 16,01.

d 0 cells (,0%) have expected count less than 5. The minimum expected count is 92,53.

e 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,55.

3cChi-Square Tests own bedroom data cross tabulation

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	21,680(b)	1	,000		
Continuity Correction(a)	21,275	1	,000		
Likelihood Ratio	23,671	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	21,679	1	,000		
N of Valid Cases	15608				

a Computed only for a 2x2 table

b 0 cells (,0%) have expected count less than 5. The minimum expected count is 170,32.

4 Family well off cross tabulation and χ^2 test

4a Data * Family well off cross tabulation by countries

Country				Family well off					Total
				Very well off	Quite well of	Average	Not very well off	Not at all well off	
Fin	data	Arcti Children	Count	50	132	58	12	0	252
			% within data	19,8%	52,4%	23,0%	4,8%	,0%	100,0%
			Std. Residual	-2,3	3,9	-1,9	-,2	-1,1	
		HBSC study	Count	957	1232	1028	173	19	3409
			% within data	28,1%	36,1%	30,2%	5,1%	,6%	100,0%
			Std. Residual	,6	-1,1	,5	,1	,3	
	Total		Count	1007	1364	1086	185	19	3661
			% within data	27,5%	37,3%	29,7%	5,1%	,5%	100,0%
Swe	data	Arcti Children	Count	65	106	62	11	2	246
			% within data	26,4%	43,1%	25,2%	4,5%	,8%	100,0%
			Std. Residual	-,3	,1	1,0	-,9	-1,0	
		HBSC study	Count	653	1019	521	145	40	2378
			% within data	27,5%	42,9%	21,9%	6,1%	1,7%	100,0%
			Std. Residual	,1	,0	-,3	,3	,3	
	Total		Count	718	1125	583	156	42	2624
			% within data	27,4%	42,9%	22,2%	5,9%	1,6%	100,0%
Rus	data	Arcti Children	Count	50	106	84	9	0	249
			% within data	20,1%	42,6%	33,7%	3,6%	,0%	100,0%

No	data	HBSC study	Std. Residual	6,9	-2,2	,3	-1,6	-,9	
			Count	401	2935	1804	348	17	5505
			% within data	7,3%	53,3%	32,8%	6,3%	,3%	100,0%
		Total	Std. Residual	-1,5	,5	-,1	,3	,2	
			Count	451	3041	1888	357	17	5754
			% within data	7,8%	52,9%	32,8%	6,2%	,3%	100,0%
	Arcti Children	HBSC study	Count	65	64	46	6	0	181
			% within data	35,9%	35,4%	25,4%	3,3%	,0%	100,0%
			Std. Residual	8,6	-2,4	-1,7	-1,2	-1,4	
		Total	Count	389	1619	1099	181	40	3328
			% within data	11,7%	48,6%	33,0%	5,4%	1,2%	100,0%
			Std. Residual	-2,0	,6	,4	,3	,3	
		Total	Count	454	1683	1145	187	40	3509
			% within data	12,9%	48,0%	32,6%	5,3%	1,1%	100,0%

4b Chi-Square Tests, Family well-off, data corss tabulation by country

Country		Value	df	Asymp. Sig. (2-sided)
Finland	Pearson Chi-Square	27,876(a)	4	,000
	Likelihood Ratio	28,340	4	,000
	Linear-by-Linear Association	,043	1	,837
	N of Valid Cases	3661		
Sweden	Pearson Chi-Square	3,223(b)	4	,521
	Likelihood Ratio	3,478	4	,481
	Linear-by-Linear Association	,060	1	,806
	N of Valid Cases	2624		
Russia	Pearson Chi-Square	58,620(c)	4	,000
	Likelihood Ratio	45,741	4	,000
	Linear-by-Linear Association	14,706	1	,000
	N of Valid Cases	5754		
Norway	Pearson Chi-Square	90,844(d)	4	,000
	Likelihood Ratio	69,819	4	,000
	Linear-by-Linear Association	41,112	1	,000
	N of Valid Cases	3509		

a 1 cells (10,0%) have expected count less than 5. The minimum expected count is 1,31.

b 1 cells (10,0%) have expected count less than 5. The minimum expected count is 3,94.

c 1 cells (10,0%) have expected count less than 5. The minimum expected count is ,74.

d 1 cells (10,0%) have expected count less than 5. The minimum expected count is 2,06.

Attachment 5 Academic achievement cross tabulations and χ^2 test

5a Chi-Square Tests Academic achievement between genders

Country		Value	df	Asymp. Sig. (2-sided)
Finland	Pearson Chi-Square	4,247(a)	3	,236
	Likelihood Ratio	4,482	3	,214
	Linear-by-Linear Association	,166	1	,683
	N of Valid Cases	3646		
Sweden	Pearson Chi-Square	9,968(b)	3	,019
	Likelihood Ratio	8,604	3	,035
	Linear-by-Linear Association	,126	1	,723
	N of Valid Cases	2637		
Russia	Pearson Chi-Square	37,512(c)	3	,000
	Likelihood Ratio	40,992	3	,000
	Linear-by-Linear Association	7,193	1	,007
	N of Valid Cases	5762		
Norway	Pearson Chi-Square	2,466(d)	3	,481
	Likelihood Ratio	2,505	3	,474
	Linear-by-Linear Association	,302	1	,583
	N of Valid Cases	3519		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 12,96.

b 0 cells (,0%) have expected count less than 5. The minimum expected count is 9,84.

c 0 cells (,0%) have expected count less than 5. The minimum expected count is 17,69.

d 0 cells (,0%) have expected count less than 5. The minimum expected count is 10,09.

5b Chi-Square Tests Academic achievement by country and data

data		Value	df	Asymp. Sig. (2-sided)
ArctiChildren	Pearson Chi-Square	48,109(a)	9	,000
	Likelihood Ratio	55,441	9	,000
	Linear-by-Linear Association	,799	1	,372
	N of Valid Cases	946		
HBSC study	Pearson Chi-Square	448,830(b)	9	,000
	Likelihood Ratio	462,843	9	,000
	Linear-by-Linear Association	3,546	1	,060
	N of Valid Cases	14618		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 9,14.

5cCountry * Academic achievement cross tabulation

data				Academic achievement				Total
				Very good	Good	Average	Below average	
ArctiChildren	Country	Finland	Count	27	107	106	10	250
			% within Country	10,8%	42,8%	42,4%	4,0%	100,0%
			Std. Residual	,0	-1,1	1,6	-,7	
		Sweden	Count	42	113	79	18	252
			% within Country	16,7%	44,8%	31,3%	7,1%	100,0%
			Std. Residual	2,8	-,7	-1,3	1,5	
		Russia	Count	6	140	107	7	260
			% within Country	2,3%	53,8%	41,2%	2,7%	100,0%
			Std. Residual	-4,2	1,4	1,3	-1,6	
		Norway	Count	28	92	52	12	184
			% within Country	15,2%	50,0%	28,3%	6,5%	100,0%
			Std. Residual	1,8	,4	-1,8	,9	
		Total	Count	103	452	344	47	946
			% within Country	10,9%	47,8%	36,4%	5,0%	100,0%
HBSC study	Country	Finland	Count	497	1308	1412	179	3396
			% within Country	14,6%	38,5%	41,6%	5,3%	100,0%
			Std. Residual	5,0	-2,6	,6	-1,7	
		Sweden	Count	329	1163	808	85	2385
			% within Country	13,8%	48,8%	33,9%	3,6%	100,0%
			Std. Residual	3,0	5,6	-5,4	-4,8	
		Russia	Count	386	2042	2644	430	5502
			% within Country	7,0%	37,1%	48,1%	7,8%	100,0%
			Std. Residual	-10,2	-4,9	8,3	5,5	
		Norway	Count	502	1533	1119	181	3335
			% within Country	15,1%	46,0%	33,6%	5,4%	100,0%
			Std. Residual	5,6	4,1	-6,7	-1,3	
		Total	Count	1714	6046	5983	875	14618
			% within Country	11,7%	41,4%	40,9%	6,0%	100,0%

Attachment 6 Mean comparisons of summed psychosomatic symptoms and symptoms more than once a week

6a Means of the Summed symptoms reversed

data	Mean	N	Std. Deviation
ArctiChildren	13,9923	911	5,17994
HBSC study	14,4015	14510	5,41927
Total	14,3773	15421	5,40612

6b ANOVA Table comparison between the data sets

		Sum of Squares	df	Mean Square	F	Sig.
Summed symptoms reversed * data	Between Groups	143,531	1	143,531	4,912	,027
	Within Groups	450523,713	15419	29,219		
	Total	450667,243	15420			

6c ANOVA Table Summed symptoms comparison between the genders

data			Sum of Squares	df	Mean Square	F	Sig.
Arcti Children	Summed symptoms reversed *	Between Groups	1551,728	1	1551,728	61,582	,000
		Within Groups	22829,183	906	25,198		
	Gender	Total	24380,911	907			
WHO study	Summed symptoms reversed *	Between Groups	21470,486	1	21470,486	769,812	,000
		Within Groups	404636,281	14508	27,891		
	Gender	Total	426106,767	14509			

6d Means of Psychosomatic symptoms more than once a week

data	Gender	Mean	N	Std. Deviation
ArctiChildren	Boy	,7893	484	1,35783
	Girl	1,3546	471	1,58704
	Total	1,0681	955	1,50142
HBSC study	Boy	,8398	7164	1,40172
	Girl	1,4733	7575	1,77372
	Total	1,1653	14739	1,63463

6e ANOVA Table Gender comparison, Psychosomatic symptoms more than once a week

data			Sum of Squares	df	Mean Square	F	Sig.
Arcti Children	Symptoms more than once a week * Gender	Between Groups	76,284	1	76,284	35,048	,000
		Within Groups	2074,292	953	2,177		
		Total	2150,576	954			
HBSC study	Symptoms more than once a week * Gender	Between Groups	1477,683	1	1477,683	574,545	,000
		Within Groups	37902,375	14737	2,572		
		Total	39380,058	14738			

6f Means of Symptoms more than once a week

data	Mean	N	Std. Deviation
ArctiChildren	1,0678	958	1,49977
HBSC study	1,1653	14739	1,63463
Total	1,1594	15697	1,62684

6g ANOVA Table symptoms more than once a week data comparison

		Sum of Squares	df	Mean Square	F	Sig.
Two or more symptoms more than once a week * data	Between Groups	8,550	1	8,550	3,231	,072
	Within Groups	41532,647	15695	2,646		
	Total	41541,197	15696			

Attachment 7 Self rated health cross tabulation and χ^2 test

7a Country * Health Crosstabulation by data sets

data				Health				Total
				Excellent	Good	Fair	Poor	
Arcti Children	Country	Finland	Count	75	147	28	2	252
			% within Country	29,8%	58,3%	11,1%	,8%	100,0%
			Std. Residual	,3	1,4	-2,5	-1,2	
			Count	106	116	29	3	254
		Sweden	% within Country	41,7%	45,7%	11,4%	1,2%	100,0%
			Std. Residual	3,9	-1,4	-2,3	-,7	
			Count	30	146	77	7	260
			% within Country	11,5%	56,2%	29,6%	2,7%	100,0%
			Std. Residual	-5,2	,9	4,6	1,1	
		Norway	Count	61	84	33	5	183
			% within Country	33,3%	45,9%	18,0%	2,7%	100,0%
			Std. Residual	1,2	-1,1	,1	1,0	
			Count	272	493	167	17	949
			% within Country	28,7%	51,9%	17,6%	1,8%	100,0%
		Total						
HBSC study	Country	Finland	Count	969	2038	402	25	3434
			% within Country	28,2%	59,3%	11,7%	,7%	100,0%
			Std. Residual	4,1	5,5	-10,6	-7,6	
		Sweden	Count	949	1093	307	51	2400
			% within Country	39,5%	45,5%	12,8%	2,1%	100,0%
			Std. Residual	14,6	-4,7	-7,7	-2,3	
		Russia	Count	717	2907	1639	244	5507
			% within Country	13,0%	52,8%	29,8%	4,4%	100,0%
			Std. Residual	-17,5	,2	16,7	6,4	
		Norway	Count	999	1677	552	112	3340
			% within Country	29,9%	50,2%	16,5%	3,4%	100,0%
			Std. Residual	6,0	-1,9	-4,2	1,4	
			Count	3634	7715	2900	432	14681
		Total	% within Country	24,8%	52,6%	19,8%	2,9%	100,0%

7b Chi-Square Tests, Self rated health Country-Data cross tabulation

data		Value	df	Asymp. Sig. (2-sided)
ArctiChildren	Pearson Chi-Square	86,224(a)	9	,000
	Likelihood Ratio	90,349	9	,000
	Linear-by-Linear Association	15,874	1	,000
	N of Valid Cases	949		
HBSC study	Pearson Chi-Square	1201,415(b)	9	,000
	Likelihood Ratio	1241,103	9	,000
	Linear-by-Linear Association	204,915	1	,000
	N of Valid Cases	14681		

a 4 cells (25,0%) have expected count less than 5. The minimum expected count is 3,28.

b 0 cells (,0%) have expected count less than 5. The minimum expected count is 70,62.

Attachment 8 Mean differences of the social relations

8 Mean comparisons

data			Country	Number of friends	Evenings with friends	E-communication with friends
ArctiChildren	Finland	Mean		3,0314	4,17	3,55
		N		239	252	252
		Std. Deviation		,84643	2,240	1,383
	Sweden	Mean		3,2238	2,95	3,41
		N		239	243	250
		Std. Deviation		,77181	2,130	1,333
	Russia	Mean		3,3481	5,07	4,06
		N		260	260	260
		Std. Deviation		,76796	2,325	1,388
	Norway	Mean		3,5625	4,23	4,07
		N		176	180	182
		Std. Deviation		,67744	2,248	1,206
	Total	Mean		3,2741	4,11	3,75
		N		914	935	944
		Std. Deviation		,79435	2,367	1,369
HBSC study	Finland	Mean		3,0181	3,56	3,62
		N		3309	3392	3418
		Std. Deviation		,82991	2,195	1,287
	Sweden	Mean		3,4124	2,36	3,54
		N		2324	2371	2393
		Std. Deviation		,73382	2,031	1,323

Russia	Mean	3,2158	3,86	3,67
	N	5471	4934	5490
	Std. Deviation	,84140	2,143	1,511
Norway	Mean	3,5391	3,50	3,93
	N	3173	3316	3347
	Std. Deviation	,70222	2,074	1,223
Total	Mean	3,2738	3,45	3,70
	N	14277	14013	14648
	Std. Deviation	,81441	2,182	1,374

Attachment 9 Social relations

9 Multiple Comparisons Tukey HSD, social relations by data and country

data	Dependent Variable	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Upper Bound	Lower Bound
Arctic Children	Male and female friends/2	Finland	Sweden	-,19247(*)	,07082	,034	-,3747	-,0102
			Russia	-,31670(*)	,06937	,000	-,4952	-,1381
			Norway	-,53112(*)	,07689	,000	-,7290	-,3332
		Sweden	Finland	,19247(*)	,07082	,034	,0102	,3747
			Russia	-,12423	,06937	,278	-,3028	,0543
			Norway	-,33865(*)	,07689	,000	-,5366	-,1407
		Russia	Finland	,31670(*)	,06937	,000	,1381	,4952
			Sweden	,12423	,06937	,278	-,0543	,3028
			Norway	-,21442(*)	,07556	,024	-,4089	-,0199
		Norway	Finland	,53112(*)	,07689	,000	,3332	,7290
			Sweden	,33865(*)	,07689	,000	,1407	,5366
			Russia	,21442(*)	,07556	,024	,0199	,4089
	Evenings with friends	Finland	Sweden	1,220(*)	,201	,000	,70	1,74
			Russia	-,899(*)	,198	,000	-1,41	-,39
			Norway	-,067	,218	,990	-,63	,50
		Sweden	Finland	-1,220(*)	,201	,000	-1,74	-,70
			Russia	-2,119(*)	,200	,000	-2,63	-1,61
			Norway	-1,287(*)	,220	,000	-1,85	-,72
		Russia	Finland	,899(*)	,198	,000	,39	1,41
			Sweden	2,119(*)	,200	,000	1,61	2,63
			Norway	,832(*)	,217	,001	,27	1,39
		Norway	Finland	,067	,218	,990	-,50	,63
			Sweden	1,287(*)	,220	,000	,72	1,85
			Russia	-,832(*)	,217	,001	-1,39	-,27

HBSC study	E-communication with friends	Finland	Sweden	,136	,120	,668	-,17	,44
			Russia	-,514(*)	,118	,000	-,82	-,21
			Norway	-,518(*)	,130	,000	-,85	-,18
		Sweden	Finland	-,136	,120	,668	-,44	,17
			Russia	-,650(*)	,119	,000	-,95	-,34
			Norway	-,654(*)	,130	,000	-,99	-,32
		Russia	Finland	,514(*)	,118	,000	,21	,82
			Sweden	,650(*)	,119	,000	,34	,95
			Norway	-,004	,129	1,000	-,34	,33
		Norway	Finland	,518(*)	,130	,000	,18	,85
			Sweden	,654(*)	,130	,000	,32	,99
			Russia	,004	,129	1,000	-,33	,34
	Male and female friends/2	Finland	Sweden	-,39430(*)	,02145	,000	-,4494	-,3392
			Russia	-,19764(*)	,01745	,000	-,2425	-,1528
			Norway	-,52095(*)	,01969	,000	-,5715	-,4703
		Sweden	Finland	,39430(*)	,02145	,000	,3392	,4494
			Russia	,19666(*)	,01962	,000	,1462	,2471
			Norway	-,12664(*)	,02164	,000	-,1822	-,0710
		Russia	Finland	,19764(*)	,01745	,000	,1528	,2425
			Sweden	-,19666(*)	,01962	,000	-,2471	-,1462
			Norway	-,32331(*)	,01769	,000	-,3687	-,2779
		Norway	Finland	,52095(*)	,01969	,000	,4703	,5715
			Sweden	,12664(*)	,02164	,000	,0710	,1822
			Russia	,32331(*)	,01769	,000	,2779	,3687
	Evenings with friends	Finland	Sweden	1,203(*)	,057	,000	1,06	1,35
			Russia	-,299(*)	,047	,000	-,42	-,18
			Norway	,058	,052	,681	-,08	,19
		Sweden	Finland	-1,203(*)	,057	,000	-1,35	-1,06
			Russia	-1,502(*)	,053	,000	-1,64	-1,37
			Norway	-1,145(*)	,057	,000	-1,29	-1,00
		Russia	Finland	,299(*)	,047	,000	,18	,42
			Sweden	1,502(*)	,053	,000	1,37	1,64
			Norway	,357(*)	,048	,000	,23	,48
		Norway	Finland	-,058	,052	,681	-,19	,08
			Sweden	1,145(*)	,057	,000	1,00	1,29
			Russia	-,357(*)	,048	,000	-,48	-,23
	Ecommunication with friends	Finland	Sweden	,077	,036	,153	-,02	,17
			Russia	-,058	,030	,208	-,13	,02
			Norway	-,313(*)	,033	,000	-,40	-,23
		Sweden	Finland	-,077	,036	,153	-,17	,02
			Russia	-,135(*)	,033	,000	-,22	-,05
			Norway	-,389(*)	,037	,000	-,48	-,30
		Russia	Finland	,058	,030	,208	-,02	,13
			Sweden	,135(*)	,033	,000	,05	,22
			Norway	-,255(*)	,030	,000	-,33	-,18
		Norway	Finland	,313(*)	,033	,000	,23	,40
			Sweden	,389(*)	,037	,000	,30	,48
			Russia	,255(*)	,030	,000	,18	,33

* The mean difference is significant at the .05 level.

Attachment 10 Variance analysis of the social relations, between the AC and HBSC-data

10a ANOVA Table, mean differences between the data sets

			Sum of Squares	df	Mean Square	F	Sig.
Number of friends * data	Between Groups	(Combined)	,000	1	,000	,000	,993
	Within Groups		10044,799	15189	,661		
	Total		10044,799	15190			
Evenings with friends * data	Between Groups	(Combined)	386,039	1	386,039	80,174	,000
	Within Groups		71965,516	14946	4,815		
	Total		72351,554	14947			
E-communication with friends * data	Between Groups	(Combined)	2,783	1	2,783	1,475	,225
	Within Groups		29410,092	15590	1,886		
	Total		29412,875	15591			

10b ANOVA Table, mean differences between the data sets by country

Country			Sum of Squares	df	Mean Square	F	Sig.
Fin	Number of friends * data	Between Groups	(Comb.) ,039	1	,039	,057	,812
		Within Groups	2448,927	3546	,691		
		Total	2448,966	3547			
	Evenings with friends * data	Between Groups	(Comb.) 86,209	1	86,209	17,849	,000
		Within Groups	17590,611	3642	4,830		
		Total	17676,820	3643			
	E-communication with friends * data	Between Groups	(Comb.) 1,112	1	1,112	,664	,415
		Within Groups	6138,585	3668	1,674		
		Total	6139,696	3669			
Swe	Number of friends* data	Between Groups	(Comb.) 7,707	1	7,707	14,173	,000
		Within Groups	1392,705	2561	,544		
		Total	1400,412	2562			
	Evenings with friends * data	Between Groups	(Comb.) 76,425	1	76,425	18,359	,000
		Within Groups	10873,013	2612	4,163		
		Total	10949,438	2613			
	E-communication with friends * data	Between Groups	(Comb.) 3,703	1	3,703	2,113	,146
		Within Groups	4629,003	2641	1,753		
		Total	4632,706	2642			
Rus	Number of	Between Groups	(Comb.) 4,345	1	4,345	6,183	,013

Nor	friends * data	Groups					
		Within Groups	4025,278	5729	,703		
		Total	4029,622	5730			
	Evenings with friends * data	Between (Comb.) Groups	359,007	1	359,007	77,475	,000
		Within Groups	24058,835	5192	4,634		
		Total	24417,842	5193			
	E-communi cation with friends * data	Between (Comb.) Groups	37,187	1	37,187	16,412	,000
		Within Groups	13024,345	5748	2,266		
		Total	13061,532	5749			
	Number of friends * data	Between (Comb.) Groups	,091	1	,091	,186	,666
		Within Groups	1644,467	3347	,491		
		Total	1644,558	3348			
	Evenings with friends * data	Between (Comb.) Groups	91,138	1	91,138	20,998	,000
		Within Groups	15165,176	3494	4,340		
		Total	15256,313	3495			
	Ecommuni cation with friends * data	Between (Comb.) Groups	3,228	1	3,228	2,160	,142
		Within Groups	5271,427	3527	1,495		
		Total	5274,655	3528			

Attachment 11 Being bullied cross tabulation and and χ^2 test

11a Chi-Square Tests between countries

data		Value	df	Asymp. Sig. (2-sided)
ArctiChildre n	Pearson Chi-Square	80,632(a)	12	,000
	Likelihood Ratio	86,615	12	,000
	Linear-by-Linear Association	6,010	1	,014
	N of Valid Cases	944		
HBSC study	Pearson Chi-Square	425,051(b)	12	,000
	Likelihood Ratio	429,696	12	,000
	Linear-by-Linear Association	54,507	1	,000
	N of Valid Cases	14600		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,01.

b 0 cells (,0%) have expected count less than 5. The minimum expected count is

11b Country * Bullied Crosstabulation

			Have not	Once or twice	2-3 times per month	Once a week	Several times per week	Have not
Arcti Children	Finland	Count	182	42	15	10	3	252
		% within Country	72,2%	16,7%	6,0%	4,0%	1,2%	100,0%
		Std. Residual	-,6	,9	1,6	1,2	-1,8	
	Sweden	Count	230	16	1	2	1	250
		% within Country	92,0%	6,4%	,4%	,8%	,4%	100,0%
		Std. Residual	3,0	-3,4	-2,8	-1,9	-2,5	
	Russia	Count	172	41	15	10	22	260
		% within Country	66,2%	15,8%	5,8%	3,8%	8,5%	100,0%
		Std. Residual	-1,7	,5	1,5	1,1	4,6	
	Norway	Count	129	38	6	4	5	182
		% within Country	70,9%	20,9%	3,3%	2,2%	2,7%	100,0%
		Std. Residual	-,7	2,3	-,4	-,5	-,4	
	Total	Count	713	137	37	26	31	944
		% within Country	75,5%	14,5%	3,9%	2,8%	3,3%	100,0%
		Std. Residual						
HBSC study	Finland	Count	2686	448	121	87	81	3423
		% within Country	78,5%	13,1%	3,5%	2,5%	2,4%	100,0%
		Std. Residual	2,8	-3,5	-1,6	1,5	-4,7	
	Sweden	Count	1998	240	43	35	40	2356
		% within Country	84,8%	10,2%	1,8%	1,5%	1,7%	100,0%
		Std. Residual	5,9	-6,5	-5,4	-2,2	-5,6	
	Russia	Count	3729	958	300	138	381	5506
		% within Country	67,7%	17,4%	5,4%	2,5%	6,9%	100,0%
		Std. Residual	-5,7	3,7	5,0	1,7	10,9	
	Norway	Count	2438	608	133	56	80	3315
		% within Country	73,5%	18,3%	4,0%	1,7%	2,4%	100,0%
		Std. Residual	-,5	4,3	-,2	-1,9	-4,5	
	Total	Count	10851	2254	597	316	582	14600
		% within Country	74,3%	15,4%	4,1%	2,2%	4,0%	100,0%

11c Chi-Square Tests between HBSC and AC data sets

Country		Value	df	Asymp. Sig. (2-sided)
Finland	Pearson Chi-Square	10,365(a)	4	,035
	Likelihood Ratio	9,755	4	,045
	Linear-by-Linear Association	2,020	1	,155
	N of Valid Cases	3675		
Sweden	Pearson Chi-Square	10,554(b)	4	,032
	Likelihood Ratio	13,102	4	,011
	Linear-by-Linear Association	8,910	1	,003
	N of Valid Cases	2606		
Russia	Pearson Chi-Square	3,099(c)	4	,541
	Likelihood Ratio	2,837	4	,585
	Linear-by-Linear Association	1,576	1	,209
	N of Valid Cases	5766		
Norway	Pearson Chi-Square	1,330(d)	4	,856
	Likelihood Ratio	1,298	4	,862
	Linear-by-Linear Association	,379	1	,538
	N of Valid Cases	3497		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,76.

b 3 cells (30,0%) have expected count less than 5. The minimum expected count is 3,55.

c 0 cells (,0%) have expected count less than 5. The minimum expected count is 6,67.

d 2 cells (20,0%) have expected count less than 5. The minimum expected count is 3,12.

Attachment 12 Other pupils support Crosstabulations and χ^2 tests

12a Other pupils support Country Crosstabulation

data				Country				Total
				Finland	Sweden	Russia	Norway	
Arcti Children	Pupils' support	Strongly agree	Count	39	52	25	45	161
			% within Country	15,4%	21,5%	9,6%	24,9%	17,2%
			Std. Residual	-,7	1,6	-2,9	2,5	
		Agree	Count	149	140	108	83	480
			% within Country	58,9%	57,9%	41,5%	45,9%	51,3%
			Std. Residual	1,7	1,4	-2,2	-1,0	
	Neither nor		Count	57	43	103	41	244
			% within Country	22,5%	17,8%	39,6%	22,7%	26,1%
			Std. Residual	-1,1	-2,5	4,3	-,9	

HBSC study	Pupils' support	Disagree	Count	8	5	21	9	43
			% within Country	3,2%	2,1%	8,1%	5,0%	4,6%
			Std. Residual	-1,1	-1,8	2,6	,2	
		Strongly disagree	Count	0	2	3	3	8
			% within Country	,0%	,8%	1,2%	1,7%	,9%
			Std. Residual	-1,5	,0	,5	1,2	
		Total	Count	253	242	260	181	936
			% within Country	100,0%	100,0%	100,0%	100,0%	100,0%
			Std. Residual					
		Strongly agree	Count	432	462	479	706	2079
			% within Country	12,8%	19,6%	8,8%	21,2%	14,3%
			Std. Residual	-2,3	6,8	-10,9	10,5	
		Agree	Count	1922	1399	2158	1854	7333
			% within Country	57,0%	59,2%	39,4%	55,7%	50,5%
			Std. Residual	5,4	6,0	-11,5	4,3	
		Neither nor	Count	807	406	2256	617	4086
			% within Country	23,9%	17,2%	41,2%	18,5%	28,1%
			Std. Residual	-4,6	-10,0	18,3	-10,4	
		Disagree	Count	188	83	515	122	908
			% within Country	5,6%	3,5%	9,4%	3,7%	6,2%
			Std. Residual	-1,6	-5,3	9,4	-6,0	
		Strongly disagree	Count	22	12	66	29	129
			% within Country	,7%	,5%	1,2%	,9%	,9%
			Std. Residual	-1,4	-2,0	2,5	-,1	
		Total	Count	3371	2362	5474	3328	14535
			% within Country	100,0%	100,0%	100,0%	100,0%	100,0%
			Std. Residual					

12b Chi-Square Tests Other pupils' support, cross tabulation with countries

data		Value	df	Asymp. Sig. (2-sided)
ArctiChildren	Pearson Chi-Square	70,618(a)	12	,000
	Likelihood Ratio	71,467	12	,000
	Linear-by-Linear Association	5,925	1	,015
	N of Valid Cases	936		
HBSC study	Pearson Chi-Square	1224,767(b)	12	,000
	Likelihood Ratio	1222,051	12	,000
	Linear-by-Linear Association	1,611	1	,204
	N of Valid Cases	14535		

a 4 cells (20,0%) have expected count less than 5. The minimum expected count is 1,55.

b 0 cells (,0%) have expected count less than 5. The minimum expected count is 20,96.

12c Chi-Square Tests Other pupils' support cross tabulation with data set, by countries

Country		Value	df	Asymp. Sig. (2-sided)
Finland	Pearson Chi-Square	5,754(a)	4	,218
	Likelihood Ratio	7,641	4	,106
	Linear-by-Linear Association	4,695	1	,030
	N of Valid Cases	3624		
Sweden	Pearson Chi-Square	2,302(b)	4	,680
	Likelihood Ratio	2,438	4	,656
	Linear-by-Linear Association	,432	1	,511
	N of Valid Cases	2604		
Russia	Pearson Chi-Square	1,122(c)	4	,891
	Likelihood Ratio	1,136	4	,889
	Linear-by-Linear Association	1,013	1	,314
	N of Valid Cases	5734		
Norway	Pearson Chi-Square	7,582(d)	4	,108
	Likelihood Ratio	7,329	4	,119
	Linear-by-Linear Association	,808	1	,369
	N of Valid Cases	3509		

a 1 cells (10,0%) have expected count less than 5. The min. expected count is 1,54.

b 1 cells (10,0%) have expected count less than 5. The min. expected count is 1,30.

c 1 cells (10,0%) have expected count less than 5. The min. expected count is 3,13.

d 1 cells (10,0%) have expected count less than 5. The min. expected count is 1,65.

12d Mean comparisons opher pupils support sum, not rnd

data	Mean	N	Std. Deviation
ArctiChildren	6,6378	936	2,27194
WHO study	6,9090	14535	2,32988
Total	6,8926	15471	2,32725

m104-106

12e ANOVA Table, summed Other pupils support mean comparisons, not rnd

		Sum of Squares	df	Mean Square	F	Sig.
Other pupils' support, sum	Between Groups (Combined)	64,690	1	64,690	11,953	,001
	Within Groups	83721,981	15469	5,412		
	Total	83786,671	15470			

m104-106

Attachment 13 School atmosphere cross tabulations and and χ^2 tests

13 a country * Atmosphere 1low, 2 med, 3 high Crosstabulation

			Atmosphere 1low, 2 med, 3 high			Total
			Low	Medium	High	
country	Finland	Count	43	202	157	402
		% within country	10,7%	50,2%	39,1%	100,0%
		Std. Residual	-,7	2,3	-1,9	
	Sweden	Count	42	137	196	375
		% within country	11,2%	36,5%	52,3%	100,0%
		Std. Residual	-,4	-1,9	2,0	
	Norway	Count	38	103	115	256
		% within country	14,8%	40,2%	44,9%	100,0%
		Std. Residual	1,4	-,6	-,1	
Total		Count	123	442	468	1033
		% within country	11,9%	42,8%	45,3%	100,0%

13b Chi-Square Tests Atmosphere

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19,041(a)	4	,001
Likelihood Ratio	18,815	4	,001
Linear-by-Linear Association	,016	1	,898
N of Valid Cases	1033		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 30,48.

Attachment 14 School satisfaction cross tabulation and χ^2 tests

14a School satisfaction data Crosstabulation by country

Country				Liking school käään				Total
				Not at all	Not very much	Like a bit	Like a lot	
Finland	data	Arcti Children	Count	18	85	131	16	250
			% within data	7,2%	34,0%	52,4%	6,4%	100,0%
			Std. Residual	-1,5	-,2	,9	-,2	
			Count	345	1164	1597	223	3329
		HBSC study	% within data	10,4%	35,0%	48,0%	6,7%	100,0%
			Std. Residual	,4	,1	-,3	,0	
			Count	363	1249	1728	239	3579
			% within data	10,1%	34,9%	48,3%	6,7%	100,0%
		Total	Count	363	1249	1728	239	3579
			% within data	10,1%	34,9%	48,3%	6,7%	100,0%
Sweden	data	Arcti Children	Count	27	57	141	28	253
			% within data	10,7%	22,5%	55,7%	11,1%	100,0%
			Std. Residual	2,0	1,1	-,5	-1,6	
			Count	165	459	1397	369	2390
		HBSC study	% within data	6,9%	19,2%	58,5%	15,4%	100,0%
			Std. Residual	-,7	-,4	,2	,5	
			Count	192	516	1538	397	2643
			% within data	7,3%	19,5%	58,2%	15,0%	100,0%
		Total	Count	192	516	1538	397	2643
			% within data	7,3%	19,5%	58,2%	15,0%	100,0%
Russia	data	Arcti Children	Count	25	82	114	38	259
			% within data	9,7%	31,7%	44,0%	14,7%	100,0%
			Std. Residual	,1	,4	-,7	,7	
			Count	518	1674	2596	721	5509
		HBSC study	% within data	9,4%	30,4%	47,1%	13,1%	100,0%
			Std. Residual	,0	-,1	,2	-,1	
			Count	543	1756	2710	759	5768
			% within data	9,4%	30,4%	47,0%	13,2%	100,0%
		Total	Count	543	1756	2710	759	5768
			% within data	9,4%	30,4%	47,0%	13,2%	100,0%

Norway data	Arcti	Count	10	22	97	56	185
	Children	% within data	5,4%	11,9%	52,4%	30,3%	100,0%
HBSC study		Std. Residual	1,1	,9	,5	-1,4	
		Count	126	326	1657	1239	3348
Total		% within data	3,8%	9,7%	49,5%	37,0%	100,0%
		Std. Residual	-,3	-,2	-,1	,3	
		Count	136	348	1754	1295	3533
		% within data	3,8%	9,8%	49,6%	36,7%	100,0%

14b Chi-Square Tests School satisfaction between data stes by country

Country		Value	df	Asymp. Sig. (2- sided)
Finland	Pearson Chi-Square	3,332(a)	3	,343
	Likelihood Ratio	3,551	3	,314
	Linear-by-Linear Association	1,940	1	,164
	N of Valid Cases	3579		
Sweden	Pearson Chi-Square	8,970(b)	3	,030
	Likelihood Ratio	8,674	3	,034
	Linear-by-Linear Association	8,848	1	,003
	N of Valid Cases	2643		
Russia	Pearson Chi-Square	1,128(c)	3	,770
	Likelihood Ratio	1,121	3	,772
	Linear-by-Linear Association	,001	1	,971
	N of Valid Cases	5768		
Norway	Pearson Chi-Square	4,530(d)	3	,210
	Likelihood Ratio	4,476	3	,214
	Linear-by-Linear Association	4,460	1	,035
	N of Valid Cases	3533		

a 0 cells (,0%) have expected count less than 5. The min. expected count is 16,69.

b 0 cells (,0%) have expected count less than 5. The min. expected count is 18,38.

c 0 cells (,0%) have expected count less than 5. The min. expected count is 24,38.

d 0 cells (,0%) have expected count less than 5. The min. expected count is 7,12.

14c Chi-Square Tests, School satisfaction between the countries

data		Value	df	Asymp. Sig. (2-sided)
ArctiChildren	Pearson Chi-Square	77,751(a)	9	,000
	Likelihood Ratio	76,701	9	,000
	Linear-by-Linear Association	29,358	1	,000
	N of Valid Cases	947		
HBSC study	Pearson Chi-Square	1722,606(b)	9	,000
	Likelihood Ratio	1708,753	9	,000
	Linear-by-Linear Association	790,319	1	,000
	N of Valid Cases	14576		

a 0 cells (,0%) have expected count less than 5. The min. expected count is 15,63.

b 0 cells (,0%) have expected count less than 5. The min. expected count is 189,22.

14d Chi-Square Tests, School satisfaction between the genders

data		Value	df	Asymp. Sig. (2-sided)
ArctiChildren	Pearson Chi-Square	12,878(a)	3	,005
	Likelihood Ratio	13,054	3	,005
	Linear-by-Linear Association	10,824	1	,001
	N of Valid Cases	945		
HBSC study	Pearson Chi-Square	71,264(b)	3	,000
	Likelihood Ratio	71,459	3	,000
	Linear-by-Linear Association	50,319	1	,000
	N of Valid Cases	14576		

a 0 cells (,0%) have expected count less than 5. The min. expected count is 39,62.

b 0 cells (,0%) have expected count less than 5. The min. expected count is 559,19.

14 e Gender * school satisfaction, country Crosstabulation

					Liking school käään				
data	Country				Not at all	Not very much	Like a bit	Like a lot	Total
Arcti Children	Fin	Gender	Boy	% within Gender Std. Residual	10,4%	34,8%	50,4%	4,4%	100,0%
			Girl	% within Gender Std. Residual	1,3	,2	-,3	-,9	
		Total		% within Gender Std. Residual	3,5%	32,7%	54,9%	8,8%	100,0%
				% within Gender Std. Residual	-1,5	-,2	,4	1,0	
	Swe	Gender	Boy	% within Gender Std. Residual	7,3%	33,9%	52,4%	6,5%	100,0%
			Girl	% within Gender Std. Residual	13,6%	26,4%	51,2%	8,8%	100,0%
		Total		% within Gender Std. Residual	1,0	,9	-,7	-,8	
				% within Gender Std. Residual	7,8%	18,8%	60,2%	13,3%	100,0%
	Rus	Gender	Boy	% within Gender Std. Residual	-1,0	-,9	,7	,8	
			Girl	% within Gender Std. Residual	10,7%	22,5%	55,7%	11,1%	100,0%
		Total		% within Gender Std. Residual	12,8%	32,8%	43,2%	11,2%	100,0%
				% within Gender Std. Residual	1,1	,2	-,1	-1,0	
HBSC study	No	Gender	Boy	% within Gender Std. Residual	6,7%	30,6%	44,8%	17,9%	100,0%
			Girl	% within Gender Std. Residual	-1,1	-,2	,1	1,0	
		Total		% within Gender Std. Residual	9,7%	31,7%	44,0%	14,7%	100,0%
				% within Gender Std. Residual	6,5%	6,5%	58,7%	28,3%	100,0%
	Finland	Gender	Boy	% within Gender Std. Residual	,5	-1,5	,8	-,4	
			Girl	% within Gender Std. Residual	4,3%	17,2%	46,2%	32,3%	100,0%
		Total		% within Gender Std. Residual	-,5	1,5	-,8	,3	
				% within Gender Std. Residual	5,4%	11,9%	52,4%	30,3%	100,0%
	Finland	Gender	Boy	% within Gender Std. Residual	13,6%	38,0%	42,1%	6,3%	100,0%
			Girl	% within Gender Std. Residual	4,1	2,1	-3,5	-,7	
		Total		% within Gender Std. Residual	7,1%	31,9%	53,8%	7,1%	100,0%
				% within Gender Std. Residual	-4,1	-2,1	3,5	,7	

Sweden	Total		Residual % within Gender	10,4%	35,0%	48,0%	6,7%	100,0%
	Gender	Boy	% within Gender Std.	8,5%	19,9%	57,6%	14,0%	100,0%
				2,1	,6	-,4	-1,3	
		Girl	% within Gender Std.	5,3%	18,5%	59,3%	16,9%	100,0%
				-2,1	-,6	,4	1,3	
Russia	Total		Residual % within Gender	6,9%	19,2%	58,5%	15,4%	100,0%
	Gender	Boy	% within Gender Std.	11,1%	30,8%	45,7%	12,3%	100,0%
				2,9	,4	-1,0	-1,1	
		Girl	% within Gender Std.	7,9%	30,0%	48,3%	13,8%	100,0%
				-2,6	-,4	,9	1,0	
Norway	Total		Residual % within Gender	9,4%	30,4%	47,1%	13,1%	100,0%
	Gender	Boy	% within Gender Std.	4,4%	9,7%	49,6%	36,2%	100,0%
				1,4	,0	,1	-,5	
		Girl	% within Gender Std.	3,1%	9,7%	49,4%	37,8%	100,0%
				-1,4	,0	-,1	,5	
	Total		Residual % within Gender	3,8%	9,7%	49,5%	37,0%	100,0%

Attachment 15 Pressured by schoowork cross tabulation and χ^2 tests

15a Pressured by schoolwork * Country Crosstabulation

data				Country				Total
				Finland	Sweden	Russia	Norway	
Arcti Children	Pressured by school work	Not at all	Count	32	50	47	15	144
			% within Country	12,6%	20,2%	18,1%	8,2%	15,2%
			Std. Residual	-1,1	2,0	1,2	-2,5	
		A little	Count	136	106	120	102	464
			% within Country	53,8%	42,7%	46,2%	55,4%	49,1%
			Std. Residual	1,1	-1,4	-,7	1,2	
		Some	Count	63	52	84	47	246
			% within Country	24,9%	21,0%	32,3%	25,5%	26,0%
			Std. Residual	-,4	-1,6	2,0	-,1	
		A lot	Count	22	40	9	20	91
			% within Country	8,7%	16,1%	3,5%	10,9%	9,6%
			Std. Residual	-,5	3,3	-3,2	,5	
		Total	Count	253	248	260	184	945
			% within Country	100,0%	100,0%	100,0%	100,0%	100,0%
			Std. Residual					
HBSC study	Pressured by school work	Not at all	Count	233	241	1300	353	2127
			% within Country	6,9%	10,1%	23,6%	10,6%	14,6%
			Std. Residual	-11,7	-5,7	17,6	-6,0	
		A little	Count	1581	1145	2276	1753	6755
			% within Country	46,8%	48,2%	41,3%	52,6%	46,3%
			Std. Residual	,4	1,4	-5,4	5,4	
		Some	Count	1188	700	1791	831	4510
			% within Country	35,1%	29,5%	32,5%	24,9%	30,9%
			Std. Residual	4,4	-1,3	2,2	-6,2	
		A lot	Count	379	290	138	395	1202
			% within Country	11,2%	12,2%	2,5%	11,9%	8,2%
			Std. Residual	6,0	6,7	-14,8	7,3	
		Total	Count	3381	2376	5505	3332	14594
			% within Country	100,0%	100,0%	100,0%	100,0%	100,0%
			Std. Residual					

15b Chi-Square Tests Pressured by schoolwork cross tabulation with country

data		Value	df	Asymp. Sig. (2-sided)
ArctiChildren	Pearson Chi-Square	45,810(a)	9	,000
	Likelihood Ratio	48,114	9	,000
	Linear-by-Linear Association	,164	1	,686
	N of Valid Cases	945		
HBSC study	Pearson Chi-Square	992,154(b)	9	,000
	Likelihood Ratio	1052,850	9	,000
	Linear-by-Linear Association	145,903	1	,000
	N of Valid Cases	14594		

a 0 cells (,0%) have expected count less than 5. The min. expected count is 17,72.

b 0 cells (,0%) have expected count less than 5. The min. expected count is 195,69.

Attachment 16 School satisfaction, Life satisfaction and schoolworks' pressure correlations.

Pearson Correlation 2-tailed

data			Life satisfaction	Liking school kään	Pressured by schoolwork
ArctiChildren	Life satisfaction	Pearson Correlation	1	,234(**)	-,166(**)
		Sig. (2-tailed)		,000	,000
		N	938	931	928
	Liking school kään	Pearson Correlation	,234(**)	1	-,242(**)
		Sig. (2-tailed)	,000		,000
		N	931	947	937
	Pressured by schoolwork	Pearson Correlation	-,166(**)	-,242(**)	1
		Sig. (2-tailed)	,000	,000	
		N	928	937	945
HBSC study	Life satisfaction	Pearson Correlation	1	,245(**)	-,194(**)
		Sig. (2-tailed)		,000	,000
		N	14635	14478	14496
	Liking school	Pearson	,245(**)	1	-,220(**)

kään	Correlation			
	Sig. (2-tailed)	,000		,000
	N	14478	14576	14485
Pressured by schoolwork	Pearson Correlation	-,194(**)	-,220(**)	1
	Sig. (2-tailed)	,000	,000	
	N	14496	14485	14594

** Correlation is significant at the 0.01 level (2-tailed).

Attachment 17 Variance analysis of Life satisfaction

17a Life satisfaction Mean comparison

data	Country	Mean	N	Std. Deviation
ArctiChildren	Finland	8,15	248	1,341
	Sweden	7,67	248	1,809
	Russia	7,40	260	2,048
	Norway	7,36	182	1,872
	Total	7,67	938	1,809
HBSC study	Finland	7,74	3422	1,562
	Sweden	7,28	2380	1,896
	Russia	6,94	5510	2,015
	Norway	7,23	3323	1,914
	Total	7,25	14635	1,899

17b Life satisfaction mean comparison between data sets

data	Mean	N	Std. Deviation
ArctiChildren	7,67	938	1,809
HBSC	7,25	14635	1,899
Total	7,27	15573	1,897

17c ANOVA Table, life satisfaction between the data sets

		Sum of Squares	df	Mean Square	F	Sig.
Life satisfaction * data	Between Groups	155,353	1	155,353	43,305	,000
	Within Groups	55859,270	15571	3,587		
	Total	56014,624	15572			

17d Post Hoc test Tukey HSD Life satisfaction

data	(I) Country	(J) Country	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
						Upper Bound	Lower Bound
Arcti Children	Finland	Sweden	,480(*)	,160	,015	,07	,89
		Russia	,749(*)	,158	,000	,34	1,16
		Norway	,791(*)	,174	,000	,34	1,24
	Sweden	Finland	-,480(*)	,160	,015	-,89	-,07
		Russia	,270	,158	,323	-,14	,68
		Norway	,311	,174	,281	-,14	,76
	Russia	Finland	-,749(*)	,158	,000	-1,16	-,34
		Sweden	-,270	,158	,323	-,68	,14
		Norway	,041	,172	,995	-,40	,49
	Norway	Finland	-,791(*)	,174	,000	-1,24	-,34
		Sweden	-,311	,174	,281	-,76	,14
		Russia	-,041	,172	,995	-,49	,40
HBSC study	Finland	Sweden	,459(*)	,050	,000	,33	,59
		Russia	,801(*)	,041	,000	,70	,91
		Norway	,505(*)	,046	,000	,39	,62
	Sweden	Finland	-,459(*)	,050	,000	-,59	-,33
		Russia	,342(*)	,046	,000	,22	,46
		Norway	,046	,050	,796	-,08	,18
	Russia	Finland	-,801(*)	,041	,000	-,91	-,70
		Sweden	-,342(*)	,046	,000	-,46	-,22
		Norway	-,296(*)	,041	,000	-,40	-,19
	Norway	Finland	-,505(*)	,046	,000	-,62	-,39
		Sweden	-,046	,050	,796	-,18	,08
		Russia	,296(*)	,041	,000	,19	,40

* The mean difference is significant at the .05 level.

Attachment 18 Coefficients in the regression equations in Northern Finland

18a Coefficients(a) of the prediction model for Pressured by schoolwork by having and being-factors ($R^2=.09$), Northern Finland

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	1,807	,138		13,111	,000	
	Academic achievement	,238	,055	,213	4,333	,000	,213
2	(Constant)	1,536	,146		10,510	,000	
	Academic achievement	,166	,056	,148	2,970	,003	,213
	Atmosphere	,284	,061	,234	4,689	,000	,275
	3 variables						

a Dependent Variable: Pressured by schoolwork

18b Coefficients(a) Final equation for School satisfaction, Northern Finland ($R^2=.29$)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	1,651	,122		13,516	,000	
	Academic achievement	,344	,049	,336	7,036	,000	,336
2	(Constant)	1,274	,125		10,213	,000	
	Academic achievement	,248	,047	,242	5,221	,000	,336
	Atmosphere 3 variables	,388	,052	,349	7,532	,000	,414
3	(Constant)	,885	,135		6,552	,000	
	Academic achievement	,207	,046	,202	4,512	,000	,336
	Atmosphere 3 variables	,317	,051	,285	6,252	,000	,414
	Pressured by schoolwork	,251	,041	,274	6,115	,000	,394

a Dependent Variable: Liking school

18c Coefficients(a) of the prediction model for school Atmosphere ($R^2=.08$), Northern Finland

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	,954	,111		8,569	,000	
	Academic achievement	,254	,044	,276	5,731	,000	,276

a Dependent Variable: Atmosphere 3 variables

18d Coefficients(a) of the prediction model for Atmosphere at home ($R^2=.11$), Northern Finland

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	1,171	,085		13,790	,000	
	Family well off	,270	,038	,336	7,071	,000	,336

a Dependent Variable: Atmosphere at home

18e Coefficients(a) Final equation for Life satisfaction, Northern Finland ($R^2=.44$)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			zero-order
1	(Constant)	9,436	,177		53,201	,000	
	Family well off	-,664	,079	-,404	-8,372	,000	-,404
2	(Constant)	9,095	,422		21,553	,000	
	Family well off	-,353	,071	-,215	-5,000	,000	-,404
	Atmosphere 3 variables	-,401	,089	-,186	-4,516	,000	-,326
	Atmosphere at home	-,696	,092	-,346	-7,569	,000	-,543
	Feeling lonely	,459	,089	,223	5,161	,000	,418
3	(Constant)	10,333	,498		20,765	,000	
	Family well off	-,328	,069	-,200	-4,752	,000	-,404
	Atmosphere 3 variables	-,310	,089	-,144	-3,482	,001	-,326
	Atmosphere at home	-,643	,090	-,319	-7,108	,000	-,543
	Feeling lonely	,319	,092	-,155	3,457	,001	-,418
	Selfesteem 8 variables	-,070	,016	-,202	-4,421	,000	-,458

a Dependent Variable: Life satisfaction

18f Coefficients(a) of the prediction model for self esteem ($R^2=.27$), Northern Finland

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	17,500	1,357		12,895	,000	
	Atmosphere at home	,839	,280	,149	3,000	,003	,341
	Feeling lonely	-1,921	,285	-,331	-6,749	,000	-,441
	Atmosphere 3 variables	1,018	,213	,223	4,772	,000	,338

a Dependent Variable: Selfesteem 8 variables

Attachment 19 Coefficients in the regression equations in northern Sweden

19a Coefficients(a) Final equation for School satisfaction, Northern Sweden ($R^2=.46$).

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations zero-order
		B	Std. Error	Beta			
1	(Constant)	11,782	,923		12,764	,000	
	Family well off	1,804	,401	,327	4,502	,000	,327
2	(Constant)	6,393	,939		6,810	,000	
	Family well off	1,050	,334	,190	3,142	,002	,327
	Atmosphere 3 variables	,928	,098	,574	9,482	,000	,620
3	(Constant)	5,189	,964		5,384	,000	
	Family well off	,790	,330	,143	2,392	,018	,327
	Atmosphere 3 variables	,714	,111	,442	6,430	,000	,620
	teachers	,351	,096	,257	3,662	,000	,548

a Dependent Variable: School satisfaction summed

19b Coefficients of the prediction model for teachers' support by having and being-factors ($R^2=.28$), Northern Sweden

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	8,176	,443		18,462	,000	
	Family well off	,681	,200	,180	3,401	,001	,180
2	(Constant)	4,446	,511		8,697	,000	
	Family well off	,369	,175	,097	2,112	,035	,180
	Atmosphere 3 variables	,609	,055	,507	10,979	,000	,523

a Dependent Variable: teachers

19c Coefficients(a) of the prediction model for School atmosphere by having factors ($R^2=.03$), Northern Sweden

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	6,086	,356		17,098	,000	
	Family well off	,507	,161	,162	3,147	,002	,162

a Dependent Variable: Atmosphere 3 variables

19d Coefficients(a) of the prediction model for Pressured by schoolwork by loving and being factors ($R^2 = .07$), Northern Sweden

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
	B	Std. Error	Beta			
1 (Constant)	4,241	,275		15,444	,000	
Symptoms	-,040	,006	-,357	-7,128	,000	-,357

a Dependent Variable: Pressured by schoolwork

19e Coefficients(a) Life satisfaction final equation Northern Sweden ($R^2 = .45$)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlation
	B	Std. Error	Beta			zero-order
1 (Constant)	26,482	1,968		13,459	,000	
Symptoms	,164	,029	,291	5,645	,000	,478
Family well off	-1,027	,256	-,196	-4,015	,000	-,352
Health	-2,007	,326	-,314	-6,163	,000	-,488
Good living in local area 67, 68, 69 10-14	-,168	,061	-,139	-2,739	,007	-,362
2 (Constant)	28,392	2,038		13,928	,000	
Symptoms	,154	,029	,274	5,365	,000	,478
Family well off	-,961	,253	-,184	-3,799	,000	-,352
Health	-2,021	,321	-,316	-6,301	,000	-,488
Good living in local area 67, 68, 69 10-14	-,138	,061	-,115	-2,262	,025	-,362
Parents	-,407	,134	-,145	-3,027	,003	-,275
3 (Constant)	31,240	2,210		14,138	,000	
Symptoms	,128	,030	,228	4,335	,000	,478
Family well off	-,933	,249	-,178	-3,743	,000	-,352
Health	-1,919	,318	-,300	-6,043	,000	-,488
Good living in local area 67, 68, 69 10-14	-,141	,060	-,118	-2,349	,020	-,362
Parents	-,415	,132	-,148	-3,139	,002	-,275
Pressured by schoolwork	-,763	,248	-,150	-3,080	,002	-,331

a Dependent Variable: Life satisfaction, summed

19f Coefficients(a) of the prediction model for Parents support by having factors ($R^2=.07$), Northern Sweden

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	3,411	,307		11,118	,000	
	Good living in local area 67, 68, 69 10-14	,111	,023	,265	4,908	,000	,265

a Dependent Variable: Parents

Attachment 20 Coefficients in the regression equation northern Norway

20a Coefficients(a) Final equation for School satisfaction, Northern Norway ($R^2=.69$)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	11,434	1,174		9,742	,000	
	Good living in local area	,461	,084	,366	5,496	,000	,366
2	(Constant)	6,502	,933		6,967	,000	
	Good living in local area	,206	,064	,164	3,212	,002	,366
	Atmosphere 3 variables	1,118	,085	,671	13,173	,000	,720
3	(Constant)	1,026	,984		1,044	,298	
	Good living in local area	,167	,054	,132	3,108	,002	,366
	Atmosphere 3 variables	,623	,090	,374	6,959	,000	,720
	rules	,405	,099	,194	4,104	,000	,544
	Pressured by schoolwork	3,535	,446	,384	7,928	,000	,682

a Dependent Variable: Q34 a-e, m103

20b Coefficients(a) of the prediction model or School rules northern Norway $R^2=.26$

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	4,516	,378		11,961	,000	
	Atmosphere 3 variables	,408	,047	,506	8,722	,000	,506

a Dependent Variable: Q 30 a,b,c rules

20c Coefficients(a) of the prediction model for Pressured by schoolwork northern Norway $R^2=.29$

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
	B	Std. Error	Beta			Part
1 (Constant)	1,139	,076		14,918	,000	
Atmosphere 3 variables	,096	,010	,539	10,105	,000	,539

a Dependent Variable: Pressured sum

20d Coefficients(a) of the prediction model for School atmosphere, northern Norway $R^2=.12$

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
	B	Std. Error	Beta			Part
1 (Constant)	4,061	,624		6,510	,000	
Good living in local area Q74-76e	,253	,044	,347	5,692	,000	,347

a Dependent Variable: Atmosphere 3 variables

20e Coefficients(a) of the final equation of the prediction model for Life satisfaction northern Norway $R^2=.55$

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
	B	Std. Error	Beta			
1 (Constant)	12,692	2,116		6,000	,000	
Symptoms	5,081	,506	,571	10,037	,000	,571
2 (Constant)	28,154	2,461		11,441	,000	
Symptoms	3,739	,454	-,420	8,242	,000	,571
Atmosphere	-,717	,119	,321	-6,031	,000	,535
Students support	-,700	,148	,246	-4,740	,000	,448
3 (Constant)	19,445	3,288		5,914	,000	
Symptoms	3,216	,460	-,362	6,996	,000	,571
Atmosphere	-,667	,116	,298	-5,757	,000	,535
Students support	-,655	,143	,230	-4,567	,000	,448
Problem solving	,364	,095	,194	3,843	,000	,436

a Dependent Variable: Q20a + Q20b + Q20c + Q20f + Q20g + Q20h + Q20i+ Q20ekäänn + Q20dkäänn + M101 lifesatsum

20f Coefficients(a) of the prediction model for Problem solving skills, northern Norway $R^2=.13$

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	21,844	1,202		18,170	,000	
	Symptoms	1,495	,287	-,323	5,210	,000	-,323
2	(Constant)	24,235	1,471		16,480	,000	
	Symptoms	1,284	,293	-,277	4,380	,000	-,323
	Atmosphere	-,204	,074	,174	-2,748	,006	-,247

a Dependent Variable: Q 21 a -j Problem solving

20g Coefficients(a) of the prediction model for School atmosphere northern Norway, $R^2=.08$

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	11,924	1,022		11,670	,000	
	Symptoms	-1,093	,243	-,276	-4,496	,000	-,276

a Dependent Variable: Atmosphere 3 variables

20h Coefficients(a) of the prediction model for School atmosphere northern Norway, $R^2=.07$

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	9,557	,775		12,331	,000	
	Summamuuuttuja 8 oiretta	-,764	,184	-,256	-4,157	,000	-,256

a Dependent Variable: m104, m105, m106, Q35d Students

Attachment 21 Coefficients in the regression equation northern North-West Russia

21a Coefficients(a) Final equation for School satisfaction, NW Russia (R²=,18)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	1,998	,209		9,549	,000	
	Teachers' opinion of your achievements	,273	,065	,222	4,239	,000	,231
	Time homework weekdays	-,081	,029	-,144	-	,006	-,158
2	(Constant)	1,044	,288		3,626	,000	
	Teachers' opinion of your achievements	,235	,064	,191	3,696	,000	,231
	Time homework weekdays	-,076	,029	-,136	-	,008	-,158
	Friends, After school, evenings and e-communication students	,030	,010	,159	3,088	,002	,124
	m104,105,106	,080	,019	,216	4,141	,000	,229
3	(Constant)	,655	,295		2,219	,027	
	Teachers' opinion of your achievements	,196	,063	,159	3,126	,002	,231
	Time homework weekdays	-,074	,028	-,131	-	,009	-,158
	Friends, After school, evenings and e-communication students	,029	,010	,152	3,038	,003	,124
	m104,105,106	,064	,019	,174	3,365	,001	,229
	Pressured by schoolwork	,132	,058	,116	2,292	,023	,187
	Feeling safe in school	,143	,040	,181	3,572	,000	,253

a Dependent Variable: Liking school

21b Coefficients(a) of the prediction model for Feeling safe NW Russia, $R^2=.03$

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	1,669	,200		8,363	,000	
	students	,074	,025	,158	2,950	,003	,158
	m104,105,106						

a Dependent Variable: Feeling safe in school

21c Coefficients(a) of the prediction model for Pressured by schoolwork NW Russia, $R^2=.04$

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	1,852	,152		12,164	,000	
	Teachers' opinion of your achievements	,149	,058	,137	2,550	,011	,137
2	(Constant)	1,582	,186		8,525	,000	
	Teachers' opinion of your achievements	,122	,059	,113	2,075	,039	,137
	students	,044	,018	,136	2,500	,013	,156
	m104,105,106						

a Dependent Variable: Pressured by schoolwork

21d Coefficients(a) of the prediction model for Pressured by schoolwork NW Russia, $R^2=.03$

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	6,073	,462		13,141	,000	
	Teachers' opinion of your achievements	,601	,178	,181	3,387	,001	,181

a Dependent Variable: students m104,105,106

21e Coefficients(a) Final equation for Life satisfaction, NW Russia (R²=,36)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	16,704	,619		26,965	,000	
	Health	-,935	,189	-,241	-4,945	,000	-,356
	Family well off	-1,194	,174	-,334	-6,860	,000	-,424
	Teachers' opinion of your achievements	-,655	,183	-,169	-3,582	,000	-,249
2	(Constant)	14,624	1,005		14,549	,000	
	Health	-,773	,184	-,199	-4,206	,000	-,356
	Family well off	-,935	,173	-,262	-5,408	,000	-,424
	Teachers' opinion of your achievements	-,530	,177	-,137	-2,986	,003	-,249
	students m104,105,106	-,187	,054	-,160	-3,425	,001	-,308
	Feeling lonely	,717	,179	,191	4,004	,000	,356
3	(Constant)	15,133	,996		15,189	,000	
	Health	-,634	,184	-,163	-3,441	,001	-,356
	Family well off	-,828	,172	-,232	-4,807	,000	-,424
	Teachers' opinion of your achievements	-,466	,175	-,120	-2,660	,008	-,249
	students m104,105,106	-,162	,054	-,139	-3,009	,003	-,308
	Feeling lonely	,763	,176	,203	4,331	,000	,356
	Future plans for succesful life fic9a-j	-,073	,020	-,174	-3,690	,000	-,333

a. Dependent Variable: Lifesat sum r 46 + m 101

21f Coefficients(a) of the prediction model for Future plans NW Russia ($R^2=.12$)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	13,292	1,302		10,206	,000	
	Health	1,998	,497	,215	4,023	,000	,267
	Family well off	1,620	,457	,190	3,542	,000	,249
2	(Constant)	11,305	1,536		7,359	,000	
	Health	1,895	,495	,204	3,828	,000	,267
	Family well off	1,415	,462	,166	3,063	,002	,249
	students						
	m104,105,106	,350	,146	,126	2,397	,017	,190

a Dependent Variable: Future plans

21g Coefficients(a) of the prediction model for Other pupils support NW Russia ($R^2=.07$)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	5,015	,539		9,308	,000	
	Family well off	,593	,163	,193	3,644	,000	,214
	Teachers' opinion of your achievements	,512	,176	,154	2,909	,004	,181

a Dependent Variable: students m104,105,106

21h Coefficients(a) of the prediction model for feeling lonely NW Russia ($R^2=.08$)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	3,739	,114		32,942	,000	
	Family well off	-,269	,050	-,283	-5,423	,000	-,283

a Dependent Variable: Feeling lonely

Attachment 22 HBSC 2001/02 MANDATORY Questionnaire, the questions and coding used in the common ArctiChildren and HBSC-data of this study

Demographics

1. m1Are you a boy or a girl ?

¹0 Boy

²0 Girl

2. m2 What class are you in?

¹0 Country specific Grade (11 year old)

²0 Country specific Grade (13 year old)

³0 Country specific Grade (15 year old)

3. What month were you born? _____

4. What year were you born? _____

Physical Activity:

Physical activity is any activity that increases your heart rate and makes you get out of breath some of the time.
Physical activity can be done in sports, school activities, playing with friends, or walking to school.
Some examples of physical activity are running, brisk walking, rollerblading, biking, dancing, skateboarding, swimming, soccer, basketball, football, & surfing. *[COUNTRY SPECIFIC EXAMPLES CAN BE GIVEN]*
For these next two questions, add up all the time you spend in physical activity each day.

5. m21 Over the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day? **Please tick one box only**

0

0 days

1

1

2

2

3

3

4

4

5

5

6

6

7

7 days

6. m22 Over a typical or usual week, on how many days are you physically active for a total of at least 60 minutes per day? **Please tick one box only**

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0 days	1	2	3	4	5	6	7 days

Notes: Responses to PA M1 & M2 will be combined (PA M1+ M2) /2 to give an average of weekly moderate to vigorous physical activity

SOURCE:

A Physical Activity Screening Measure for Use with Adolescents in Primary Care
Judith J. Prochaska, M.S., James F. Sallis, Ph.D.,
Barbara Long, M.D., M.P.H.
From the Joint Doctoral Program in Clinical Psychology at San Diego State University & University of California, in press, 2001.

7. About how many hours a day do you usually watch television (including videos) in your free time?

Please tick one box for weekdays and one box for weekend

m23 Weekdays

m24 Weekend

¹ <input type="radio"/>	None at all
² <input type="radio"/>	About half an hour a day
³ <input type="radio"/>	About 1 hour a day
⁴ <input type="radio"/>	About 2 hours a day
⁵ <input type="radio"/>	About 3 hours a day
⁶ <input type="radio"/>	About 4 hours a day
⁷ <input type="radio"/>	About 5 hours a day
⁸ <input type="radio"/>	About 6 hours a day
⁹ <input type="radio"/>	About 7 or more hours a day

¹ <input type="radio"/>	None at all
² <input type="radio"/>	About half an hour a day
³ <input type="radio"/>	About 1 hour a day
⁴ <input type="radio"/>	About 2 hours a day
⁵ <input type="radio"/>	About 3 hours a day
⁶ <input type="radio"/>	About 4 hours a day
⁷ <input type="radio"/>	About 5 hours a day
⁸ <input type="radio"/>	About 6 hours a day
⁹ <input type="radio"/>	About 7 or more hours a day

SOURCE: HBSC 1986, 1990, 1994, 1998 (C56) REVISED

8. About how many hours a day do you usually spend doing school homework out of school hours?

Please tick one box for weekdays and one box for weekend

m25 Weekdays

m26 Weekend

- ¹ ☐ None at all
- ² ☐ About half an hour a day
- ³ ☐ About 1 hour a day
- ⁴ ☐ About 2 hours a day
- ⁵ ☐ About 3 hours a day
- ⁶ ☐ About 4 hours a day
- ⁷ ☐ About 5 hours a day
- ⁸ ☐ About 6 hours a day
- ⁹ ☐ About 7 or more hours a day

- ¹ ☐ None at all
- ² ☐ About half an hour a day
- ³ ☐ About 1 hour a day
- ⁴ ☐ About 2 hours a day
- ⁵ ☐ About 3 hours a day
- ⁶ ☐ About 4 hours a day
- ⁷ ☐ About 5 hours a day
- ⁸ ☐ About 6 hours a day
- ⁹ ☐ About 7 or more hours a day

SOURCE: HBSC: new item

9. About how many hours a day do you usually use a computer (for playing games, emailing, chatting or surfing the internet) in your free time?
Please tick one box for weekdays and one box for weekend

m27 Weekdays		m28 Weekend	
<input type="radio"/>	None at all	<input type="radio"/>	None at all
<input type="radio"/>	About half an hour a day	<input type="radio"/>	About half an hour a day
<input type="radio"/>	About 1 hour a day	<input type="radio"/>	About 1 hour a day
<input type="radio"/>	About 2 hours a day	<input type="radio"/>	About 2 hours a day
<input type="radio"/>	About 3 hours a day	<input type="radio"/>	About 3 hours a day
<input type="radio"/>	About 4 hours a day	<input type="radio"/>	About 4 hours a day
<input type="radio"/>	About 5 hours a day	<input type="radio"/>	About 5 hours a day
<input type="radio"/>	About 6 hours a day	<input type="radio"/>	About 6 hours a day
<input type="radio"/>	About 7 or more hours a day	<input type="radio"/>	About 7 or more hours a day

SOURCE: HBSC 1990, 1994, 1998 (C57) REVISED

Risk Behaviour: substance use

10. m30 How often do you smoke tobacco at present? ***Please tick one box only***

☐ Every day

☐ At least once a week, but not every day

☐ Less than once a week

☐ I do not smoke

SOURCE: HBSC 1986, 1990, 1994, 1998 (C14)

11. m34 Have you ever had so much alcohol that you were really drunk? *Please tick one box only*

- ☐ ₁ No, never
- ☐ ₂ Yes, once
- ☐ ₃ Yes, 2-3 times
- ☐ ₄ Yes, 4-10 times
- ☐ ₅ Yes, more than 10 times

*SOURCE: HBSC 1986,
1990, 1994, 1998 (C20)*

Bullying

Here are some questions about bullying. We say a student is **BEING BULLIED** when another student, or a group of students, say or do nasty and unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she does not like or when they are deliberately left out of things. But it is **NOT BULLYING** when two students of about the same strength or power argue or fight. It is also not bullying when the teasing is done in a friendly and playful way.

12. m54 How often have you been bullied at school in the past couple of months? *Please tick one box only*

- ☐ ₁ I haven't been bullied at school the past couple of months
- ☐ ₂ It has only happened once or twice
- ☐ ₃ 2 or 3 times a month
- ☐ ₄ About once a week
- ☐ ₅ Several times a week

SOURCE: Olweus, D, 1996: The revised Olweus Bully/Victim Questionnaire. Mimeo. HEMIL, University of Bergen, N-5015 Bergen, Norway

Peer Culture:

13. At present, how many close male and female friends do you have? ***Please tick one box each column***

	m87 <u>Males</u>		m88 <u>Females</u>
¹ <input type="radio"/>	None	¹ <input type="radio"/>	None
² <input type="radio"/>	One	² <input type="radio"/>	One
³ <input type="radio"/>	Two	³ <input type="radio"/>	Two
⁴ <input type="radio"/>	Three or more	⁴ <input type="radio"/>	Three or more

***SOURCE: HBSC 1994, 1998 (C72)
REVISED***

14. m89 How many days a week do you usually spend time with friends right after school?
Please tick one box only

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0 days	1	2	3	4	5	6	6 (can be added in countries where 6 day school week)

SOURCE: HBSC 1986, 1990, 1994, 1998 (C74) REVISED

15. m90 How many evenings per week do you usually spend out with your friends?
Please tick one box only

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0 evenings	1	2	3	4	5	6	7 evenings

SOURCE: HBSC 1986, 1990, 1994, 1998 (C75)

16. m91 How often do you talk to your friend(s) on the phone or send them text or email messages? ***Please tick one box only***

- ¹ ☐ Rarely or never
- ² ☐ 1 or 2 days a week
- ³ ☐ 3 or 4 days a week
- ⁴ ☐ 5 or 6 days a week
- ⁵ ☐ Every day

SOURCE: HBSC new item

Positive Health

17. In the last 6 months: how often have you had the following....? ***Please tick one box for each line***

	<i>About every day</i>	<i>More than once a week</i>	<i>About every week</i>	<i>About every month</i>	<i>Rarely or never</i>
m92 Headache	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m93 Stomach-ache	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m93 Back ache	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m95 Feeling low	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m96 Irritability or bad temper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m97 Feeling nervous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m98 Difficulties in getting to sleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m99 Feeling dizzy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*SOURCE: HBSC 1986,
1990,1994,1998 (C43-C50)*

18. m100 Would you say your health is.....? *Please tick one box only*

¹ ☐ Excellent

² ☐ Good

³ ☐ Fair

⁴ ☐ Poor

SOURCE: Idler, E. L. & Benyamini, Y. (1997). Self-rated health and mortality: A review of twenty-seven community studies. Journal Of Health And Social Behavior, 38, 21-37.

19. m101

Here is a picture of a ladder.
The top of the ladder '10' is the best possible life for you and the bottom '0' is the worst possible life for you.
In general, where on the ladder do you feel you stand at the moment?
Tick the box next to the number that best describes where you stand.

<input type="checkbox"/>	10	Best possible life
<input type="checkbox"/>	9	
<input type="checkbox"/>	8	
<input type="checkbox"/>	7	
<input type="checkbox"/>	6	
<input type="checkbox"/>	5	
<input type="checkbox"/>	4	
<input type="checkbox"/>	3	
<input type="checkbox"/>	2	
<input type="checkbox"/>	1	
<input type="checkbox"/>	0	Worst possible life

SOURCE: Cantril, H. (1965). The pattern of human concern. Rutgers University Press.

School setting:

20. m102 In your opinion, what does your class teacher(s) think about your school performance compared to your classmates? **Please tick one box only**

- ☐ Very good
- ☐ Good
- ☐ Average
- ☐ Below average

SOURCE: HBSC 1986, 1990, 1994, 1998 (C10)

21. m103 How do you feel about school at present? **Please tick one box only**

- ☐ I like it a lot
- ☐ I like it a bit
- ☐ I don't like it very much
- ☐ I don't like it at all

SOURCE: HBSC 1986, 1990, 1994, 1998 (C11)

23. Here are some statements about the students in your class(es). Please show how much you agree or disagree with each one. **Please tick one box for each line**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
m104 The students in my class(es) enjoy being together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m105 Most of the students in my class(es) are kind and helpful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m 106 Other students accept me as I am	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SOURCE: HBSC 1994, 1998 (F10-F12) REVISED

24. m107 How pressured do you feel by the schoolwork you have to do?

¹ ☐ Not at all

² ☐ A little

³ ☐ Some

⁴ ☐ A lot

SOURCE: HBSC 1994,1998 (F24)

Social Inequality:

25. *Father*

m108 Does your father have a job?

¹ ☐ Yes

² ☐ No

³ ☐ Don't know

⁴ ☐ Don't have or don't see father

If YES, please say in what place he works
(for example: hospital, bank, restaurant)

.....
.....

**Please write down exactly what job he does
there** (for example: teacher, bus driver)

.....
.....

Mother

m111 Does your mother have a job?

¹ ☐ Yes

² ☐ No

³ ☐ Don't know

⁴ ☐ Don't have or don't see mother

If YES, please say in what place she works
(for example: hospital, bank, restaurant)

.....
.....

**Please write down exactly what job she does
there** (for example: teacher, bus driver)

.....
.....

26.

m110 If NO, why does your father not have a job?

(Please tick the box that best describes the situation)

- ¹ ☐ He is sick, or retired, or a student
- ² ☐ He is looking for a job
- ³ ☐ He takes care of others, or is full-time in the home
- ⁴ ☐ I don't know

SOURCE: HBSC 1986, 1990, 1994, 1998
REVISED

m113 If NO, why does your mother not have a job?

(Please tick the box that best describes the situation)

- ¹ ☐ She is sick, or retired, or a student
- ² ☐ She is looking for a job
- ³ ☐ She takes care of others, or is full-time in the home
- ⁴ ☐ I don't know

27. m114 Does your family own a car, van or truck? ***Please tick one box only***

- ¹ ☐ No
- ² ☐ Yes, one
- ³ ☐ Yes, two or more

SOURCE: HBSC 1994, 1998
(Family Affluence Scale F25)
REVISED

28. m115 Do you have your own bedroom for yourself? ***Please tick one box only***

- ¹ ☐ No
- ² ☐ Yes

SOURCE: HBSC 1994, 1998
(Family Affluence Scale F26)

29. m116 During the past 12 months, how many times did you travel away on holiday (vacation) with your family? **Please tick one box only**

- ☐ Not at all
☐ Once
☐ Twice
☐ More than twice

SOURCE: HBSC 1998 (Family Affluence Scale F28)

30. m117 How many computers does your family own? **Please tick one box only**

- ☐ None
☐ One
☐ Two
☐ More than two

SOURCE: NEW HBSC (Family Affluence Scale)

31. m118 How well off do you think your family is? **Please tick one box only**

- ☐ Very well off
☐ Quite well off
☐ Average
☐ Not very well off
☐ Not at all well off

SOURCE: HBSC 1994,1998 (F27)

Attachment 23 An informed consent for Student Questionnaires according to HBSC 2001/02 Codebook

The following text is suggested to be included at the beginning of the questionnaire.

Thank you for helping us with this survey!

By answering these questions you will help us understand more about the ways in which young people live. The same questions are being used in surveys in 34 other countries in Europe and North America.

Your answers will be looked at by the researchers and by no-one else. They will not be seen by your parents or teachers. You should not write your name on the questionnaire. After you have filled it, you can put it in the envelope provided and seal it.

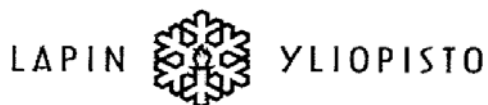
Because the questions are being asked in many different countries and cultures, some of them may seem a bit unusual to you. Please take your time to read each question carefully in turn and answer it as honestly as you can. Remember that we are only interested in your opinion. It is not a test and there are no right or wrong answers.

Things you need to know

For most questions you will be asked to tick the box that best fits your answer. Please tick just **one box** for each question or part of a question, otherwise we won't be able to count your answer.

If it is difficult to choose just one answer, please think about what is **true most of the time**.

Attachment 24 An informed consent for Pupils' Questionnaire in the Finnish ArctiChildren study



Arktisen alueen lasten ja nuorten psykososiaalinen hyvinvointi -hanke

**HYVINVOINTIKYSELY
KUODES-, SEITSEMÄS- JA KAHDEKSASLUOKKALAISILLE OPPILAILLE**

Hyvä Oppilas,

Olet mukana kansainvälisessä (Barentsin alue) kehittämis- ja tutkimushankkeessa, joka liittyy Lapin yliopiston toteuttamaan Arktisen alueen lasten ja nuorten psykososiaalinen hyvinvointi - hankkeeseen.

Tässä tutkimuksessa selvitetään lasten ja nuorten terveyttä, elämäntyyliä ja hyvinvointia. Tutkimustulokset lähtökohtana tullaan kehittämään kouluyhteisöjen psykososiaalista hyvinvointia edistäviä uusia käytäntöjä. Lapissa kyselyyn vastaavat [redacted] ja [redacted] alueen noin 400 oppilasta, Venäjällä [redacted] ja [redacted] noin 350 oppilasta sekä Ruotsissa [redacted] noin 300 oppilasta.

Tämä kyselylomake voi olla Sinulle ennalta tuttu, sillä tämä tutkimus toteutettiin myös viime keväänä koulussanne. Lisäksi lomakkeella on kerätty tietoja vuonna 2002 Maailman Terveysjärjestön (WHO) koululaistutkimuksessa. Kuten silloinkin, kaikki lomakkeen tiedot

käsitellään ehdottoman luottamuksellisesti. Nimeäsi Sinun ei tarvitse mainita missään vaiheessa, käytämme lomakkeissa *tunnistuskoodia*, jonka saat osittain laatia itse. Mikäli vastasit jo viime vuonna, käytä samaa koodia. Koodi on vain tutkijoita varten ja heitä lukuun ottamatta kukaan muu ei tule näkemään vastauksiasi. Tutkimuksen tuloksia ei tulla esittelemään vastaajakohtaisesti, vaan ainoastaan tilastollisia kokonaisuuksia tarkastellen. Vastaathan kysymyksiin rehellisesti.

Kiitos avustasi ja mukavaa kevään jatkoa!

Professori Kyösti Kurtakko ja
tutkijaryhmä / ArctiChildren

