School, Pupil’s well-being and Achievement Scores
-A psychological perspective on some of the factors that affect some pupils’ performance in school-

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Abstract

This study aims to describe how pupils’ achievement scores can be affected by the school that the pupil goes to and the pupil’s well-being. The participants in this study were upper secondary school pupils. The participants were doing their last year in upper secondary school and they are pupils that have reached the age of 18 years. Questionnaires were used for this study. This method entailed concentrating on small groups of pupils to get into the depth of the samples’ reasoning and feelings. The sample was selected according to the programme that they attend in school. The programmes were used to select the sample, depended on the entry scores for that particular programme. The two programmes that were picked for this study have two categories: high entry scores and low entry scores. The results showed differences in scores, some mostly not significant. For example, pupils from divorced parents were more representative of the pupils that obtained the lower score compared to those who came from none divorced parents. The study concludes that there are no significant links between the school that a pupil attends, the pupil’s well-being in school and the achievement score (grade) that the pupil eventually attains.

Keywords and Phrases
Well-being, performance in school, achievement scores, Quality-of-school life, Well-being Model, The basic path model, subjective well-being.
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Generally speaking, a pupil’s well-being at school can be defined as a sense of happiness and satisfaction as a result of positive contribution in the pupil’s own school life and engagement in the school environment. In trying to conceptualize the term well-being, it is worthwhile to look at Michalos (1985) theory in which he uses the term Quality of School Life (Q.S.L.), which then explains that well-being is a direct result of a pupil’s devotion and involvement in the school activities and environment. Some studies have shown negative tendencies in children's health, well-being, health behaviour and lifestyle as being directly linked to the pupils’ or adolescents performance in school, as well as problems in adjustment into society. The above mentioned assumption on the effects of pupils’ well-being in school is also reflected and supported in my previous study on pupils’ well-being in immigrant congested schools (Regenhardt, 2006).

According to Apajasalo (1997) and Drotar (1998), measurements of quality of life in children or pupils usually tend to focus on questions of health, i.e. the effects of diseases and treatments. In regards to school and its impact on achievement scores, some researchers believe that if public school facilities are in disrepair, the situation affects the pupil’s morale, their mental well-being in that they feel neglected, and academic achievement of students tends to drop (Frazier, 1993). Other research studies have been conducted in the area of school building’s age and its impact on pupil achievement (Thomas, 1962) and found that the age and state of the school building was one of the independent variables having great effect on educational outcomes. He used methods such as questionnaires and interviews for both pupils and their teachers in order to ascertain if there was any connection between school building and achievement scores. Thomas further concluded that a school building's age was consistently and definitely related to pupil’s achievement.

Background on well-being, school building and general environment
The phenomenon, general subjective well-being, among pupils in school context has rarely been studied. In studying factors associated with schoolchildren's subjective well-being the main concern is the school context. The most important categories related to general subjective well-being are ‘means for self-fulfilment in school' and
social relationships in school'. However, the social relationships among family and friends are also known to be fundamental, but some researches argue that socioeconomic status had less impact on schoolchildren's general subjective well-being than one might expect.

When it comes to research on how school building affects the pupils’ achievement scores, explanations that have been given are for example the following on lighting, colour and the building. Classroom lighting plays a particularly critical role because of the direct relationship between good lighting and student's performance (Phillips, 1997). Hathaway and Fielder (1986) found that light is essential to the general well-being of people as well as pupils confined to a physical facility a great portion of the day. They discovered that "illumination is important that even seasonal mood changes as strong as depression have been treated successfully merely by increasing the bright light in a person's environment" (Dunn, 1985, p.868). Blackwell (1963) observed that the effectiveness of information gathering is reduced in bad light. Seeing in bad light can lead to the development of ineffective programming of the information collection process and that bad lighting leads to discomfort.

Colour choices can also impact the teaching/learning process. Sinofsky and Knirck (1981) concluded that colour influences pupils’ attitudes, behaviours and learning. The reasons given include that colour affects a pupils’ attention span and affects the pupil’s as well as teacher's sense of time. Rice (1953) observed that paint colour in schools especially carefully designed colour schemes positively affect academic achievement of elementary pupil’s and especially pupils of kindergarten age. Papadatos (1973) suggested that the proper use of colour in schools can change an atmosphere that is depressing and monotonous into one that is pleasing, exciting and stimulating. He added that such change of colour schemes in schools would reduce absenteeism and promote positive feelings about schools. Ikpa, 1992; Plumley, 1978; and Bowers and Burkett, 1987 are but some of the researchers that strongly believe that the building of a school can influence the grades that the pupil obtains. They state that pupils attending school in neglected buildings tend to feel neglected themselves and that modern buildings tend to inspire pupils in such a way that they tend to be proud of their school and feel as being part of the school and the learning process. In the discussion section of this paper, it is pointed out that there is indeed a difference in
results, perhaps because there is a difference in the school structure of the schools in Sweden and that of the schools studied in the literature read for this study.

Theory and relevant research
Some past research have brought to light that pupils who enjoy high levels of satisfaction in school are those pupils that experience their school environments as being positive and fulfilling (Hernandez, 1999). These pupils tend to accept the values of their schools and are involved in different activities, resulting in greater motivation in their learning. Furthermore, the pupil’s well-being is associated to pupils being more receptive to knowledge resulting in lower school drop-out rates (Samdal, 1998). On the other hand, similar studies show that pupils that are known to perceive school less positively are prone to experiencing general health problems (Nutbeam, and Aaron 1991). Other studies show that lack of school satisfaction has been proven to be linked to behavioural problems, poor school achievement and alienation from school (Baker, 1998; Fine, 1986).

Samdal (1998) and Opdenakker and Van Damme (2000) are just some of the researchers that have studied well-being in the school context. In Samdal's survey, the individual well-being of pupils was measured by simply asking pupils the question: In general, how do you feel about your life at present? Her results indicated that peer support, motivation and teacher support are the most important determiners of individual well-being. The following indicators have been used by Opdenakker and van Damme (2000) in a well-being questionnaire. The questionnaire consists of eight indicators: well-being at school, social integration in the class, relationships with teachers, interest in learning tasks, motivation towards learning tasks, attitude to homework, attentiveness in the classroom and academic self-concept. According to Opdenakker and van Damme the same variables above were effective determiners for both achievement and well-being.

Konu, Lintonen and Rimpelä (2002) are some of the researchers that have conducted studies concerning children's or adolescents' quality of life at the population level, meaning that they were assigned to carry out a national survey at school across Finland by the state. Furthermore, Konu et al., (2002) state that the overall subjective well-being can be understood in terms of life satisfaction and contentment while different aspects of subjective well-being include self-appraisals like self-esteem and confidence. In another research, Raphael, Rukholm, Brown, Hill-Bailey and Donato
(1996) indicated in, *The Quality of Life Profile, Adolescent Version*, that contributing factors on pupils' well-being in school can be defined as adolescents' quality of life as the extent to which a person enjoys the important possibilities that he/she is able to accomplish in his/her life.

According to Veenhoven (1991) life satisfaction can be understood as the extent to which an individual determines the overall quality of his life, in a favourable manner. However, many researchers have measured Well-being using different methods, and these measures mostly concern personality disorders, distress and psychological well-being, and examine areas such as happiness, life-satisfaction and morale (Bowling, 1991). A researcher by the name of Huebner and his colleagues (Huebner, 1991; Terry, and Huebner, 1995) state that subjective well-being among children and adolescents can be seen as a three-part construct consisting of universal/global life satisfaction which has been defined as a judgment of one’s satisfaction with life as a whole, and positive and negative affects referring to an individual’s frequency of positive emotions (e.g., proud, interested) whereas negative affect refers to the frequency of negative emotions (e.g., distressed, hostile) (Huebner, 1991; McCullough, Huebner, and Laughlin, 2000).

Furthermore, Allardt states that in almost all of the Scandinavian languages, the word welfare can also stand for well-being, and covers both the standard of living and the quality of life (Allardt, 1989). In Konu et al., (2002) they point out that Allardt's work provided the foundation for the model of well-being developed for their project for the *School Well-being Model* (Konu and Rimpelä, 2001). Konu’s and Rimpelä’s model in Figure 1 is divided into different groupings/categories of well-being in the school context. These are *school conditions, social relationships, means of self-fulfilment* and *health status*. In this study, the *health status* part has been over-looked due to the unavailability of or inaccessibility to health records (protected by the patient records confidentiality law) and also due to that this research can not include information of the pupils’ recollection of their health at the time in question, as this information may be highly inaccurate. In Konu’s model, they indicate that other important contexts that can influence a pupil’s well-being outside school include home environment and also the surrounding community (see figure 1).
Overall happiness

Overall happiness is defined as “the degree to which an individual judges the overall quality of his life-as-a-whole favourably” (Veenhoven, 1984: p22). Thus defined happiness appears as an attitude towards one’s own life, that has some stability of its own and that involve related feelings and beliefs. For instance, Diener and Lucas (2000) define Subjective Well-Being (SWB) as being satisfied with life (attitude), while feeling good (affect), in their own words “a person is said to have high SWB if she or he experiences life satisfaction and frequent joy, and only infrequently experiences unpleasant emotions such as sadness or anger”(p.41). On the other hand, Diener and Lucas state that a person is said to have low SWB if she or he is dissatisfied with life, experiences little joy and affection and frequently feels negative emotions such as anger or anxiety (Diener and Lucas, 1997: pp 41-75). Some contemporary researchers for instance Veenhoven, describe ‘being happy’ as having a certain kind of positive attitude toward your life, which in the fullest form has both a cognitive and an affective component. The cognitive aspect of happiness consists in a positive evaluation of your life, a judgment that at least on balance; it measures up
favourably against your standard or expectations. The affective side of happiness consists in what we commonly call a sense of well-being, finding your life enriching or rewarding or feeling satisfied or fulfilled by it. (Veenhoven, 2000; pp. 1-39)

**Purpose**

This study aims to determine whether or not pupils’ achievement scores are affected by the two variables mentioned in this study which are *school conditions* and the *well-being* of the pupils. These are factors said to have some effect on the pupils’ achievement scores. The school environment and condition of the buildings can affect the pupils’ performance in that may feel that their school is not good enough because it is not properly maintained or it is too old. In the case of the pupils’ *well-being*, one can generally assume that, when a pupil does not feel well in school, they tend to be less motivated, less ambitious and thus neglect their schoolwork (Konu et al., 2002).

This study investigates both native and non-native children. The secondary purpose for this study is to try and document the pupils’ experiences, in order to attain a better understanding as to what factors influence their performance and what achievement score they eventually obtain. Since there are very few studies done in this area in Sweden, thus it is interesting to investigate these factors, in order to see if there is a link and thereby ensure that pupils are well understood and can be helped in their efforts to attain better scores in school. In short, the purpose of this study is to investigate and highlight from a psychological perspective, the effects of pupils’ *well-being* and the *school conditions* have on the *achievement scores* that the pupils eventually obtain in school.

The first hypothesis for this study is that, there is at least some connection between a pupil’s well-being and the achievement scores that he/she attains. Similarly, the second hypothesis is that there is also a connection between the school that the pupil attends and the achievement scores that he/she obtains in school.
Method

Sample Selection and Procedure
The participants in this study were upper secondary school pupils doing their last year in school. They were also eighteen years of age or above. The total number of pupils that participated in the study was 60 with the exception of two pupils that did not attend secondary school in Sweden because they are born outside of Sweden and migrated to Sweden after secondary school. From the Natural Science program, the number of participants was 32 pupils of which 22 were girls and 10 boys. From the Individual program, there were a total number of 28 pupils of which 8 were girls and 20 boys. These particular groups of pupils were chosen in order to avoid complicated and many times impossible methods requiring consent from parents of the pupils. Thus, the participants in this study are pupils that have reached the age of 18 years. The background of the pupils is intended to cover different demographics and geographical descent of the pupils and therefore, no particular selection requirements were used. However, there are certainly distinct cultural variations between our participants meaning that the pupils are from different cultural backgrounds. However, it is important to stress that this study does not aim to identify or explore variations in “cultural” or “national” differences. Hence the sample is not intended to represent ‘national’, ‘regional’ or ‘continental cultures’. The well-being part and the school conditions of the study were measured and analysed mainly by means of the data obtained from the questionnaire, the achievement scores were determined by the programme that a pupil obtained. The questionnaires were handed-out to pupils in the two programmes, Natural Science (NSP) and the Individual Program (IV) for the pupils to fill in during a period of 20 minutes

The pattern used in selecting the sample was based on the programme that the target sample currently attends at upper secondary school level, and the sample number was determined by the number of pupils attending that particular program. The upper secondary school chosen for this study offers different programmes which require different scores from pupils leaving the lower secondary school, for admission into the programme at upper secondary school. Therefore, the selection of sample depended on the programme that they attend and the choice of which programme to use for the study depended entirely on the entry scores. These are scores that a pupil is required to obtain in order to come into a particular programme at upper secondary
school level. Different upper secondary schools have different entry requirement points, depending on the programmes offered. To be accepted to a particular programme, pupils have to obtain the scores required for that particular programme. It is these scores that are used for analysis in this study, in order to determine the effect of the variables Well-being and school environment on the pupils. These entry scores were also relevant for the sample selection, because the study needs to compare achievement scores for ‘high achievers’ to those of ‘not so high (low) achievers’ in order to determine the underlying factors for the difference in achievement scores of the pupils.

The two programmes that were picked for this study have been allocated the following categories: high entry scores and low entry scores. For the category with high entry scores, the following points were required for admission into the programme. The minimum points required for entering the Natural- and Social-Science Programmes were 235 points as minimum requirements, but 273 points was the average entry points for year 2006. The total number of subjects offered at secondary school is sixteen. The following are abbreviations allocated to a certain grade\footnote{G = godkänd (pass), VG = väl godkänd (pass with merit) and MVG = mycket väl godkänd (pass with distinction)} for example, a mere pass (G) in a subject is considered to be equivalent to 10 points. A pass with merit is equivalent to 15 points (VG) and a pass with distinction is 20 points (MVG). Therefore, high entry scores (273 points) means that a pupil must have had passed most, if not all of the subjects offered at school and they at least obtained a mixture of G, VG or/and MVG grades in order to reach 200 to 270 points. On the other hand, low entry scores (110 points) translate to that a pupil did not pass all their subjects and with a probability that most of the grades obtained were a mere pass.

In this study, the programme with the higher entry points is the Natural- and Social-Science Programme (NSP). For comparison purposes, the programme with the low entry score category is known as the individual programme (IV). The IV programme entails that pupils study single subjects which they themselves put together to suite their ambitions and abilities, rather than a programme with fixed subjects picked and arranged by the school. For acceptance, for the IV programme the minimum points
required vary quite immensely depending on the number of places available and the number of pupils applying for the places. However, the lowest points for this particular school were 60 points but the average turned out to be 110 points for year 2006. Since these entry scores for the different programmes vary from year to year, the scores used in this study are average scores dating from approximately five years ago to date. It should be borne in mind that the entry scores may have been higher or lower but around these figures at the time the pupils obtained their grades to enter the programmes. The programme with the lower grades will be referred to as (IV) in this study. For this study, *high entry score* are translated as an indicator for high achievement scores and *low entry scores* as indicators for low achievement scores.

The only strict requirement that was to be upheld for this study was that all the participants had to be 18 years of age or above. The questionnaires were handed out to a class in respective programmes (mentioned above) and the pupils were then instructed to fill in the questionnaire with information based on the recollection of their memory of their years in secondary school. The information filled in was to reflect the pupil’s years in secondary school and it had to be information about their own experiences and not that of their peers’ or that of someone else. It was borne in mind that the sample had to be large enough to provide enough information on both similarities and differences among the participants’ experiences.

However, the number of responses from the questionnaires used in this study was partly determined by the quality of the responses and the interest of the pupil in participating in the study. The pupils were asked if they could participate in the study and the response that they gave was that they were all willing to participate. All the pupils in the two classes targeted for the survey took part and answered the questionnaire. As mentioned by Smith (2003), one of the determining factors for participation in a study should be the interest of the participant. Thus, had the questionnaires been filled in incompletely or inadequately and had the pupils shown no interest in participating, they would have been left out because the information they would have given could be seen or can be perceived as being inaccurate. There were no pupils that did not answer the questionnaire. Pupils in the two classes chosen for the study all participated in answering the questionnaire.
Selection of the programmes involved in this study (NSP & IV)

The school where the survey was carried out can be said to be a standard State or Communal upper secondary school. Only those adolescents who gave consent – meaning that they verbally agreed to participate, were included in the study. The pupils’ confidentiality was also assured to all the participants. This means that the questionnaires were to be dealt with confidentially and the identity of the participant was not be revealed in the study (Shaughnessy & Zechmeister, 2006).

Before the questionnaires were handed out to the pupils, a short discussion with the school curator on factors regarding the risk/benefit ration that might have affected the pupils was taken into consideration and deemed minimal (Shaughnessy & Zechmeister, 2006). The consultations with the curator was to determine whether the questions were appropriate for the pupils and thus avoid infringing on the pupils’ privacy, thereby causing them discomfort or some form of trauma.

Methodology for the questionnaire and data interpretation

The questions used in the questionnaire were inspired from questions obtained mainly on the Internet, from different questionnaires on well-being. They have however been reconstructed and then translated into Swedish in order to make it easier for the pupils to understand and fill them in. Questions for part one are self designed in order to look at ‘family conditions’. The questions in part two and three of the questionnaire are borrowed from the following sources:

1. Theory-based survey analysis of well-being in secondary schools in Finland, by Konu and Lintonen Health Promot. Int. 2006; http://her.oxfordjournals.org/cgi/content/full/17/6/732/T1. The questions that were picked from Konu and Lintones’s questionnaire are questions 9 to 16 and questions 34 to 37.

2. The Leicestershire Healthy Schools Programme (LHSP) a local partnership between education and health in the UK, which aims to help schools in Leicestershire achieve National Health School status: http://www.chcchoir.com/LHS/Emotional. Questions 17 to 33 are inspired by a questionnaire used by the (LHSP)

3. Another Internet site that was browsed for relevance was Young Minds - an Internet based project in which young people from different countries in Europe communicate
and explore links between youths, on well-being and mental health. [http://www.youngminds.org.uk/sos/outputs.php](http://www.youngminds.org.uk/sos/outputs.php). The rest of the questions were inspired by questions found on the above mentioned site.

Only questions that appeared to have relevance to this study, although from different sources, were picked and included in the questionnaire for this study. In interpreting the data collected, the computer programme “Microsoft Excel” was used.

The tables revealing the data are then analysed by comparing the percentages of the responses that were positive compared to those that were negative to see if there is any pattern of similarities or differences in scores between the variables in question (School and Well-being). After studying the obtained data through ANOVA tests into statistical tables, the result was then analysed from a psychological perspective by checking and reading the available psychology literature. This way, it was made possible to compare investigated phenomenon and similar situations or outcomes to those which are taken up in the discussion section. The relevant research was reviewed through electronic database searches online. This study is a combination of quantitative and qualitative methods in design.

**Limitations and Objectivity**

It is important as a researcher to be critical to the method used and also to how the analysis has been planned and conducted. It should be emphasised that the interpretation of the result analysis cannot and shall not be regarded as the only possible or correct explanation for the outcome. Limitations such as the generalizability of findings from the current study should be assumed. The current study was cross-sectional, thus causal statements cannot be made. However, longitudinal and experimental studies are needed to fully understand the complex of environmental and intrapersonal factors that influence adolescents’ positive subjective well-being and adaptation to changes in life circumstances. And lastly, it is by the request of the school used in this study that the actual name of the school is not mentioned. The school authorities felt that doing so would undermine the pupils’ privacy regarding confidentiality. They explained that since the school has only one program with pupils taking the individual programme, it would be easy to stigmatize the group based on the result of their responses.
RESULTS

In part one (Del ett) of the questionnaire, the pupils’ responses introduces their family condition at the time when they attended grade nine. In the data from part one of the questionnaire, focus was set on question number seven (7) because this question was regarded as the fundamental and most interesting in analysing the pupils’ ‘family state of being’ in their ninth grade. For example, it is most likely that a pupil that comes from a split up family is most likely to go through much more stress and depression, brought about by factors such as being loyal to one parent rather than the other and the trouble of commuting from one parent’s residence to the other’s. Part two (Del två) introduces the pupils’ well-being while part three (Del tre) looks at the school environment. In part four (Del fyra), the questionnaire takes a glimpse at the pupils’ and their parents’ social situation such as how long they had lived in Sweden and how integrated they were in society when the pupil was in secondary school. In interpreting the data, the index used to determine the pupil’s condition is the nature of the questions. For example, questions in part two (Del två) of the questionnaire, if answered as being correct (stämmer) signify that the pupil’s experience in school was positive and satisfactory. This is the case in the questionnaire’s part three (Del tre) as well.

In order to make the statistic analysing process easier, question 35 a-g was converted in such a way that the scale 1 – 5 switched places so that the scale 1 became scale 5 and the scale 5 represented 1 respectively. By doing so, it made it possible to assess questions 34 and 35 as one category relating to the school environment for the item analysis. Questions 36 and 37, in part four (Del fyra) were analysed together with questions 9 to 33 as they are similar in nature (same category), in that they all deal with the pupils’ well-being in school. In order to obtain the result for this study, the data was subjected to a series of ANOVA tests, with the “programme that a pupil attended as well as the sex of the pupil as the independent variables. The significance level was set at p<0.05.

Part one (Family)

The data in part one of the questionnaire for pupils taking the IV programme indicates that of the 92.9 percent of the pupils that had both their parents alive during their secondary school years, 57.1 percent of the pupils lived with one parent at a time during their secondary school years. The reasons vary from divorce to death of one of
the parents. Furthermore, 42.9 percent lived with both their parents. From the 57 percent of the pupils who lived with one parent at a time, approximately 7.1 percent of the pupils had just one parent alive and the other 21.4 percent of the total number of pupils with divorced parents (57%) lived only with their mothers, without their fathers’ involvement. Finally, the remaining 28.5 percent of the pupils with divorced parents lived with both their parents interchangeably. All the pupils that participated in the study had siblings, of which 21.4 percent had around 3 to 4 siblings, and the remaining 78.6 percent of the pupils had around 1 to 2 siblings.

For the NSP, the data shows that of all the total number of pupils, 93.7 percent had parents that were alive of which approximately 68.7 percent of the pupils lived with both their parents. 75 percent of the pupils had one to two siblings. And 1.3 percent of the pupils had around 3 to 4 siblings, while 6.3 percent of pupils had 5 to 6 siblings. However, 6.3 percent of the pupils had just one parent alive and 25 percent of the pupils with divorced parents lived only with their mothers. None of the pupils lived only with their fathers.

The statistical data shows that there are more divorce cases amongst pupils belonging to the IV class with 57% divorce cases. The number of pupils from divorce cases in the NSP class is only 25%.

Part two (Well-being)

The data in part two of the questionnaire for IV pupils show that 45.1 percent of the pupils were neutral in that they circled the figure 3 from the choices given in questions 9 through to 33. The responses indicate that 45.1% of the pupils had a neutral stance regarding their emotions on their well-being. The second highest score for pupils shows that they felt relatively well in school (their well-being was good) with a percentage of 23.4 and 18.9 percent of the pupils indicate that they felt very well in school. Furthermore, 9.9% of the pupils indicate that they did not feel very well at school and only 2.7 percent of the pupils state that their well-being in school was very poor.

The statistical data for the NSP also shows that around 45.8 percent of the pupils state that they felt well in school, while approximately 42.45 say they felt well sometimes and sometimes not. The rest of the 11.8 percent state that, they did not feel well in
school. Looking at the figures above in detail, the figures show that out of the total 100% of the pupils, 20.8 percent of the pupils’ state that they felt neither well nor bad. 29.5 percent of the pupils lean towards feeling well at school while 25.6 percent say that they felt very well. 3.1 percent did not know or remember how they felt in secondary school. 19.4 percent were leaning towards not feeling well in school while 1.6 percent clearly answer that they did not feel well in school at all.

Although the statistical figures in part two of the questionnaire show a slight difference in the percentages, the inferential statistics show a somewhat different but clearer view of the data. The equation for the data of the questions 9 through to 33 was as follows:

When subjected to the AVOVA tests, the results show that there is no difference between the two classes in question, when it comes to the pupils’ well-being. Since the significance level of .45 is much higher than the .05 significance level, one can conclude that there is no significant difference in how the pupils answered about their perception of their well-being when they were in grade nine.

\[ F(1,56) = 0.587, \ p = .447, \ p > .05 \]

Furthermore, to see if there was any form of interaction between the sexes and the programs that the pupil attended, statistical figures below were obtained. The difference in response between boys and girls was investigated yielding the following results:

For the boys in the IV class the mean score was 1,967 with a standard deviation at 0.510. For the girls, the mean score was 2,048 with the standard deviation at 0.113. For the NSP, the mean score for boys was 2,095 with the standard deviation at 0.230. For the girls, the mean score was 2,070 with the standard deviation at 0.189. The figures yielded no difference.

Inferential statistics were then done for the well-being and the data that is revealed is shown in the equation below:

\[ F(1,56) = .287, \ p = .594, \ p > .05 \]
The equation and figures indicate that there is no interaction between the sexes or correlations between the variable well-being and the achievement scores. The differences are insignificant.

Part three (school environment)
The scores 28.4 percent for $IV$ and 23.89 percent for $NSP$ show that the pupils in both classes stand in the middle in regards to their school environment. Their scores fall on the comfortable scale number 3 (in the middle of the alternative/ choices). 14.3 percent from $IV$ and 11.5 percent from $NSP$ felt well about their school environment. The second scores on how good the pupils felt about their schools were 17.7 percent for $IV$ and 30.21 percent for $NSP$.

However, pupils who felt good in and about their school environment have scores of 39.6 percent for $IV$ and 34.4 percent for $NSP$ respectively. This shows that the pupils were not disturbed by the elements they were questioned about on their school environment. This means that over 80 percent of the total number of pupils questioned was satisfied in school. In conclusion, the pupils in $NSP$ obtained high scores for satisfaction over their school environment, with scores of 78.9 percent and 82.2 percent of pupils in $IV$ being satisfied. Nonetheless, 14.8 percent for IV and 17.7 for the NSP were not satisfied.

The statistical data shows that more pupils were satisfied with their school environment than those who were not. A further 6.7 percent of the pupils did not respond to the questions. No pupil from $NSP$ chose the alternative (answer number) 1, which means that there are no pupils from $NSP$ that totally felt that their classroom environment was very unsatisfactory. The pupils did not feel that they had any problems working in groups and that they did not feel that their teachers had too high expectations of them, to perform very well in class.

According to the ANOVA test, the data reveals that:

- In the above statistical data, there is a slight reverse of pattern in the pupils’ scores when it comes to the percentage of pupils who fall in the middle of the scale at number three.
• There is only a 3.3 percent difference in the pupils’ satisfaction of their school environment between the two classes. Below is the equation for the inferential statistics:

\[ F(1, 56) = 0.549, \ p = .462, \ p > .05 \]

Here too, the relationship in the difference in response between boys and girls was also investigated yielding the following results:

Inferential statistics were then done to see if there was any form of interaction between the sexes and the programs that the pupil attended. The data revealed is shown in the equation below. To see if there was any form of interaction between the sexes and the programs that the pupil attended, statistical figures below were obtained.

The mean score for the boys in the IV class was 3,308 with a standard deviation at 0.807. For the girls in the IV class, the mean score was 3,154 with the standard deviation at 0.537. For the NSP, the mean score for boys was 3,551 with the standard deviation at 0.665. For the girls in the NSP class, the mean score was 3,241 with the standard deviation at 0.807.

\[ F(1, 56) = .122, \ p = .728, \ p > .05 \]

From both equations, it can be deduced that the differences are not significant enough to make any noticeable difference in the pupils’ perception of their former school environments. Thus the difference in regards to the achievement scores that the pupils obtained can not be determined from the data obtained on school environment.

*Part four (Social situation)*

From the pupils in the IV programme, 57.1 percent of the pupils’ parents are born in Sweden and the rest of the 42.9 percent of the pupils’ parents are born outside of Sweden. 92.9 percent of the pupils are born in Sweden and approximately 7.1 percent of the pupils are born outside of Sweden.

For the NS programme, the statistical data shows that 50 percent of the pupils have parents that are born in Sweden and 43 percent of the pupils’ parents are born outside
of Sweden. 26.3 percent of the pupils did not answer question number 38. However, 93.7 percent of all the pupils from NSP are born in Sweden and the rest of the 6.3 percent are born outside of Sweden.

The ANOVA shows that:

- At least, approximately 50 percent of the pupils in both classes have either parents or at least one parent that is born in Sweden.
- Over 80 percent of the pupils are born in Sweden
- About 6.0 to 7.0 percent of the pupils in both classes did not answer part four of the questionnaire.

When all the data was analysed to check whether there is a connection between the grades that the pupils finally attained and the school that they attended, the results were as follows: with the inferential statistics for the questions 9-33 and 34-35 the correlation was at 0.159 and the P-Value at 0.227. For the questions 34-35 correlation between school environment and the scores that the pupils obtain yielded the following figures: Correlation at 0.052 with the P-Value at 0.6932. For the questions on well-being which are 9-33 correlating with the achievement scores yielded the following figures: correlation 0.142 and the P-Value at 0.2828. Finally, a measure of the internal consistency of the reliability of the questionnaire was done by means of the Cronbach’s alpha on the questions 9-33 and 34-35. The reliability measure of the study was 0.771 for questions 9-33 and 0.877 for questions 34-35 which is relatively good because reliability can be assured with the Cronbach’s alpha when at least .60 or preferably closer to .90

**Discussion**

After going through and analysing the statistical data it can safely be stated that this study finds no connection between the factors that were intended to be studied which are the connection between the school that a pupil attends, the pupils’ well-being in school and the eventual grade that that particular pupils attains. Although in one of his studies, Plumley (1978) examined the relationship between the school building and student achievement of 4th grade pupils in selected schools in Georgia, USA, and
the findings indicated that the older the school buildings, without the effects of modernization, the lower the vocabulary, the poorer the reading and comprehension, of the language and the lower the mathematics scores the pupil obtained. Plumley's study supported the fact that there is a significant relationship between a school’s structural conditions, as in whether modern in structure or old and unimproved to meet modern standards and the pupils’/students’ academic achievement. However, this assumption can be said to agree with North American studies. This can be the case due to the fact that there are perhaps differences in standards when it comes to schools in the USA, unlike the schools in Sweden.

In a similar study, Chan (1979) investigated the relationship of school building age and academic achievement of 8th grade pupils. Chan selected a random sample of schools in Georgia and found that the achievement scores of pupils assigned to modernized school buildings were consistently higher than the scores of pupils assigned to non-modernized school buildings. In the area of modernized school buildings, Bowers and Burkett (1987) researched the academic achievement of two hundred and eighty, 4th and 6th grade pupils housed in two separate facilities (the oldest and newest facilities in the selected school district). They found that the students in the newer building (modern) performed much better than the students in the older building. The students in the modern building also had a better record in the areas of health, attendance and discipline.

In addition, Ikpa (1992) found a significantly negative relationship between the age of school buildings and achievement. Her data indicated that as the age of the school building increased, the achievement test scores tended to decrease. Some of the explanations for this phenomenon are that pupils tend to feel that the school officials and authority has neglected them and does not care much about them. Another explanation given is that pupils tend to live up to their own expectations of the situation, so if attending a school that is lowly maintained or old and unimproved, the pupils’ expectations of how important it is to improve is minimised. Thus, persons who demonstrate positive subjective well-being experience a preponderance of positive emotions, relatively few negative emotions, and evaluate their overall lives as positive. Research with adults has shown that maintaining positive levels of well-being is not only normative, but appears crucial to adaptation (Myers & Diener, 1995).
However, this was not the case in the findings of this study. As the data from the questionnaires for both programmes reveal, the pupils did not have any particular dislike for their school environment. The pupils stated that their school facilities were all in good functional order and that they had no reason to complain about their school environments. An explanation for this unanimous response from the pupils regarding their school environment could lay in the school curriculum for both compulsory and non-compulsory school system which states that “[E]ducation shall be adapted to each pupil’s preconditions and needs.” Meaning that “ the Education Act stipulates that the education provided for the pupils within each type of school shall be of the same value regardless of where in the country it is provided (chapter 1, §2 and §9)” (Curriculum for the compulsory and non-compulsory school system Lpf 94, p4).

Therefore, one can argue that in the case of this particular study, in spite of the fact that pupils with lower achievement scores went to schools which had facilities that met their expectations and were satisfied, their achievement score were still low. Therefore, the reasons for the low achieving pupils’ poor scores can be attributed to and explained by other factors not taken up in this study.

Perhaps, we can turn to other explanations in order to establish possible reasons associating pupils' general subjective well-being, the school they attended and factors related to the achievement scores that the individual pupil obtained in school. In studying factors associated with pupils’ subjective well-being, the school context was the main concern. For the purpose of this study, the school-related variables were categorised on the basis of the School Well-being Model (Figure 1). These variables are School conditions, social relationships and means of self-fulfilment. According to Konu et. al. these variables entail pupils’ well-being.

It should be pointed out that Konu et. al. state that the model does not propose causal linkages but rather the interdependencies of variables within the school, on the pupils’ well-being concept. The most important categories related to general subjective well-being were ‘means for self-fulfilment in school’ and ‘social relationships in school’. In this study the results show that the pupils felt neither very well nor very bad in school, or it could mean that half of the time, the pupils felt well in school while the other half they did not feel so well. There could also be other contributing factors to the pupils’ response such as their memory failing due to the years that have gone by since they
were in secondary school. Perhaps, if the pupils were asked directly while they were still in grade nine, the result of their perception of their well-being might have been different.

Nevertheless, Konu et. Al., add that the social relationships among family and friends were also essential, socioeconomic status had less impact on school children's general subjective well-being than expected. However, since the focus of this study was primarily on the connection between the school, the pupil’s well-being and the scores that the pupil finally achieved, the pupils’ well-being should also be scanned and scrutinised thoroughly. In spite the fact that pupils that attend the IV program also had lower scores for entry into upper secondary school, majority of the pupils stated that they too felt well and satisfied in school just as the pupils in the NSP programme. However, although statistical figures and calculations in this study show that there are no significant links between the pupils’ well-being and their achievement scores, there is significant psychological research which supports this assumption.

For example, one can turn to theories supporting achievement strategies that different pupils tend to use. One theory assumes that pupils that have the tendency to perceive their time at school as less satisfying, for example, pupils who do not find their school environment pleasant or those pupils that do not feel appreciated or noticed by their teachers or peers might tend to have a negative view of themselves and thus respond accordingly.

Figure 2. The basic path model. (Määtä, Sami, Stattin, Håkan & Nurmi, 2006)
The model above explains some of the achievement strategies that pupils tend to use for example, peer groups are important for an adolescent's development as they can have positive impacts but also negative ones. Peer groups sometimes provide a buffer against troubles, but may also invite problems as well (Cairns, Cairns & Neckerman, 1989). For example, it has been suggested that the sharing of values and aspirations among peers is important in successful transition from adolescence to adulthood (Youniss, 1980). By contrast, if the values and actions of peer groups come into direct conflict with authoritative institutions, they may cause problems (Cairns & Cairns, 1994). Norm-breaking may even become a norm in peer groups (Moffit, 1993).

The peer groups that school-age children and adolescents associate with may influence many important aspects of adolescents' lives. For example, it has been found that members of adolescents' peer groups show similar levels of academic achievement (Cairns et al., 1989; Ryan, 2000), aggressive behaviour and there are certain common features which have been found to be of crucial importance to the way peer groups are formed. One is proximity. For example, friendships and groups are forged typically among the relationships available in the classroom. If classrooms are reshuffled, so are the friendships and groups. In schools where classes were moved as a unit the peer groups were more stable (Cairns & Cairns, 1994). Although a probability, this type of achievement strategy can not be confirmed as having been used by my sample group due to the lack of supporting information regarding the pupils and their peer groups in their ninth grade.

Achievement strategies have been assumed to consist of a variety of successive psychological processes (Nurmi, 1993). First, when people face a challenging situation, this typically evokes first expectations about what will happen as well as related affects. These are typically based on individuals' experiences in similar kinds of past situations. If people expect to do well, they typically then set themselves task-related goals, construct plans for their actualization, and invest a high level of effort in carrying them out (Norem, 1989; Nurmi, 1993) this is perhaps reflected by pupils who stated that they were appreciated and that their efforts in school and suggestions and opinions were respected. In contrast, pupils who expect a failure tend to avoid the situation, or will behave in a way that will enable them an excuse for potential failure or will reduce their anxiousness (Kliewer, 1991).
In many cases, the pupil may tend to complain about everything even so they function correctly, and they may put blame on others. Perhaps one can say that this group of pupils can be identified through their negative responses in all the four parts of the questionnaires. These are pupils that tend to complain about everything from their time in school being bad to their well-being not being too good either. When a pupil answers majority of the questions in a negative manner, it can be argued that this individual either went to a very bad school and comes from a dysfunctional family, or that they are just being negative and shifting blame for their poor performance and short-comings. However, there could have been other underlying problems that are not taken up here, problems such as physical or mental illness at the time.

In these pupils who use task-avoidant strategies, it has been found to lead to problems in academic achievement (Eronen & Nurmi, 1999) and socialization (Nurmi, Salmela-Aro & Ruotsalainen, 1994). For example, individuals deploying a task-avoidant strategy are likely to do poorly at school, and partly due to that, be less likely to end up in higher education. Expecting failure and avoiding challenging tasks may also lead to problem behaviour, such as alcohol use and norm-breaking behaviour (Nurmi et al., 1994).

According to the findings of this study, only the family aspect had a significant difference between the two classes in regards to the pupils’ family and social status, thus slightly suggesting that pupils from the IV class had more divorced parents than those that are in the NSP class. However, Just this single factor can not be seen as evidence enough to explain and confirm the reasons for the pupils’ lower scores. Hence, future studies should include more diverse samples so that participants are not only more representative of the racial and socioeconomic diversity found in Sweden, but it should also be longitudinal in design, in order to follow the progress of a pupil as well as cross-sectional in order to compare the results from region to region. Finally, research should focus not only on adolescents’ positive subjective well-being, but also on younger children’s in order to assess the interplay of developmental factors, environmental stressors, personality, and eventually the subjective well-being. Perhaps a study into the pupils’ health status might also reveal aspects that can help explain the pupils’ links to their achievement strategies and subsequently their scores.
Conclusion

Finally, unlike what the research literature and material read for this study state and indicate, there is no significant effect and link between pupil’s well-being, the school they attended and the achievement scores the pupils finally get. However, the difference in the results found in this study, although not overwhelmingly varying, can be said to be in contrast to the literature read. As earlier mentioned, this could depend on the fact that the literature read for this study is primarily based on studies done in USA. Perhaps there are major differences in the quality of the school standards and conditions thus bringing about the results presented in the research literature. Nevertheless, although the IV class had pupils with lower entry scores and NSP class had pupils with higher entry scores, the results in this study rejects the hypothesis that: the school that a pupil attends and how well they feel in school has an impact on their achievement scores in school (scores attained). Perhaps the differences would have been larger and more prominent had other factors been taken into consideration. Factors such as teacher influence, cultural influence, peers influence and the pupils’ mental and physical health at the time of their days in secondary school. These factors were left out due to the impossibility and complications of determining them in retrospect.

Based on the research in the area of school building age and academic achievement, it is vital that educational consultants, architects and administrators be critically aware of the importance attached to the compatibility between the physical environment and students’ learning. Teacher–staff co-operation and pupil counselling are also related to both achievement and well-being, whereas co-operation and professional contacts between teachers were related only to school well-being. In this study however, the pupils do not show any distinct dislike for their school. This conclusion is drawn from the results obtained were the pupils neither find their school environment bad nor particularly very good but acceptable. Their feelings for their schools are rather neutral Perhaps the result of this study can be attributed to that all the pupils went to schools in the same region. And according to the Swedish school system and curriculum, all schools are expected to meet certain standards making them relatively uniform in structure and condition. If this were the case, then the schools can be looked at as all having the same standards thus causing this study to result in findings that contradict the above mentioned findings by other researchers.
It should be noted that other factors could also have contaminated this study’s outcome in that there are no significant and systematic differences between the schools in question (Secondary Schools in Skåne), or simply that the sample size was too small to determine the factors in question in this study. There is no knowing what the results would have looked like, had the above mentioned factor been included. For future studies in this area, perhaps the best method of observation and research would be to carry out a longitudinal study, following the sample from secondary school to upper secondary school through to university. This way, the results would be much more accurate.
References


Skolan, elevernas välmående och slutbetyget
Frågeformulär för gymnasie elever

OBS:
Frågeformuläret fokuserar på elevernas tid/år då han/hon gick i skolan i årskurs 7 – 9. Alla Svaren reflekterar denna tidsperiod om inte annat anges. Informationen som eleverna kommer att lämna är sekretessbelagd. Detta betyder att elevernas namn eller personliga uppgifter inte får tas med i uppsatsen eller någon annanstans.

**Del ett (familj) ringa in svaret där det passar.**

1. Bodde du med både dina föräldrar när du gick i högstadiet?  
   Ja  Nej
2. Var både dina föräldrar vid liv när du gick i högstadiet?  
   Ja  Nej
3. Har du några syskon?  
   Ja  Nej
4. Hur många syskon har du?  
   1  2  3  4  5  6  7  8  9  fler __
5. Hur många var ni i hushållet när du gick i högstadiet?  
   1  2  3  4  5  6  7  8  9  fler __
6. Om du svarade nej på frågan 2, vilken förälder var vid liv?  

7. Var dina föräldrar skilda när du gick i högstadiet?  
   Ja  Nej / Jag väljer att inte svara

8. Om du svarade Ja på fråga nummer 7, vilken förälder bodde du med?  
   Moder / fader / båda

**Del två (bedömning av ditt välmående i skolan)**

1 = stämmer inte alls  /  5= stämmer helt  

Ringa in numret som stämmer med vad du tycker

9. Stämningen både på skolan och i klassrummet var god  
   1  2  3  4  5
10. Jag hade bra kontakt med mina lärare 1 2 3 4 5

11. Jag hade bra kontakt med mina skolkamrater 1 2 3 4 5
12. Det fanns alltid någon skolpersonal som man kunde lita på 1 2 3 4 5
13. Mina lärare tog mig på allvar 1 2 3 4 5
14. Lärarna på skolan behandlade eleverna med Respekt 1 2 3 4 5
15. Det fanns tid och möjlighet att utveckla social kompetens på lektionerna i skolan 1 2 3 4 5
16. Eleverna uppmuntrades att jobba självständigt 1 2 3 4 5

<table>
<thead>
<tr>
<th>Ringa in ansiktet som visar vad du tycker</th>
<th>stämmer</th>
<th>ibland</th>
<th>stämmer inte</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Jag kände mig trygg på skolgården</td>
<td>😊</td>
<td>😐</td>
<td>😞</td>
</tr>
<tr>
<td>18. Mina lärare tog hand om mig på skolan</td>
<td>😊</td>
<td>😐</td>
<td>😞</td>
</tr>
<tr>
<td>19. Mina skolkamrater brydde sig om mig</td>
<td>😊</td>
<td>😐</td>
<td>😞</td>
</tr>
<tr>
<td>20. Jag litade på mina lärare och all personal på Skolan</td>
<td>😊</td>
<td>😐</td>
<td>😞</td>
</tr>
<tr>
<td>21. Jag litade på mina klasskamrater</td>
<td>😊</td>
<td>😐</td>
<td>😞</td>
</tr>
<tr>
<td>22. Mina lärare och personalen behandlade mig Rättvist</td>
<td>😊</td>
<td>😐</td>
<td>😞</td>
</tr>
<tr>
<td>23. Mina klasskamrater behandlade mig rättvist</td>
<td>😊</td>
<td>😐</td>
<td>😞</td>
</tr>
<tr>
<td>24. Mina lärare lyssnade på mig</td>
<td>😊</td>
<td>😐</td>
<td>😞</td>
</tr>
<tr>
<td>25. Jag trivdes på de flesta av mina lektioner</td>
<td>😊</td>
<td>😐</td>
<td>😞</td>
</tr>
<tr>
<td>26. När jag hade svårigheter med skolarbetet fanns det någon att fråga och som stöttade mig</td>
<td>😊</td>
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</tr>
</tbody>
</table>
Reglerna på skolan var rättvisa

Det fanns åtminstone en vuxen i skolan som fick mig att känna mig speciell

Jag hade en bästa vän på skolan

Om jag hade problem i skolan visste jag vem jag kunde fråga

När jag sade någonting i klassrummet respekterade klasskamraterna mina åsikter

Jag trivdes bra på skolan

Jag fick rikligt med belöningar i skolan

Del tre; Bedömning av skolans miljö

1 = stämmer inte alls / 5 stämmer helt rätt

Ringa in numret som stämmer med vad du tycker

34. På skolan var jag nöjd med:
   a. uppvärmning - temperatur
   b. Skolmöbler
   c. Städning och underhåll
   d. Hygien (toaletter etc)
   e. Säkerhet, säkerhetsregler
   f. Skolmiljö och nedsmutsning

35. Störde följande faktorer dig i ditt skolarbete?
   a. Trängsel i klassrummen
   b. Oväsen och eko
   c. Dålig ventilation
   d. Temperatur (för varmt, för kallt, drag)
   e. Smuts, damm
   f. Dåliga toaletter, omklädningsrum etc

1 = stämmer inte alls / 5 = stämmer helt rätt
36. Hur bra var möjligheterna när det gäller elevernas välmående eller personliga frågor (tex depression, stress, sex etc)
   a. Lärarna var engagerade och intresserade av att hjälpa eleverna 1 2 3 4 5
   b. Stämningen i klassrummet var trivsam 1 2 3 4 5

37. Hur var det för dig i skolan, hade du problem med något av följande?
   a. Att jobba i grupp 1 2 3 4 5
   b. Mina lärare förväntade för mycket av mig 1 2 3 4 5

Del fyra (social situation) ringa in rätt svar

38. Är båda dina föräldrar svenskfödda? Ja Nej

39. Om inte,
   Förälder # 1 kommar ifrån ........................................
   Förälder # 2 kommar ifrån........................................

40. Hur länge hade du och dina föräldrar bott i Sverige då du gick i högstadiet?
   Jag är född i Sverige Ja Nej

41. Jag hade bott i: 1 – 5 år / 6 – 10 år
   Förälder # 1: hade bott i 1 – 5 år / 6 – 10 år / 11 – 15 år / 16 – 20 år
   Förälder # 2: hade bott i 1 – 5 år / 6 – 10 år / 11 – 15 år / 16 – 20 år

42. Vilken stadsdel bodde ni i .........................

Tack för ditt deltagande! 😊