Associations between school liking, loneliness and social relations among adolescents: Northern Finland Birth Cohort 1986 study

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ABSTRACT
School is an important social environment, but it can also be a devastating place for those who experience loneliness, are bullied or have problematic social relations. These negative experiences might be associated with school dislike, which in turn can negatively affect pupil’s motivation, academic success and overall well-being. This study examined the associations between school liking with self-reports of experiences of loneliness and social relations in the Northern Finland Birth Cohort 1986. The answers of 16-year-olds to two adolescents’ questionnaires were investigated (n = 5817) using binomial logistic regression. For girls, variables associated with school dislike were being somewhat or very lonely, for girls and boys hanging around with friends/kids who get in trouble and for boys being afraid of going to school and not getting along with other adolescents. Schools should pay attention to creating safe and supporting social and learning environment so that everyone can thrive at school.

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Introduction

For adolescents school is a central social context; a great deal of social learning occurs in schools and it is a place for building and maintaining friendships (Hofman, Adriaan Hofman, & Guldemond, 2001; Linnakylä & Malin, 2008). However, school can also be a difficult place for some. If a pupil experience loneliness, is being bullied, is afraid of going to school or her/his social relations are troublesome, that might contribute to a dislike of school (Harel-Fisch et al., 2011; see Junttila, Laakkonen, Niemi, & Ranta, 2010). How well pupils like the school has a great significance for their overall well-being, motivation and academic success (Erath, Flanagan, & Bierman, 2008; Gest, Welsh, & Domitrovich, 2005). Therefore, understanding the risk factors associated with school dislike is important in order to enhance the well-being of the pupils (Haapasalo, Välimaa, & Kannas, 2010). The current study will focus on these themes; the associations between school liking, loneliness and social relations among adolescents in Northern Finland are being examined.

The concept of school liking

School liking refers to pupil’s affective sentiments towards the school environment, their attitude to school (Eggum-Wilkens, Valiente, Swanson, & Lemery-Chalfant, 2014; Ladd & Coleman, 1997) and has
been equated with a general school perception (Harel-Fisch et al., 2011). Previous studies on school liking have often used the School Liking and School Avoidance questionnaire (see Erath et al., 2008), but similarly to the present study, school liking has often been used on its own as a one-item variable, for example in Sweden (Jerdén, Burell, Stenlund, Weinehall, & Bergström, 2011), the US (Gest et al., 2005), Finland (Ahonen, 2008) and Norway (Løhre, Lydersen, & Vatten, 2010; Løhre, Moksnes, & Lillefjell, 2014). It is also a variable in a large World Health Organization cross-national study called ‘Health Behaviour in School-Aged Children’ (HBSC) (Currie et al., 2002).

In Finland, school satisfaction and liking for school have been found to be poor in national and international studies (Haapasalo et al., 2010), even though Finnish students have performed well on assessments such as the Program for International Student Assessment (PISA) (Linnakylä & Malin, 2008). Liking school has been associated with positive peer relationships (Erath et al., 2008). For example, Boulton, Don, and Boulton (2011) discovered that peer acceptance and perceived peer support were significant unique predictors of school liking. Then, negative peer relations, such as peer rejection and negative peer treatment, can in turn have negative effects on school adjustment, i.e. dislike for school (Buhs, 2005). Furthermore, school dislike has been related to being bullied and being both bully and victim (Harel-Fisch et al., 2011). So, if an adolescent shows problems in her/his peer relations, does not get along with others, is asocial, and is for example withdrawing from social encounters and keeping from getting close to others, it might hinder the sense of connectedness and be linked with a dislike for school. Furthermore, low satisfaction with school and school dislike might contribute beside a lack of connection, also to rebellion against it; pupils might start to engage in health risk behaviours such as drinking and smoking (Takakura, Wake, & Kobayashi, 2010), which might in turn be related to spending time with adolescents who are not good company and get into trouble a lot, who show delinquent behaviour (Smith-Adcock, Lee, Kerpelman, Majuta, & Young, 2011). Furthermore, previous studies report greater school dislike for boys (Ahonen, 2008; Ding & Hall, 2007; Erath et al., 2008) and older pupils (Ding & Hall, 2007; Harinen & Halme, 2012).

Less is known about the relationship of loneliness and school liking (Harinen & Halme, 2012). Loneliness is a multidimensional, negative, painful experience, which occurs, when one’s intimate and social needs are not adequately being met (Mellor, Stokes, Firth, Hayashi, & Cummins, 2008; Rokach, 2011; Weiss, 1973). Loneliness is more about quality, the meaningfulness of the social relationships, rather than the quantity of them. Thus, an adolescent with very few or no social relationships might not necessarily experience loneliness, yet someone with many friends might still be lonely. Loneliness is thus a very subjective experience (Killeen, 1998). Besides social relations, loneliness is affected by contextual and sociocultural factors (Bauer & Rokach, 2004; Rokach & Neto, 2005; Weiss, 1973). Up to 80% of adolescents report loneliness at least sometimes, and chronic loneliness is experienced by about 5–15% of adolescents (Hawkley & Cacioppo, 2010; Inderbitzen-Pisaru, Clark, & Solano, 1992; Saari, 2010; Schinka, van Dulmen, Mata, Bossarte, & Swahn, 2013). When being chronic, loneliness might have negative consequences to health and well-being (Hawkley & Cacioppo, 2010). Experience of loneliness is predictive of and predicted by school bullying (Acquah, Topalli, Wilson, Junntila, & Niemi, 2015; Nishina, Juvonen, & Witkow, 2005). Loneliness has also been linked with an increased likelihood of school drop-outs (Heinrich & Gullone, 2006), absenteeism (Juvonen, Nishina, & Graham, 2000) and substance use (Page, Dennis, Lindsay, & Merrill, 2010; Stickley, Koyanagi, Koposov, Schwab-Stone, & Ruchkin, 2014). On a broader level for example urbanization, individualization and less stable family structures have affected and changed family and friendship relations and communality (Franklin, 2012), thus possible contributing to the loneliness experiences of adolescents.

Previous studies on school liking and loneliness have mainly been conducted with young pupils. Gest et al. (2005) studied the normative trends and behavioural predictors of social relatedness (teacher and school supportiveness and loneliness) and levels of school liking (one-item) in a 6-month longitudinal study of grades 3–5 in US. The results indicated that there was a small increase in loneliness across the school year and that lonely children reported less school liking. Also in a Canadian study the higher levels of loneliness were connected to less school liking and greater school avoidance among
kindergarten children (Coplan, Closson, & Arbeau, 2007). However, the older adolescents get, the less they tend to like school, and, therefore, it is important to study the factors related to school dislike among older, 16-year-old adolescents.

To link all the above-mentioned topics of interest together we refer to the self-system model of Connell & Wellborn (as cited in Boulton et al., 2011) according to which the need for belonging/relatedness to other people or groups has energetic functions, the need is a catalyst for engagement or disaffection. Thus, if the belonging/relatedness need is satisfied in a given context, such as at school, it leads to greater engagement in, and liking of that context (see also Baumeister & Leary, 1995), and further at school, contribute to motivation and learning. Although the self-system model focuses not on loneliness and social relations and school liking per se, for example Osterman (2000), Boulton et al. (2011) and Gest et al. (2005) have utilized the approach when examining these topics. If pupils enjoy good relationships with their peers, they tend to like school more and negative social experiences including loneliness and poor social relations might inhibit school liking.

Furthermore, there are only a few studies of school liking and loneliness in a same age group of pupils in different school types. After comprehensive education (grade 9) at the age of 15 or 16, Finnish pupils apply to upper secondary education, which has two routes; general, academically oriented upper secondary school, and practically oriented vocational school. Both are three-year-schools. In the 2000s, 42% of boys and 60% of girls chose academic upper secondary school and 49% of boys and 32% of girls chose vocational school. This division has not changed much (Brunila et al., 2011). Little is known, of whether school liking and its association with loneliness might differ at the top end of the comprehensive school (grade 9th), upper secondary school (year 1), or in the vocational school, (year 1). It is assumed, that those in upper secondary education would like school less, as previous studies shows that older pupils like school less, yet as related to loneliness, it might be, that starting a new school might increase loneliness experiences and then negatively be linked with school liking. In the current study, this association will be examined.

Gender in relation to school liking, loneliness and social relations

Previous studies show that boys tend to like school less than girls, but that is not the case in reporting loneliness. Often no statistically significant differences have been found between girls and boys in quantitative studies using for example the University of California Loneliness Scale (UCLA) or its revised version (R-UCLA); however, if a difference has been found, adolescent boys appear to be lonelier than girls (Koenig & Abrams, 1999). When examined with single-item variables, girls tend to report more loneliness than boys (Kämppi et al., 2012; Moisio & Rämö, 2007). Furthermore, social orientation between girls and boys might be different (Tolonen, 2001); girls have been reporting having more close friends than boys, yet typically, girls form dyadic or three person intimate friendships while boys' social circles seem to be larger and more active oriented, entailing group activities like doing sports together (O'Connor, 2006).

Present study will examine the possible differences between girls and boys in the associations between school liking, loneliness and social relations.

Aims of the study

To our knowledge, no previous work on the associations between school liking, loneliness and social relations has been conducted in Finland among 16-year-olds, nor has research on these themes been studied previously in a large cohort data. The association of loneliness with school liking in comprehensive, vocational and upper secondary school have not been examined before.

The aims of this study were to examine: (a) school liking among adolescent girls and boys, and (b) are, and if so, to what extent, selected independent variables (loneliness, being afraid of going to school, bullying, getting along with other kids/adolescents, keeping from getting close to others, hanging
around with friends/kids who get in trouble) associated with school dislike among girls and boys, and (c) the association with loneliness and school dislike in different school types (comprehensive, upper secondary and vocational school) for boys and girls.

Method

Participants

The sample is from the general population-based Northern Finland Birth Cohort 1986 study, which was collected from the two northernmost provinces in Finland (Oulu and Lapland), and it comprises 9432 live-born infants (4567 girls and 4865 boys) whose expected date of birth fell between 1 July 1985 and 30 June 1986. They have been prospectively followed since the prenatal period with follow-ups at ages 7–8 years (1992–1994) and 15–16 years (2001–2002) (Northern Finland Birth Cohorts [NFBC], 2015).

In this article, data from two questionnaires were used. At the age of 15–16 years (in 2001–2002), the addresses of 9215 (9340 were alive) were known. At that time, those adolescents received a postal questionnaire concerning family, friends, school, health, living habits, hobbies and behaviour. First, those members of the NFBC 1986 who answered the question ‘I feel lonely’ in the first postal questionnaire were selected and the parents and adolescents who opposed the use of their data \( n = 209 \) were excluded, leaving 7014 respondents. Adolescents underwent a clinical examination to accompany an additional questionnaire concerning their lifestyle and among those 7014 adolescents, 6985 adolescents responded to the additional questionnaire in 2001–2002. In that study, a question concerning school liking was asked and 6161 adolescents answered the question ‘Do you like school at present?’ Among those are 65 participants who responded to the question that they were not attending school at the time and were excluded from the study. Also, school type was asked in adolescent postal questionnaire. 193 adolescent responded there that they were not attending school and were thus excluded. Those who attended a special school \( n = 104 \), were excluded since their situation differs from that in a regular schools. Special schools, at the time were for pupils who could not achieve their learning, development and growth objectives due to severe learning difficulties, mental disorders, neurological deficits, emotional/social problems, physical disabilities or long-term illnesses in a general comprehensive school (European Agency for Special Needs and Inclusive Education, 2015). After all these exclusions the sample had 5799 participants. However, additionally, 18 adolescents responded to the question ‘Do you like school at present?’ that they were not attending school, but they also answered to the question ‘What school are you attending now?’ that they go to a comprehensive school. Their school situation probably changed between the two questionnaires, and these 18 adolescents were included in the study.

Thus, the study population included 5817 participants (3029 girls and 2788 boys; mean age: 15.5 years). Written informed consent was obtained from the parents and the adolescents in 2001–2002. The ethical committee of the Northern Ostrobothnia Hospital District have reviewed the study.

Measures

Dependent variable

We used adolescents’ own assessments of their experience of school liking as a dependent variable, with the item, ‘Do you like school at present?’ retrieved from the adolescents’ additional questionnaire. The response alternatives were 1 = very much, 2 = somewhat, 3 = not very much and 4 = not at all. The variable was dichotomized for binomial logistic regression, similarly as study conducted in Norway (Lohre et al., 2014). Code 0 was chosen to describe a positive attitude towards school, in which response alternatives 1 and 2 were recoded. Code 1 was chosen to describe a negative attitude towards the school, school dislike, in which alternatives 3 and 4 were recoded. This was chosen as the reference category.
Independent variables

All the independent variables were selected from Youth Self-Report (YSR) (Achenbach & Rescorla, 2001), which was part of the adolescents’ questionnaire. The participants assessed whether each statement had been true for them during the preceding six months. All the YSR variables had the same response alternatives of: 1: not true; 2: somewhat/sometimes true; and 3: very/often true. As different types of peer relations, and problems within them, might not have uniform associations with school liking (review in Osterman, 2000) thus we included multiple manifestations of social relations to the study (see Boulton et al., 2011).

Experiences of loneliness were measured with a one-item self-report stating I feel lonely. All three response alternatives (recoded as: 1: somewhat/sometimes true; and 2: very/often true) were included in the analysis and the statement ‘not at all’ was chosen as a reference category (recoded as 0). Even though loneliness is multidimensional in nature, a single-item self-report of loneliness is a valid measure of loneliness, and used before in several studies (see Stickley et al., 2014). Single-item self-report was the standard against which the original UCLA instrument was validated (Russell, Peplau, & Ferguson Lund, 1978), and it has been shown to correlate highly with the most widely used loneliness assessment tools (Theeke 2009).

The second statement from YSR was I am afraid of going to school, and the response alternative ‘not true’ was chosen as a reference category and recoded as 0, whereas other response alternatives where recoded as 1 ‘somewhat/very true’. All the other four YSR variables were recoded similarly. If an adolescent reports being afraid of school, shows school fear or school refusal, it might signal severe, typically (psycho)social problems, she/he is facing at school (Steinhausen, Bosiger, & Metzke, 2006). Third, experienced violence at school, bullying, has been linked with school dislike before (Harel-Fisch et al., 2011). However, school bullying is less common among older pupils (Smith, 2014). Item ‘I get bullied a lot’ was chosen to examine the association among older adolescents.

Not getting along with others and Keeping from getting involved with/close to others are variables representing social problems. Not getting along signals problems in peer relations, and if one keeps from getting involved with/close to others, it might signal withdrawal or asocial behaviour. In both cases, one might not be as well connected and it might lead to non-belonging from the peer group, which in turn, can be linked with poor school adjustment (Kalutskaya & Buhs, 2013), school dislike. We included variable Hanging around with kids who get into trouble in the study, as indicative of deviant peer association (see Snyder et al., 2005). Spending time in this type of company has been linked in previous studies with delinquent behaviour and negative attitude towards school (Strand, 2012).

Finally, as older pupils tend to like school less, it can be assumed that school type (comprehensive school, upper secondary school, vocational school) could resonate with this. Therefore, we were interested in examining the associations between school dislike and loneliness in different school types, as little research on that has been conducted on this before.

Statistical analysis

We used cross-tabulations to describe the frequency of the school liking of girls and boys across selected variables. The difference in distributions between boys and girls were tested by means of the chi-square test.

Secondly, six independent variables (loneliness and social relations) were entered as predictors for binomial logistic regression with school dislike as the outcome variable, and expressed the crude and unadjusted associations with each of them in terms of odds ratios (OR) and their 95% confidence intervals (CI) separately for boys and girls.

Thirdly, the respondents were grouped by their school type, and loneliness was selected as an independent variable for that model to examine the association between school dislike and loneliness.
Table 1. Gender specific number of participants (N), proportion of experience of school liking (%) and difference in proportions between boys and girls, stratified by independent variables.

| Independent variable                          | Girls N (%) | Boys N (%) | School liking |               |               |               |               |               |               |               |               |               |               |               |
|----------------------------------------------|-------------|------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                              |             |            | Very much     | Somewhat      | Not very much | Not at all    |               |               |               |               |               |               |               |               |
|                                              |             |            | Girls%        | Boys%         |               |               | p             | Girls%        | Boys%         |               |               |               |               |               |
|                                              |             |            |               |               |               |               |               |               |               |               |               |               |               |               |
| Feeling lonely                               |             |            |               |               |               |               |               |               |               |               |               |               |               |               |
| Not at all                                   | 1.853 (61.2)| 2.260 (81.1)| 5.6           | 4.7           | 0.227         | 63.1          | 52.1          | 0.000         | 29.2          | 38.8          | 0.000         | 2.0           | 4.3           | 0.000         |
| Somewhat                                    | 1.058 (34.9)| 473 (17.0) | 6.0           | 4.4           | 0.274         | 55.1          | 48.0          | 0.011         | 36.5          | 44.4          | 0.004         | 2.5           | 3.2           | 0.493         |
| Very/often true                              | 118 (3.9)   | 55 (2.0)   | 5.1           | 1.8           | 0.433         | 44.9          | 45.5          | 1.000         | 41.5          | 41.8          | 1.000         | 8.5           | 10.9          | 0.585         |
| Afraid of going to school                    |             |            |               |               |               |               |               |               |               |               |               |               |               |               |
| Not at all                                   | 2.838 (94.7)| 2.675 (97.2)| 5.8           | 4.7           | 0.071         | 60.3          | 51.7          | 0.000         | 31.6          | 39.5          | 0.000         | 2.3           | 4.1           | 0.000         |
| Somewhat/very true                           | 159 (5.3)   | 77 (2.8)   | 3.8           | 2.6           | 1.000         | 47.8          | 33.8          | 0.05          | 44.0          | 54.5          | 0.164         | 4.4           | 9.1           | 0.238         |
| Get bullied a lot                            |             |            |               |               |               |               |               |               |               |               |               |               |               |               |
| Not true                                     | 2.865 (95.1)| 2.611 (94.2)| 5.4           | 4.6           | 0.154         | 60.6          | 51.8          | 0.000         | 31.7          | 39.6          | 0.000         | 2.2           | 4.0           | 0.000         |
| Somewhat/very true                           | 149 (4.9)   | 162 (5.8)  | 11.4          | 6.2           | 0.111         | 42.3          | 43.2          | 0.909         | 40.9          | 42.6          | 0.818         | 5.4           | 8.0           | 0.376         |
| Don’t get along with other kids or adolescents|             |            |               |               |               |               |               |               |               |               |               |               |               |               |
| Not true                                     | 2.573 (85.2)| 2.384 (86.0)| 6.0           | 5.0           | 0.153         | 60.9          | 52.6          | 0.000         | 30.9          | 38.5          | 0.000         | 2.2           | 3.9           | 0.000         |
| Somewhat/very true                           | 448 (14.8)  | 389 (14.0) | 4.2           | 2.3           | 0.129         | 52.2          | 43.2          | 0.010         | 39.7          | 48.6          | 0.012         | 3.8           | 5.9           | 0.193         |
| Keep from getting involved/close to others   |             |            |               |               |               |               |               |               |               |               |               |               |               |               |
| Not true                                     | 2.385 (79.9)| 2.088 (77.6)| 5.9           | 4.3           | 0.018         | 61.1          | 52.8          | 0.000         | 31.2          | 38.6          | 0.000         | 1.8           | 4.3           | 0.000         |
| Somewhat/very true                           | 600 (20.1)  | 603 (22.4) | 5.3           | 5.0           | 0.796         | 53.8          | 46.3          | 0.009         | 36.7          | 44.6          | 0.006         | 4.2           | 4.1           | 1.000         |
| Hang around with friends/kids who get in trouble|             |            |               |               |               |               |               |               |               |               |               |               |               |               |
| Not true                                     | 2.514 (83.4)| 2.257 (81.5)| 6.1           | 4.8           | 0.065         | 62.1          | 54.3          | 0.000         | 30.0          | 37.5          | 0.000         | 1.9           | 3.4           | 0.001         |
| Somewhat/very true                           | 500 (16.6)  | 513 (18.5) | 3.8           | 3.7           | 1.000         | 47.6          | 38.6          | 0.004         | 43.4          | 49.9          | 0.044         | 5.2           | 7.8           | 0.099         |
| School type                                  |             |            |               |               |               |               |               |               |               |               |               |               |               |               |
| Comprehensive                                | 2.206 (72.8)| 1.963 (70.4)| 5.3           | 3.9           | 0.046         | 57.4          | 48.4          | 0.000         | 34.5          | 42.7          | 0.000         | 2.8           | 5.0           | 0.000         |
| Upper secondary                              | 628 (20.7)  | 468 (16.8) | 4.9           | 6.2           | 0.421         | 66.2          | 54.7          | 0.000         | 27.5          | 35.9          | 0.004         | 1.3           | 3.2           | 0.033         |
| Vocational                                   | 195 (6.4)   | 357 (12.8) | 13.3          | 6.4           | 0.008         | 63.1          | 62.7          | 1.000         | 22.1          | 29.1          | 0.087         | 1.5           | 1.7           | 1.000         |
| Total                                        | 3.029 (52.1)| 2.788 (47.9)| 5.7           | 4.6           | 0.067         | 59.6          | 51.3          | 0.000         | 32.3          | 39.8          | 0.000         | 2.4           | 4.3           | 0.000         |

*p* Chi-square test.
The models were tested for multicollinearity, and the variance inflation factor was less than 1.2 for all variables, so no problems with multicollinearity existed. We employed IBM SPSS Statistics 22 to perform the statistical analyses.

**Results**

**Descriptive statistics**

Among participants, 32.3% of girls and 39.8% of boys reported not liking school very much, and 2.4% of girls and 4.3% of boys reported not liking school at all. Most adolescents, 59.6% of girls and 51.3% of boys stated that they like school somewhat, but only 5.7% of girls and 4.6% of boys reported liking

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**Figure 1.** School liking and feeling lonely among adolescent girls and boys (%).

**Table 2.** Binomial logistic regression for school dislike expressed as unadjusted and adjusted ORs and 95% confidence intervals (95% CI) separately for girls and boys (Ref. Reference category).

| Independent variables                  | Girls          |                  | Boys            |                  |
|----------------------------------------|----------------|-----------------|-----------------|-----------------|
|                                        | Unadjusted     | Adjusted        | Unadjusted      | Adjusted        |
|                                        | OR 95% CI      | OR 95% CI       | OR 95% CI       | OR 95% CI       |
| Loneliness                             |                |                 |                 |                 |
| Not at all (Ref.)                      |                |                 |                 |                 |
| Somewhat                               | 1.4 1.1–1.6    | 1.2 1.0–1.5     | 1.1 0.9–1.4     | 1.0 0.8–1.2     |
| Very/often true                        | 2.2 1.5–3.1    | 1.7 1.1–2.5     | 1.4 0.8–2.5     | 1.2 0.6–2.2     |
| Afraid of going to school              |                |                 |                 |                 |
| Not afraid (Ref.)                      |                |                 |                 |                 |
| Afraid                                 | 1.8 1.3–2.5    | 1.3 0.9–1.8     | 2.2 1.4–3.6     | 1.7 1.0–2.9     |
| Being bullied                          |                |                 |                 |                 |
| Not bullied (Ref.)                     |                |                 |                 |                 |
| Is bullied                             | 1.6 1.2–2.3    | 1.2 0.8–1.7     | 1.3 0.9–1.8     | 1.0 0.7–1.4     |
| Don’t get along with other adolescents |                |                 |                 |                 |
| Not true (Ref.)                        |                |                 |                 |                 |
| True                                   | 1.5 1.2–1.9    | 1.2 0.9–1.5     | 1.6 1.3–2.0     | 1.4 1.1–1.7     |
| Keep from getting involved/close to others |            |                 |                 |                 |
| Not true (Ref.)                        |                |                 |                 |                 |
| True                                   | 1.4 1.1–1.6    | 1.1 0.9–1.4     | 1.2 1.0–1.5     | 1.1 0.9–1.3     |
| Hang around with friends/kids who get in trouble |          |                 |                 |                 |
| Not true (Ref.)                        |                |                 |                 |                 |
| True                                   | 2.0 1.6–2.4    | 1.8 1.5–2.2     | 1.9 1.6–2.3     | 1.9 1.5–2.3     |

Note: Significance values (p value) to each bolded ORs and 95% CIs.
school very much (Table 1). The gender difference was statistically significant (chi-square 0.000) boys reporting a greater dislike of school than girls, except among those who reported liking school very much. Among them boys reported greater dislike towards school, but the difference between girls and boys was not statistically significant. Similar trend was seen when looking at the gender differences of school liking stratified by independent factors.

Girls reported loneliness more often than boys. As Figure 1 shows, very lonely adolescents more often reported not liking school at all (girls 8.5%, boys 10.9%), than those who were not at all lonely (girls 2.0%, boys 4.3%). More girls than boys reported being afraid of going to school, yet if a boy reported being afraid, they disliked school more than those who were not; this was not seen among girls. Slightly more boys than girls reported school bullying. Girls and boys who reported being bullied a lot liked school more often than those who were not bullied. Most adolescents (girls 85%, boys 86%) felt that they got along with others, and most (78–80%) responded that they do not keep from getting involved with/close to others. 17% of girls and 19% of boys reported hanging around with friends/kids who get in trouble. Among those adolescents, the ratings for school dislike were higher than those who did not hang around with friends/kids like that. Adolescents, especially girls, reported more often liking school in vocational school than in other school types.

**Binomial logistic regression**

In the unadjusted model, among girls all the six factors examined were significantly associated with school dislike. The odds ratios ranged from 1.4 to 2.2, and the strongest predictor of school dislike among girls was being very lonely. In the unadjusted model, among boys 4 out of 6 variables were associated with school dislike; being afraid of going to school (OR 2.2), not getting along with other adolescents (OR 1.6), keeping from getting involved/close to others (OR 1.2) and hanging around with friends/kids who get in trouble (OR 1.9).

After adjusting all the factors in the model, among girls, two variables influencing whether a person reports school dislike remained statistically significant: being somewhat or very lonely and hanging around with friends/kids who get in trouble. Among very lonely girls, the proportion of those disliking school was 1.7-fold compared to the non-lonely girls. Also, girls who reported hanging around with friends/kids who get in trouble did not like school (OR 1.8). After adjusting with all the factors in the model, among boys three of the independent variables made a statistically significant contribution to the model; being afraid of going to school (OR 1.7), not getting along well with other adolescents (OR 1.4) and hanging around with friends/kids who get in trouble (OR 1.9) (Table 2).

### Table 3. Binomial logistic regression of school dislike by school types expresses as unadjusted ORs and 95% confidence intervals (95% CI) separately for girls and boys.

| Independent variable | Girls |                 |                | Boys |                 |                |
|----------------------|-------|-----------------|----------------|------|-----------------|----------------|
|                      | OR    | 95% CI          | OR             | 95% CI| OR              | 95% CI         |
| Comprehensive school |       |                 |                |      |                 |                |
| Not at all lonely (Ref.) | |                 |                |      |                 |                |
| Somewhat lonely       | 1.4   | 1.2–1.7         | 1.1            | 0.9–1.5 | |                |
| Very lonely           | 1.6   | 1.0–2.5         | 1.5            | 0.8–2.9 | |                |
| Upper secondary school|       |                 |                |      |                 |                |
| Not at all lonely (Ref.) | |                 |                |      |                 |                |
| Somewhat lonely       | 1.3   | 0.9–1.9         | 1.3            | 0.8–2.0 | |                |
| Very lonely           | 4.0   | 1.8–8.7         | 1.0            | 0.3–3.2 | |                |
| Vocational school     |       |                 |                |      |                 |                |
| Not at all lonely (Ref.) | |                 |                |      |                 |                |
| Somewhat lonely       | 1.2   | 0.5–2.5         | 0.8            | 0.4–1.7 | |                |
| Very lonely           | 6.5   | 1.9–21.9        | 2.2            | 0.1–35.8 | |                |

Note: Significance values (p value) to each bolded ORs and 95%CI.
There were no association between loneliness and school dislike by school type among boys, but for girls associations were found; in comprehensive school the odds ratio for disliking school was 1.6; in upper secondary school it was 4.0 and in vocational school 6.5 for a girl who reports feeling very lonely than a girl who is not lonely (Table 3).

Discussion

In this article, the associations between school liking, loneliness and social relations were examined among a large cohort data sample of Finnish adolescents. Overall, adolescents had more positive than negative attitudes towards school, and a similar trend has been seen elsewhere (Løhre et al., 2014). However, when compared internationally, these ratings of school liking among northern Finland adolescents are low. In HBSC study in 2001–2002, Finland was in last place in comparison to the other 34 nations in the study when ratings for liking school a lot were examined (Currie et al., 2002). Our results were also in accordance with previous body of research with regard to the gender difference in reports for school liking, boys reported a greater dislike of school than did girls (Erath et al., 2008).

As our study suggests, poor social relations and loneliness contribute to school dislike with similarities as well as differences in the results by gender. After all the factors were added to the logistic regression model together, two variables, loneliness and spending time with friends/kids who get in trouble, were only two remained variables linked with school dislike among girls, while among boys three variables, being afraid of going to school, getting poorly along with others, and spending time with friends/kids who get in trouble were linked with school dislike. Next, we will discuss these associations with more details.

First, girls reported more loneliness than did boys, similarly to HBSC studies that also used a single-item measure of loneliness (Kämppi et al., 2012) and loneliness was statistically significantly associated with school dislike among girls, but not among boys. Similar findings have been reported elsewhere, where loneliness was predicting school dislike only among girls (Løhre et al., 2014). Loneliness is centrally caused by a lack of meaningful social relationships, especially in quality. Loneliness and connected feelings of distress may also arise after facing troubles, or after ending friendships, for example due to disagreements, or relocation (Benenson & Christakos, 2003). Generally speaking, girls tend to report having more social relations and more mutual intimate friendships (Erath et al., 2008) than boys do. As also Løhre et al. (2013) conclude, girls might be more vulnerable to loneliness than boys in the school setting. It might make an adolescent girl stand out from others in the class, as is often typical, and also expected, for girls to have a close dyadic friendship (Slater, Guthrie, & Boyd, 2001). Furthermore, as previous Finnish studies have shown (Lindfors, Solantaus, & Rimpelä, 2012; Vornanen, Törrönen & Niemelä, 2009), being alone at school, as well as experiencing loneliness, was the biggest fear of adolescents girls, but not for boys, underlying the significance of the issue among them. Having such a fear, and generally experiencing loneliness might drive adolescents to spend time and affiliate with ‘bad company’, just so that they do not have to be alone and lonely at school (Brendgen, Vitaro, & Bukowski, 2000). The current study shows some support for this, since besides loneliness, spending time with friends/kids who get into trouble, indicative of delinquent friends, was among girls the other variable statistically significantly linked with school dislike.

Overall, hanging around with friends/kids who get into trouble had the strongest odds ratios with school dislike for both girls and boys. Peer group seems to have a great effect on adolescents’ attitudes towards school, which has been seen in other studies as well. In a study of 7th grade students, the peer group influenced students’ ‘intrinsic value for school’; those who ‘hung out’ with a group of friends who disliked school showed a greater decrease in their own enjoyment of school compared to students who spent time with friends who liked school (Ryan, 2001). Thus, as previous studies suggest, spending time with delinquent friends might lead besides school dislike, lower school and overall motivation, and achievement beliefs and behaviours, (Ryan, 2001) which in turn might negatively affect well-being and health.

Surprisingly, being bullied and experiencing violence at school had no association with school dislike in adjusted models among girls and boys, even though this was assumed based on previous studies.
conducted with younger pupils (Boulton, Chau, Whitehand, Amataya, & Murray, 2009; Harel-Fisch et al., 2011). Interviewees were asked whether they experience bullying a lot. It might be that the formulation of the question about bullying in the questionnaire did not capture well enough the many dimensions of the phenomenon of bullying, and then was not relatable for interviewees. Overall, only a few participants reported being bullied often or sometimes. Previous studies show that victimization and school violence declines as pupils get older (Acquah et al., 2015; School Health Promotion Study, 2015), which in part might explain the result. Being afraid of going to school was nevertheless associated with school dislike among boys. This might imply a negative school culture; there was something at school that made boys afraid.

Interestingly, those bullied pupils, especially girls, reported even higher school liking than those who were not bullied. These girls and boys likely were good and studious pupils which might have been one reason for them to be bullied in the first place. Yet as school was motivating for them, experienced violence at school might not have been such a big issue, that it would affect school liking and motivation for being at school. Also, some studies have shown, that bullied pupils might still have friends among other bullied pupils, which might help to carry over a difficult time; being a buffer against a difficult experience of violence at school (Smith, 2014).

Finally, at the time of the data collection, those born in 1986 were still in comprehensive school grade 9, but some of those born in 1985 were already in vocational or in upper secondary school. School liking was greater in upper secondary education, especially in vocational school. After comprehensive school, the vocational school might feel more motivating and entails usually a clear vision for future employment, possibly explaining the higher ratings for liking of school in vocational school generally. Thus, our study shows no support for older pupils disliking school more than younger pupils in this respect.

We were interested in finding out, whether there were any associations between experienced loneliness and school dislike in different school types. Loneliness was associated with school dislike in every school type among girls, but not among boys. The link between loneliness and school dislike was stronger among those in upper secondary education than in comprehensive education, even though school liking was higher in upper secondary education. This result, a stronger association of loneliness and school dislike in upper secondary education, especially in vocational school, might indicate school adjustment problems, problems in connecting and integrating into a new school environment and context and troubles in forming new meaningful social relationships, (Boulton et al., 2011; Howe, 2010), influencing experiences of loneliness and school dislike. Generally speaking, and as found in our study, the majority of girls apply to upper secondary school (i.e. academic track) instead of vocational school; thus those in vocational school might be the only girls in their former comprehensive school class going to a vocational school. In many areas, pupils have to move to another city to attend the vocational school, while an upper secondary school is typically found in every city. Therefore, it might be that those girls are separated from their former peers, thus feeling intensified loneliness in the new school in a new town or city.

Limitations

The cross-sectional study design prevents us from claiming the causality of the observed associations. Second, we used only single-item self-reported variables in the study, which might limit the depth of the phenomena examined. However, since our data-set included questions similar to those used in other studies, such as the HBSC study, our results enable a comparison with their results. Thirdly, even though all participants were attending school, the context in the NFBC survey was not specifically related to schools; for example adolescents were asked whether they experienced loneliness in general. Those reporting being very lonely probably felt lonely a lot, including in the school context. However, the large and diverse general population-based NFBC data offers unique possibilities to examine associations among the adolescent population in and around school.
Conclusion
Loneliness and negative social relations were associated with school dislike with some gender differences among adolescents in Northern Finland. Our results were in line with the self-system model, which proposes the link between these types of adverse experiences and negative attitude towards school. School dislike, loneliness and problematic social relations may all negatively affect one's well-being, and future school paths through poorer motivation and school adjustment. Achievement, grades and PISA success are emphasized in schools in Finland, while socio-emotional aspects may not be talked about as much. In recent decades, a lot of work against school bullying has been done in Finnish schools. Further attention on helping improving peer relationships and positive atmosphere in the class is a potential way to enhance liking of school (see Boulton et al., 2011). There is evidence that the school culture can be changed, that it is possible to foster positive norms and standards among students, and that schools can develop a more prosocial, caring, including and positive atmosphere (Shann, 1999), which in turn may lead to better liking of school, better motivation and learning results. Teaching and discussing compassion, respect, ethics, non-violence and solidarity with pupils (Nussbaum, 2010) is important from early on and should be addressed more in the school curriculum. Teachers also need more training for this. Our results offer interesting new insights since previous studies have suggested that older pupils are less satisfied with their schooling, while our results suggest that the school type may affect school liking. Transitions from one school level to another are often difficult times socially for pupils, being linked with more intense feelings of loneliness. Special attention should be paid to the atmosphere and the sense of belonging when new classes are formed and when new pupils enter the class in the middle of a semester.

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