

Social relations in school and psychosomatic health among Swedish adolescents—the role of academic orientation

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Background: The purpose of this study was to analyse the connection between two types of social relations in school (to peers and to teachers) and psychosomatic health complaints among adolescents in school Year 9 in the Swedish compulsory school. In particular, the focus is on the importance of students' academic orientation as a possible modifier of the association between social relations and psychosomatic health complaints. **Methods:** The data were collected during the 1995–2005 time period from approximately 10 000 Swedish adolescents in the age of 15–16 years by using a questionnaire that was handed out in the class room. **Results:** There are strong associations between adolescents' social relations in school (both to peers and to teachers) and psychosomatic health complaints. Worse relationships are connected to worse psychosomatic health. The health effects of teacher contacts were significantly modified by academic orientation; they were stronger for theoretically (i.e. those with better health) than for non-theoretically oriented students. **Conclusion:** Interpreted from a social class perspective, the results may reflect that the theoretically oriented students to a higher degree strive to conform to the culture present in school making this group of students more sensitive for teacher relations manifested as recognitions, rewards or penalties. In order to promote social equity in health, efforts to improve social relations in school should not solely focus on the teacher–student relationships but also on the relationships between peers.

Keywords: adolescents, psychosomatic health complaints, social interactions in school, socio-economic differences

Introduction

During the past decades, there have been concerns for deteriorating mental health among Swedish adolescents. However, while mental health problems have increased among older adolescents, no changes over time seem to have occurred among younger adolescents.^{1,2}

Since adolescents in Sweden are subjected to compulsory school attendance, they have to interact with teachers and classmates on a daily basis. Therefore, it is reasonable to consider strained social relations in school as psychosocial stressors, which may negatively affect the health of adolescents.³

Studies also show strong associations between adolescents' experiences of the social climate in school, social relationships and mental health outcomes.^{4–9} Poor relationships are connected to worse health outcomes,^{3,8,10,11} in particular for strained relationships.¹² Also, there seems to be a connection between disempowerment from teachers and strained peer relationships.¹³

Within a school class, adolescents may perceive the quality of social relations (degree of psychosocial stress) differently, which in turn may affect the degree of perceived health

problems. In addition, there seems to exist smaller contextual school class effects on adolescents' health.¹⁴

The social relations students have in school may differ in type and meaning. Relations to peers differ from those to teachers, since the teacher formally has a superior role including opportunities for rewards and penalties. It seems important to distinguish between qualitatively different social relations to be able to increase the knowledge of how social relations affect the health of adolescents.

Also, although students are participating in schoolwork under the same conditions, the meaning and importance of different types of social relationships may also differ between different groups of adolescents, due to different lifestyles and educational tracks. Academic orientation has been shown to be strongly correlated to substance use among adolescents and youth.^{15,16} In addition, academic orientation measured as students' choice for upper-secondary school studies [theoretical (preparing for university studies) vs. non-theoretical (vocational-oriented) educational programmes] has been considered as an early indicator of future social position, reflecting students' social class of destination, but indirectly affected by social class of origin.^{16,17} In order to understand the connection between social relationships and health for

different groups of adolescents, the possible impact of their socio-economic positions need to be taken into account. This is also in line with studies addressing the implications of 'the hidden curriculum' (values, norms and beliefs of appropriate behaviours in school) showing socio-economic differences.¹⁸

The purpose of this study is to analyse the connection between two types of social relations in school (to peers and teachers) and psychosomatic health complaints among adolescents in school Year 9 in the Swedish compulsory school, using the PsychoSomatic Problems scale (PSP-scale) as outcome measure. Since the importance of social relations may vary between different subgroups of adolescents, the present study particularly highlights the importance of students' academic orientation, as a possible modifier of the association between social relations and health. Because academic orientation reflects educational tracks and choices of lifestyles, it can be hypothesized that relationships connected to academic performance (e.g. relationships to teachers) are more important for theoretically oriented students striving for a academic life (e.g. university studies). Therefore, in this study it is hypothesized that the effect of social relations on psychosomatic health complaints differs between adolescents with different academic orientations, implying the theoretically oriented students to be more sensible to teacher contacts.

Methods

Material

This study is based on repeated cross-sectional data collected during 1995–2005 time period among 9900 adolescents in Year 9 (aged 15–16 years) in 14 of 16 municipalities in the county of Värmland in Sweden. The number of respondents at each of these years of investigation was: 2426 (1995), 2342 (1998), 2478 (2002) and 2654 (2005), and with the proportion of non-responses: 6.3% (1995), 9.0% (1998), 11.8% (2002) and 14.9% (2005). The study group is constituted by ~50% of each sex. With respect to academic orientation, ~60% of the students had applied for non-theoretical upper-secondary school educational programmes and ~40% for theoretical.

Data collection

The data were collected using a questionnaire handed out in the classrooms by school personnel. Participation was voluntary. The questionnaire was completed anonymously in the classroom and returned in a sealed envelope. The principles guiding the data collection in 2005 were approved by the ethical committee at Karlstad University.

At every year of investigation, the data collection took place during April.

Instruments

Psychosomatic health complaints

The PSP-scale was used as outcome measure. The PSP-scale comprises eight items intended to capture information about psychosomatic health problems among children and adolescents in general populations. The PSP-scale is constructed by the summation of the respondents' responses (raw scores) across all eight items. The eight items in the scale are: 'had difficulty in concentrating', 'had difficulty in sleeping', 'suffered from headaches', 'suffered from stomach aches', 'felt tense', 'had little appetite', 'felt sad' and 'felt giddy'. The response categories are: 'never', 'seldom', 'sometimes', 'often' and 'always'. The justification of the summation of raw scores has been examined with psychometric analyses based on the

Rasch model.¹⁹ The psychometric analysis of PSP has shown good fit to the Rasch model, with high reliability (internal consistency), invariance among items and proper categorization of the items (see Hagquist²⁰). During the past 20 years, the PSP-scale has been used in surveys monitoring the psychosomatic health of adolescents in the county of Värmland. In 2009, the PSP-scale was also used in a nationwide study conducted by Statistics Sweden with 172 000 respondents.

A low value on the PSP-scale indicates few health problems, whereas a high value indicates more psychosomatic health problems.

Social relations with peers in school

To measure social relationships with peers during school time, a single item was used: 'The friendship in the school class is good', with the response categories 'never', 'seldom', 'sometimes', 'often' and 'always'. In the multinomial logistic regression analysis, the response categories 'never' and 'seldom' were collapsed, and so were the categories 'often' and 'always', resulting in three categories instead of five. The number of response categories was reduced to avoid empty cells (variable combinations containing no observations) in the analysis. The internal loss of responses on this item has been <1% at all years of investigations.

Social relations with teachers in school

To measure social relations with teachers in school a single item was used: 'Contacts with teachers are good'. The response categories were: 'never', 'seldom', 'sometimes', 'often' and 'always'. In the multinomial logistic regression analysis, the categories 'never' and 'seldom' were collapsed, so were the categories 'Often' and 'Always', resulting in three categories instead of five. The categories were collapsed to avoid empty cells in the analysis. The internal loss of responses on this item has been <1% at all years of investigations.

Academic orientation

In Sweden, upper-secondary school studies are voluntary but almost all adolescents (about 97% in this study) apply for an educational programme. In this study, academic orientation was measured by a question about the students' first choice of educational programme for upper-secondary school studies. The responses were dichotomized as either theoretically (mainly natural and social sciences, preparing for university studies) or non-theoretically oriented (vocational, individual and other non-theoretical programmes).

Data analysis

The distributions of theoretically and non-theoretically oriented students with respect to sex, years of investigation and social relations were analysed using contingency tables. The differences between proportions were tested using two-tailed z-tests (reported in table 1). Ordinary linear regression analysis was conducted using the original PSP-scale, without any categorization. The independent variables were analysed using dummy regressor coding (reported in table 2).

In order to specifically contrast the extremes of the PSP-scale distribution, individuals located above the 90th percentile were compared with individuals below the 10th percentile. Multinomial logistic regression analysis was performed, and is reported in tables 3 and 4. Two types of models were tested: one with only main effects, and one with main effects

Table 1 Frequency and percentage distribution of sex, year of investigation, friendship in the school class and teacher contacts by academic orientation

Variables	Theoretical study orientation (n = 3846)		Non-theoretical study orientation (n = 5486)		
	n	%	n	%	
Sex					
Boys	1672	43.6	2932	53.6	P<0.0001
Girls	2167	56.4	2539	46.4	P<0.0001
Year					
1995	1060	27.6	1146	20.9	P=0.0002
1998	1123	29.2	1120	20.4	P<0.0001
2002	862	22.4	1488	27.1	P=0.0116
2005	801	20.8	1732	31.6	P<0.0001
Friendship in the school class?					
Never/Seldom good	315	8.2	528	9.7	P=0.4647
Sometimes good	594	15.6	790	14.6	P=0.6064
Often/Always good	2910	76.2	4110	75.7	P=0.6294
Good teacher contacts?					
Never/Seldom good	330	8.6	743	13.7	P=0.0182
Sometimes good	858	22.5	1521	28.1	P=0.0028
Often/Always good	2634	68.9	3155	58.2	P<0.0001

Significant differences between proportions ($P<0.05$) are marked with brackets (two-tailed z-tests).

and an interaction term included. The goodness-of-fit of these models were compared by means of the total likelihood ratio test statistic (marginal G^2), and the partitioned likelihood ratio test statistic (conditional G^2). Since the goodness-of-fit was significantly improved (conditional $G^2=10.95$, $df=4$, $P=0.027$) by including an interaction term (academic orientation by 'good teacher contacts'), this model was chosen. To facilitate the interpretation of the odds ratios based on interaction terms, the results from the multinomial logistic regression analysis are presented in two different steps. First, in table 3, the log odds coefficients for all individual main and interaction terms are presented. Second, in table 4 these terms are summated and transformed to more interpretable odds ratios. In the analysis, the dependent variable consisted of three categories, based on the PSP-values at percentile 10 and 90 as cut-off points. All statistical analyses were performed using the SPSS 18.0 software.

Results

Academic orientation, sex, year of investigation, friendship in the school class and teacher contacts

Table 1 shows the frequency and proportion of respondents as regards sex, year of investigation, friendship in the school class and teacher contacts by academic orientation (two-tailed z-tests). The proportion of boys is significantly greater among the non-theoretically oriented adolescents, whereas the proportion of girls is greater among the theoretically oriented. The proportion of adolescents choosing theoretical educational programmes for their upper-secondary school studies is significantly greater in the years 1995 and 1998 and the proportion choosing non-theoretical programmes is significantly greater in the years 2002 and 2005. Regarding friendship in the school class, only small differences can be observed between the theoretically and non-theoretically

Table 2 Ordinary linear regression with 'The friendship in the school class is good' and 'Good teacher contacts' as independent variables, and the continuous (original) PSP-scale as dependent variable, with adjustments for sex, academic orientation and year of investigation

Psychosomatic Health Problems	<i>b</i>	95% CI
Friendship in the school class is good		
Never	0.75	0.60 to 0.90
Seldom	0.57	0.47 to 0.67
Sometimes	0.32	0.24 to 0.39
Often	0.14	0.08 to 0.19
Always	0	
Good teacher contacts		
Never	0.93	0.77 to 1.09
Seldom	0.61	0.52 to 0.71
Sometimes	0.40	0.33 to 0.47
Often	0.19	0.13 to 0.26
Always	0	
Sex		
Boy	-0.59	-0.64 to -0.55
Girl	0	
Academic orientation		
Theoretical	-0.26	-0.31 to -0.22
Non-theoretical	0	
Year of investigation		
2005	0.14	0.08 to 0.21
2002	0.05	-0.01 to -0.12
1998	0.08	0.01 to -0.14
1995	0	

Table 3 Multinomial logistic regression analysis of psychosomatic health complaints (percentile 90 vs. percentile 10)

Psychosomatic Health Problems (Percentile 90 vs Percentile 10)	<i>b</i>	95% CI
There is a good sense of friendship in the school class		
Never/seldom	1.586	1.19 to 1.98
Sometimes	0.792	0.51 to 1.08
Often/always	0	
Good teacher contacts		
Never/seldom	1.314	0.93 to 1.70
Sometimes	0.871	0.57 to 1.17
Often/always	0	
Sex		
Boys	-2.047	-2.26 to -1.83
Girls	0	
Academic orientation		
Theoretical	-0.823	-1.08 to -0.56
Non-theoretical	0	
Year of investigation		
2005	0.697	0.41 to 0.98
2002	0.215	-0.07 to 0.50
1998	0.366	0.07 to 0.67
1995	0	
Interaction between teacher contacts and academic orientation		
Never/seldom by theoretical	1.151	0.34 to 1.96
Never/seldom by non-theoretical	0	
Sometimes by theoretical	-0.033	-0.53 to 0.46
Sometimes by non-theoretical	0	
Often/always by theoretical	0	
Often/always by non-theoretical	0	
Model fit		
G^2	282	
df	264	
<i>P</i>	0.218	

Log odds ratios (*b*) reported for main effects and interaction effects

oriented adolescents. The differences are greater as regards the perceived teacher contacts. The proportion experiencing the teacher contacts 'always' or 'often' to be good is significantly greater among the theoretically oriented adolescents, whereas the proportion experiencing the teacher contacts to be good

Table 4 Odds ratios for reporting severe psychosomatic health complaints (percentile 90 vs. percentile 10) with respect to main effects of 'The friendship in school class is good' and interaction of 'Good teacher contacts' by academic orientation (95% CI)

Psychosomatic Health Problems (Percentile 90 vs Percentile 10)	OR (95% CI)
The friendship in the school class is good	
Never/seldom	4.89 (3.30-7.24)
Sometimes	2.21 (1.66-2.94)
Often/always	1
Good teacher contacts by academic orientation ^a	
Theoretical orientation	
Never/seldom	11.76 (5.52-23.57)
Sometimes	2.31 (1.55-3.44)
Often/always	1
Non-theoretical orientation	
Never/seldom	3.72 (2.61-5.64)
Sometimes	2.39 (1.80-3.29)
Often/always	1

a: Based on the log odds ratio summation of the three terms included in the interaction

'sometimes' and 'never' or 'seldom' is significantly greater among the non-theoretically oriented.

Social relations in school and psychosomatic health complaints

Initially, the association between social relations in school and psychosomatic health complaints was studied using ordinary linear regression analysis, which is shown in table 2. The general pattern described in table 2 implies that worse relationships (both to teachers and to peers) are connected to worse psychosomatic health.

The analysis using multinomial logistic regression is shown in tables 3 and 4. The goodness-of-fit analysis shows that the model including one interaction term in addition to the main effects fits the data. In table 3, it can be seen that the main effects were significant, additionally also one parameter of the interaction term shows a significant effect. The interaction term 'good teacher contacts' by academic orientation was significant; implying that the association between teacher contacts and psychosomatic health complaints is significantly modified by academic orientation, i.e. the health effects of teacher contacts is different for academically and non-academically oriented adolescents. Table 3 also shows that girls report worse health than boys, non-theoretically oriented students worse health than theoretically oriented, and that the health varies with years of investigation with significantly worse health reports in the year 2005 compared with the reference year 1995.

Table 4 shows the odds ratios for the main effects of friendship in the school class, and for the interaction between 'good teacher contacts' and academic orientation. It shows that there is a strong connection between friendship in the school class and psychosomatic health complaints. For instance, the odds ratio for falling into the 90th percentile compared to the 10th on the PSP-scale is about five times as high for a never/seldom response compared with a response in often/always. It can also be seen that there was an interaction between 'good teacher contacts' and academic orientation. The odds ratio for falling into the 90th percentile compared with the 10th on the PSP-scale is about 12 times as high for a never/seldom response compared with a often/always response for theoretically oriented, and about four times as high for the non-theoretically oriented students. In contrast, the odds ratio for a sometimes response is about the same for different orientations.

Discussion

The purpose of this study was to analyse the connection between adolescents' social relations in school (to teachers and to classmates) and psychosomatic health complaints using the PSP-scale. In particular, academic orientation was focused as a possible modifier of the effects of social relations on psychosomatic health. The ordinary linear regression as well as the multinomial logistic regression analysis shows strong connections between social relationships in school and psychosomatic health complaints, both for relations with peers and teachers. However, there is no statistically significant interaction effect between the two measures, i.e. the health effects of social relationships with peers is not modified by the social relationships with teachers (and vice versa). Also, the association between social relationships in school and psychosomatic health problems is not modified by sex or years of investigation (i.e. no statistical interaction).

Regarding the role of academic orientation as a possible modifier of the association between social relations and psychosomatic health, the results show interesting patterns. First, there was an interaction effect between 'good teacher contacts' and academic orientation, indicating that the association between social relations and psychosomatic health is modified by academic orientation. This means that the effect on health of 'teacher contacts' is different for the two separate academic orientations studied. Second, there was no corresponding statistically significant interaction effect for relations with classmates, implying that the association between peer relations and health was about the same regardless of academic orientation.

The general outcomes from this study showing an association between social relations in school and psychosomatic health are consistent with previous studies on psychosocial stress in school. Poor social relations with peers and teachers in school have been shown to be potential chronic stressors which contribute to the experience of psychosomatic symptoms.³ Given that school is compulsory, adolescents have to interact with peers and teachers on a daily basis in a non-voluntary way, the relations in school are inescapable. Taking a social class perspective by considering academic orientation to be an early indicator of social position,^{16,17} which reflects different lifestyles, it is reasonable to hypothesize that the effects of social relations in school may be different for theoretically and non-theoretically orientated students. Although it seems to be a lack of studies on academic orientation and social class as moderating factors of the effects of the students–teachers relationships, there are studies considering ethnicity as a moderator.²¹ These studies indicate that students from groups at greater risk for poor school adjustment are more responsive to the quality of the student–teacher relationship. By showing stronger health effects of teacher contacts for the theoretically oriented than for the non-theoretically oriented students, the present study seems to point to an opposite direction. Although counterintuitive at face value from a social class and cultural perspective, the results are less surprising. Given the work of Willis²² showing working class boys to be dissociated from the middle class academic culture present in school, it is likely that the theoretically oriented students to a higher degree strive to conform to the academic culture present in school, including academic achievements. This in turn could make this group of students more sensitive for teacher relations manifested as recognitions, rewards or penalties.

At a general level of analysis, it may seem a bit surprising that a statistically significant interaction effect for relations to classmates similar to that of teachers does not occur. The results indicate that relations to classmates are important for the psychosomatic health of adolescents, regardless of students'

academic orientation. In contrast to teacher relations, relations to classmates are more general and do not explicitly connect to academic achievements. Therefore, they may have virtually the same importance for all adolescents, regardless of academic orientation. It is therefore reasonable to hypothesize that the health effects of peer relations are more uniform.

The importance of social relations to peers and teachers in school, not just *per se* but also with respect to students' health indicate room and need for actions to improve the social climate in schools. Efforts to promote a good social climate in school is likely to improve not just social relations and health but also the educational environment as a whole, contributing to improved academic performance of the students.^{23,24} In order to promote social equity in health, efforts to improve social relations in school should not solely focus on the teacher–student relationships but also on the relationships between peers.

This study was based on a cross-sectional study design. Therefore, the direction of the observed associations cannot be determined. Adolescents' health status may be affected by their social relationships, but adolescents may also have worse relationships due to their health problems. However, relying on the large body of research conducted in this field, it is plausible to consider deficient social relationships as psychosocial stressors contributing to worse health (see Halpern²⁵ and Turner and Turner²⁶ for a discussion).

By applying ordinary linear regression and multinomial logistic regression, analyses of both the general pattern along the continuous PSP-scale as well as specific groups at higher risk were facilitated.

Conflicts of interest: None declared.

Key points

- In this study, both relationships to peers and to teachers were associated with psychosomatic health complaints.
- Worse teacher contacts is associated with worse psychosomatic health, but is modified by academic orientation.
- Efforts to improve social equity in health should not solely focus on teacher–student relationships or on the relationships between peers but both.

References

- 1 Hagquist C. Psychosomatic health problems among adolescents in Sweden – are the time trends gender related? *Eur J Public Health* 2009;19:331–6.
- 2 Hagquist C. Discrepant trends in mental health complaints among younger and older adolescents in Sweden: an analysis of WHO data 1985–2005. *J Adolesc Health* 2010;46:258–64.
- 3 Murberg TA, Bru E. School-related stress and psychosomatic symptoms among Norwegian adolescents. *School Psychol Int* 2004;25:317–32.
- 4 Bond L, Butler H, Thomas L, et al. Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health and academic outcomes. *J Adolesc Health* 2007;357:e9–e18.
- 5 Hall-Lande JA, Eisenberg ME, Christenson SL, Neumark-Sztainer D. Social isolation, psychological health, and protective factors in adolescence. *Adolescence* 2007;42:265–86.
- 6 McGrath B, Brennan MA, Dolan P, Barnett R. Adolescent well-being and supporting contexts: a comparison of adolescents in Ireland and Florida. *J Community Appl Soc Psychol* 2009;19:299–320.
- 7 Shochet IM, Dadds MR, Ham D, Montague R. School connectedness is an underemphasized parameter in adolescent mental health: results from a community prediction study. *J Clin Child Adolesc Psychol* 2006;35:170–9.

- 8 Ueno K. The effect of friendship networks on adolescent depressive symptoms. *Soc Sci Res* 2005;34:484–510.
- 9 Östberg V. Children in classrooms: peer status, status distribution and mental well-being. *Soc Sci Med* 2003;56:17–29.
- 10 Due P, Lynch J, Holstein B, Modvig J. Socioeconomic health inequalities among a nationally representative sample of Danish adolescents: the role of different types of social relations. *J Epidemiol Community Health* 2003;57:692–8.
- 11 Jellesma FC, Rieffe C, Meerum Terwogt M. My peers, my friend, and I: peer interactions and somatic complaints in boys and girls. *Soc Sci Med* 2008;66:2195–205.
- 12 Brolin Låftman S, Östberg V. The pros and cons of social relations: an analysis of adolescents' health complaints. *Soc Sci Med* 2006;63:611–23.
- 13 Nation M, Vieno A, Perkins DD, Santinello M. Bullying in school and adolescent sense of empowerment: an analysis of relationships with parents, friends, and teachers. *J Community Appl Soc Psychol* 2008;18:211–32.
- 14 Torsheim T, Wold B. School-related stress, support, and subjective health complaints among early adolescents: a multilevel approach. *J Adolesc* 2001;24:701–13.
- 15 Ellickson P, Saner H, McGuigan KA. Profiles of violent youth: substance use and other concurrent problems. *Am J Public Health* 1997;87:985–91.
- 16 Hagquist C. Health inequalities among adolescents - the impact of academic orientation and parents' education. *Eur J Public Health* 2007;17:21–6.
- 17 Hagquist C. Socioeconomic differences in smoking behaviour among adolescents: the role of academic orientation. *Childhood* 2000;7:467–78.
- 18 Langhout RD, Mitchell CA. Engaging contexts: drawing the link between student and teacher experiences of the hidden curriculum. *J Community Appl Soc Psychol* 2008;18:593–614.
- 19 Rasch G. *Probabilistic models for some intelligence and attainment tests*. (Copenhagen, Danish Institute for Educational Research). Expanded edition (1980) with foreword and afterword by Benjamin D. Wright. Chicago: The University of Chicago Press, 1960/1980.
- 20 Hagquist C. Psychometric properties of the PsychoSomatic Problems scale – a Rasch analysis on adolescent data. *Soc Indic Res* 2008;86:511–23.
- 21 Meehan BT, Hughes JN, Cavell TA. Teacher–student relationships as compensatory resources for aggressive children. *Child Dev* 2003;74:1145–57.
- 22 Willis P. *Learning to Labour: How Working Class Kids get Working Class Jobs*. Farnborough: Saxon House, 1977.
- 23 Catalano RF, Haggerty KP, Oesterle S, et al. The importance of bonding to school for healthy development: findings from the social development research group. *J Sch Health* 2004;74:252–61.
- 24 Ruus V-R, Veisson M, Leino M, et al. Students well-being, coping, academic success, and school climate. *Soc Behav Pers* 2007;35:919–36.
- 25 Halpern D. *Social capital*. Cambridge: Polity Press, 2005.
- 26 Turner JR, Turner BJ, editors. *Social Integration and Support*. New York: Springer, 2006.