

Scandinavian Journal of Educational Research



ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/csje20

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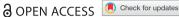
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To cite this article: Astrid Hoås Morin (2020): The VIP Partnership Programme in Norwegian Schools: An Assessment of Intervention Effects, Scandinavian Journal of Educational Research, DOI: 10.1080/00313831.2020.1791247

To link to this article: https://doi.org/10.1080/00313831.2020.1791247

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The VIP Partnership Programme in Norwegian Schools: An Assessment of Intervention Effects

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This study used a quasi-experimental design to evaluate the efficacy of the universal, school-based VIP-Makkerskap [VIP Partnership] programme. 1101 students in a test group and 734 students in a control group completed guestionnaires one week (t1), ten weeks (t2), and six months (t3) after programme implementation. A one-way ANCOVA showed that at t2 and t3, students in the test group reported significantly higher social classroom environment scores than the control group, but the effect sizes were small (d = .10 and .09, respectively). Further analyses showed that five of the ten test schools accounted for the increase in the outcome variable from t1-t2. In these schools, a greater proportion of teachers had used the programme since its beginning in 2015, compared to the schools that did not report an increase. The results suggest that teachers' experience in using VIP Partnership is a key component of the programme's effectiveness.

ARTICLE HISTORY

Received 25 October 2019 Accepted 25 June 2020

KEYWORDS

VIP Partnership; intervention; social classroom environment; school transitions; mental health promotion

Introduction

Mental health promotion and preventive work directed at children and youth has been the subject of increasing attention among educators, researchers and politicians in Norway and other countries. School has been highlighted as important in this regard because it is an arena where most young people spend a considerable amount of time. This makes it an ideal setting for reaching youth with efforts and initiatives. Researchers have emphasized the importance of a good psychosocial classroom environment for students' mental health, wellbeing and learning (e.g., Afari, 2013; Danielsen et al., 2009; Gådin & Hammarström, 2003; Larsen et al., 2019). This has contributed to the foundation and implementation of a variety of school-based programmes, strategies and interventions targeting the psychosocial dimension of the school environment.

The psychosocial classroom environment refers to the interpersonal conditions at school, the social environment and students and teachers' experiences of these (Norwegian Ministry of Education and Research, 2003). Students' relationships with peers are central part of the psychosocial environment in school, and there is general agreement among researchers that positive peer relationships are vital to adolescents' academic and non-academic functioning. For instance, acceptance by peers has been found to reinforce adolescents' wellbeing (Berndt & Keefe, 1995; Keefe & Berndt, 1996), learning and achievement (Cook et al., 2007; Liem & Martin, 2011). Peer rejection has on the other hand been linked with lower grades (Wentzel, 1991; Wentzel & Caldwell, 1997), truancy, school dropout (Kupersmidt et al., 1990; Parker & Asher, 1987), reduced social functioning (La Greca & Lopez, 1998), depressive symptoms, and feelings of anxiety (La Greca & Harrison, 2005; Platt et al., 2013).

The importance of a good psychosocial classroom environment has also been emphasized in the transition from lower to upper secondary school (Strand, 2019). For most students in Norway, this transition involves changing schools, where they encounter a new social environment. Previous studies have indicated that the move from one school level to another can interfere with established peer relations (Parker et al., 2015), and that some students after such a transition find it difficult to integrate socially in the class (Scott et al., 1995).

One school-based, health-promoting and preventive programme targeting the psychosocial environment in school, is VIP [Guidance and Information on Mental Health in School] Partnership. VIP Partnership was designed to result in an inclusive classroom in which fewer students feel left out when starting upper secondary school (VIP School Programme [VSP], 2017b). Principally, the programme is about how schools and teachers facilitate social relationships between students by assigning them into partnerships and partner groups from the first day of upper secondary school. VIP Partnership was developed by the VIP School Programme (VSP), a unit owned by Vestre Viken Hospital Trust, and it is financed by the Norwegian Directorate of Health as part of the subsidy scheme "Mental Health in School" (Norwegian Directorate of Health, 2018). Because VIP Partnership is publicly financed, participation is free of charge for schools.

Since VIP Partnership started in 2015 and until the school year 2018/2019, 116 schools have used the programme on a national basis. This number accounts for over one fourth of Norway's 415 upper secondary schools and encompasses approximately 19,000 students. The extent of the programme highlights the importance of examining whether it has an effect. The present study therefore sought to examine if participation in VIP Partnership could improve students' perceptions of the social environment at school. Specifically, the following research question is addressed in this article: Do students who participate in VIP Partnership have a more positive perception of the social classroom environment a) 10 weeks (t2) and b) six months (t3) into the school year, compared to non-participating students?

Categories of Health-Preventive Initiatives

The literature on mental health-preventive work commonly distinguishes between three types of initiatives. These are indicated, selective and universal prevention (Major et al., 2011). The first two are directed toward individuals (indicated) or groups (selective) with known and increased risk of developing health problems. Examples may be providing follow-up of children who have parents with severe mental disorders (indicated) or implementing bullying programmes in schools with a high incidence of bullying (selective). Universal programmes are in turn aimed at entire population groups without an elevated risk for developing problems (Major et al., 2011). For instance, if bullying programmes are implemented in schools regardless of whether bullying is identified as a problem, the initiative will be defined as universal.

VIP Partnership - Background and Implementation

VIP Partnership falls into the category of universal prevention, as it targets entire groups (schools and classes) of first year upper secondary school students in Norway. The programme was initiated by a group of VSP employees affiliated with mental health work in school. The establishment of the programme is described by VSP (2015, 2016) as a response to schools' reports of psychosocial challenges, such as social exlusion, loneliness, and students' social vulnerability in the transition from lower to upper secondary school. VSP (2015, 2016) emphasizes that the programme's methodological approach corresponds with factors that previous research has indicated may influence the school learning environment.

First, they draw attention to research concerning the associations between a good classroom management and a good learning environment (e.g., Ogden, 2009; Olsen & Traavik, 2010). Next, they refer to literature addressing the importance of a planned and organized school start that goes beyond a purely academic focus (e.g., Ogden, 2009). Finally, they point to research emphasizing that students who have their social needs satisfied will be better able to focus on school learning activities (e.g., Bru et al., 2016).

VIP Partnership is initiated on the students' first day of upper secondary school. Prior to implementation, VSP staff provide a four-hour training seminar for one or more members of the participating school staff (e.g., school nurse, principal, or educational-psychological services staff). The latter are then responsible for training other teachers at the school in how to implement and use the programme. As part of this training, all contact teachers receive an information guide containing various tasks and exercises that they can use in the class, with the purpose of building a positive class environment and forming good student partnerships (VSP, 2017a).

Implementation of the programme is done by the contact teachers, who from the first day of school divide the class into two or three-person partnerships. These in turn constitute a four or five-person partner group. The teacher information guide emphasizes that the partnerships should primarily be assembled randomly, but that the partners should preferably not come from the same lower secondary school. The teachers also prepare name tags on the students' desks indicating where they should sit. Students furthermore receive a three-page booklet containing information about the programme and a partner group phone list (VSP, 2017c).

The partnerships and groups form the basis for academic and social-pedagogical work in the class, and students in the partnerships have specific responsibilities in relation to each other. These include sitting next to one another in all common core subjects, working together in class, greeting one another, paying attention to whether the partner thrives, letting each other know if they are sick or absent from class, and taking notes for the partner if they are not present in class. Students in the partner groups also write a group contract with points that they believe are important to achieve good collaboration in the group. In addition, all students in the class conduct and take part in various tasks and "ice-breaker" exercises, related to being a good classmate (VSP, 2016, 2017b). The programme runs over a period of nine weeks, with a change of partnerships and groups every third week. VSP (2017b) emphasizes that VIP Partnership is not about forcing on friendships among the students, but about forming collegial communities.

Through the elements described above, VSP (2017b) promotes that "the programme will help ensure: a smoother transition from a secondary to an upper secondary school, that the students get acquainted with more of their classmates, a more intimate and [secure] classroom environment at an early stage, an increase in the students' social competence", and "good work relations that will increase the educational drive" (VSP, 2017b). Taken together, the rationale behind VIP Partnership is that specific efforts directed at classroom management, including clear rules and structure, will help promote social participation among students, and in the longer run prevent mental health problems and promote a good mental health (VSP, 2015, 2016, 2017b). However, before examining whether participation in VIP Partnership can contribute to improved mental health, it is vital to investigate if it can help increase social participation in the class and improve the social classroom environment. That is the topic of the present study.

Research on School Interventions and Programmes

In Norway and internationally, there is a corpus of literature on school-based interventions and programmes directed at improving the psychosocial environment. These interventions vary greatly in terms of participants' age, target groups, intervention types, and duration. Many seem to be designed to reduce the prevalence of bullying and victimization (e.g., Farrington & Ttofi, 2009; Smith et al., 2004), or to reduce problem behaviours (e.g., Sørlie & Ogden, 2015) or mental health problems among children and adolescents (e.g., La Greca et al., 2016; Neil & Christensen, 2009; Skotheim

et al., 2014). Several studies have also investigated the effectiveness of school-based universal social and emotional (SEL) programmes. In these, the effects for the most part seem to be measured as enhancement of students' attitudes, skills, behaviours, emotional distress, self-image, or academic performances (e.g., Durlak et al., 2011; Sklad et al., 2012). Although the research findings are not unanimous, the literature seems to report a predominantly positive effect from the majority of these interventions and programmes. Common to many interventions that have proven to be effective, is that the teachers, through their support, dedication and commitment, are promoted as primary resources for successful implementation (e.g., Han & Weiss, 2005; Kam et al., 2003). There is however sparse research on how efforts aimed directly at social relations in the classroom may influence on students' perceptions of the classroom environment. This will be further investigated in the present study.

More specifically, the purpose was to address whether participation in VIP Partnership could contribute to forming a more inclusive classroom environment. The study has investigated students' perceptions of various aspects of the social classroom environment that are explicitly related to the goals of VIP Partnership. Changes in and between participating and non-participating students' perceptions of the social classroom environment were examined over three data collection points, and that made it possible to follow the development and change over time.

Method

Design and Participants

This research is a collaborative venture between the Norwegian University of Science and Technology (NTNU), Vestre Viken Hospital Trust, and two Norwegian county authorities. The research employed a quasi-experimental design with two groups: schools that had used VIP Partnership (test) and schools that had not used the programme (control). While a fully randomized experiment incorporating random assignment of schools to the two conditions would have been preferred, this was not possible for practical reasons. Test and control schools were recruited through convenience sampling by contact persons in the two collaborative county authorities. The test schools were recruited among public schools in the two counties that had already implemented or planned to implement VIP Partnership in the fall of 2017. The control schools were recruited from schools in the two counties that did not use VIP Partnership, and on the basis that they should be as similar as possible to the test schools regarding size and geographical location. Table 1 displays some characteristics of the sample. The test and control schools match well by school size, gender, mother's level of education and participants born in Norway. The proportion of participating students attending general studies education programmes is higher than the national average of 61%. The gender imbalance is mainly due to the female predominance in general studies education programmes (Statistics Norway, 2018).

Table 1. Sample characteristics.

	Test	Control
Number of schools N	10	7
Average school size (number of students)	562	606
Students enrolled in first year of upper secondary N	1992	1163
Participated in all three surveys N	1101	734
Response rate %	55	63
Female %	61	60
Enrolled in general studies education programmes %	78	72
Born in Norway %	89	88
Mother's level of education %		
Primary or upper secondary school	33	37
Higher education (College/University)	65	61



Procedure

Data was collected twice during the fall 2017 and once in the spring 2018, by means of electronic selfreporting questionnaires administered in school classes. The VIP Partnership programme was implemented on the first day of school after the summer vacation, and this made it impossible to perform a pre-test before the schools started the programme. The first data collection (t1) was therefore initiated during the students' second school week. One and a half week after initiation, 14 schools had completed the survey. In the three remaining schools (two test and one control), a total of nine classes asked for more time to answer the questionnaire. In order to increase the response rate, the survey was therefore kept open for an additional one and a half week for these schools. Some classes would thus have used VIP Partnership longer than others at the time of the first data collection. This constitutes a possible source of error in the data material and will therefore be examined prior to the main data analyses (ANCOVA). The second data collection (t2) was initiated approximately ten weeks after the first, and immediately after the VIP Partnership programme was scheduled to be completed. All schools had responded to the survey two and a half weeks after opening. The third data collection was initiated approximately six months into the school year and was open for two weeks.

All schools identified one employee who was responsible for providing the necessary information and assistance to teachers and students. Students, teachers and parents were also given an information sheet, which informed that students had a right to withdraw from participation at any time, and that they were considered to have given their consent to participate by filling in the questionnaire. An information video recorded by the author was shown to the students in each individual class before they started responding to the survey. The video explained the rationale of the study and encouraged the students to answer the questionnaire properly. In accordance with the instructions of the Norwegian Centre for Research Data (NSD), parental consent was obtained from students under the age of 16. The project was approved by the NSD.

Measures

Dependent Variables

Social Classroom Environment

The dependent variables in this article are students' social classroom environment scores at t2 and t3. As mentioned, VIP Partnership is about how schools facilitate social relationships between students. Despite literature searches in Google Scholar, and the ERIC and JSTOR databases, no self-report measures concerning students' experiences of the schools' social practice were found. Four items were therefore formulated to capture the primary objectives of VIP Partnership. Two of these items were based on questions used in a survey created by VSP (2015, 2016), and reformulated for the present study: "It feels secure to be at school" and "I always have someone to be with during breaks". The two remaining statements were made for the present study: "I always have someone to sit with in class", and "The other students in the class greet me when we meet". The response categories for all statements were on a 6-point scale, ranging from 1 = strongly disagree through 6 = strongly agree. Items were averaged for a scale score. Internal consistency for this scale was $\alpha = .82$ at t2 and $\alpha = .81$ at t3.

Independent Variable and Covariates

The key independent variable is participation in VIP Partnership. It was expected that participation in VIP Partnership should promote the students' experiences of a positive social classroom environment. In addition to participation in VIP Partnership, there are several factors that may be of significance for the students' experiences of the social environment in their classes. Therefore, a set of covariates were included in the analyses. These were social anxiety, loneliness in 10th grade, academic achievement, gender, mother's education level, and students' social classroom environment scores at t1.

Social Anxiety

Social anxiety has been defined as a "marked, or intense, fear or anxiety of social situations in which the individual may be scrutinized by others" (American Psychiatric Association, 2016, p. 18). Studies have found that adolescents with high levels of social anxiety both experience less acceptance and support (La Greca & Lopez, 1998; Levpuscek & Berce, 2012), and tend to be rejected and excluded by their peers (e.g., Greco & Morris, 2005; Levpuscek & Berce, 2012; Siegel et al., 2009). In the present study, social anxiety was measured using the Mini-Social Phobia Inventory (mini- SPIN), a three-item scale derived from the Social Phobia Inventory (Connor et al., 2000). The scale has been evaluated in several studies as a reliable and valid instrument for measuring social anxiety (e.g., Connor et al., 2001; Garcia-Lopez & Moore, 2015; Wiltink et al., 2017). The items were rated using a 5-point scale, where 1 = not at all, 2 = a little bit, 3 = somewhat, 4 = very much, and 5 = extremely, and then averaged for a scale score.

Loneliness

Loneliness can be described as the incongruity between a person's desired and actual social relationships (Masi et al., 2011), and it can have severe consequences for the individual. In addition to being associated with a range of mental and physical health problems (e.g., Heinrich & Gullone, 2006), adolescent loneliness has been linked with social difficulties such as peer rejection, neglection and victimization (Woodhouse et al., 2012), lower friendship quality (Parker & Asher, 1993), lower social competence (Horowitz & de Sales French, 1979; Junttila, 2010; Segrin & Flora, 2000), and less positive perceptions of social support (Riggio et al., 1993).

In the present study loneliness was measured by using a Norwegian version of the Loneliness and Social Dissatisfaction Questionnaire (Asher & Wheeler, 1985; Valås, 1999). As the first survey was conducted only a week into the schoolyear, it was considered as little meaningful to measure the students' perceptions of loneliness at school. The items were therefore adjusted in order to measure loneliness retrospectively as students' perceptions of loneliness in 10th grade (their last year of lower secondary school). The response categories for all statements were on a 6-point scale, ranging from 1 = strongly disagree through 6 = strongly agree. Items were averaged for a scale score, and high values indicate a greater degree of loneliness.

Academic achievement

Studies tend to show that school performance levels are distinctively related to social acceptance. Overall, research findings suggest that students characterized by higher school achievement tend to be better liked by and experience more acceptance from their peers (Bakker & Bosman, 2003; Frentz et al., 1991). Conversely, students characterized by lower school achievement tend to experience less peer acceptance and be less positively evaluated by their peers (Bakker & Bosman, 2003; Valås, 1999). In the present study, academic achievement was measured using a mean score based on students' self-reported overall achievement marks in Norwegian, mathematics and English from 10th grade. This measure ranged from 1 (lowest) through 6 (highest).

Gender

Some studies have found gender differences in students' experiences of relationships and wellbeing in school. For instance, results from a Norwegian, nationally representative survey (Andersen & Dæhlen, 2017) showed that among students who reported having problems with relations at school, girls were overrepresented by 68% versus 32%. In the present study, a dichotomous variable indicated whether the adolescent is female (1) or male (2).

Mother's Education Level

Research indicates that parental education level is related to students' social functioning. For example, Andersen and Dæhlen (2017) found that students who reported a greater degree of problems in school and friendship relations, to a lesser extent had parents with higher education. In

the present study, social background was measured as mother's level of education on a four-level scale (OECD, 2009). Lowest level (1) is primary and lower secondary school while highest level (4) is tertiary education exceeding three years. This measure was converted into a dichotomous variable where 1 = education up to upper secondary level, and 2 = higher education at college or university level.

Analyses

Analysis of covariance (ANCOVA) is a recommended analytical method to examine intervention effects, given that the correlation between pre and post-test is not too high (r < 0.8) (O'Connell et al., 2017; Vickers & Altman, 2001), and that there are no systematic differences in the groups' pre-scores (Miller & Chapman, 2001). The latter applies particularly to the present study where test and control schools were not randomly assigned. T-tests and chi-square tests showed that the test and control schools did not significantly differ on any of the covariates. Unlike analytical methods that examine change scores between pre and post-measurements, ANCOVA takes into account the participants' baseline score by using it as a control variable (Vickers & Altman, 2001). In the context of the present study, this makes it possible to compare the test and control schools' social classroom environment scores at t2 and t3, using the score at t1 as a covariate. Because tests indicated normality and homoscedasticity violations, bootstrapping and the HC3 heteroscedasticity-consistent standard error were applied in the ANCOVA analyses. All analyses were conducted using SPSS 26.

The dependent variables were students' social classroom environment scores at t2 and t3, and participation in VIP Partnership was added as factor. Students' social classroom environment scores at t1 was added as a covariate, in addition to social anxiety, loneliness in 10th grade, gender, mother's education level (dichotomous), and mean grades. As a further assessment of the strength of the impact of VIP Partnership, effect sizes (Cohen's d) were calculated for all significant findings. Cohen's d was calculated based on adjusted mean differences between the test and control schools, divided by unadjusted standard deviation scores.

Before running the ANCOVA's, an exploratory factor analysis was performed on all items in the "social classroom environment", "loneliness in 10th grade" and "social anxiety" scales. Next, a correlation analysis was conducted to ensure that the intercorrelations between the pre and post-tests were not too high. Collinearity tests moreover showed that multicollinearity was not a concern, with tolerance levels between .78 and .94, and VIF's between 1.06 and 1.29 for all variables. Finally, a comparison was done between test and control schools and class environment scores at t1, t2 and t3, prior to inclusion of the covariates.

Results

First, as mentioned in the procedure section, some classes were given additional time to respond to the survey at the first data collection. Results from t-tests showed that there were no systematic differences in the responses given by students in these classes and the remaining classes in the associated schools. The classes that had responded later to the survey were therefore included in the analyses. As shown in Table 2, the three scales seem to cover three different phenomena, and each have appropriate reliability values.

Inter-correlations among the covariates, dependent variables and school type (test or control) are presented in Table 3. All covariates except for gender are significantly correlated with the dependent variables, and all correlations are below .8. This indicates that the covariates are well suited for ANCOVA. The significant correlations between the two dependent variables and school type furthermore indicate that students' participation in VIP Partnership is positively related to the social classroom environment scores at t2 and t3.

Table 2. Factor analysis (Maximum Likelihood) of the social classroom environment, loneliness in 10th grade and social anxiety scales at T1 (Oblimin rotation with Kaiser. Normalization).

	Factor loadings for latent variables		
Item	1	2	3
I had no one to talk with at school	.929	.021	023
I often spent the breaks all by myself	.825	020	.048
I had no one to be together with at school	.941	006	049
I felt an outsider in school	.766	009	.102
I had no friends in school	.903	.009	048
I always have someone to sit with in class	.014	.820	.070
The other students in the class greet me when we meet	.028	.631	065
I have someone to be with during breaks	.063	.761	.051
It feels secure to be at school	.015	.652	083
Fear of embarrassment causes me to avoid doing things or speaking to people	.084	086	.640
I avoid activities in which I am the centre of attention	034	006	.803
Being embarrassed or looking stupid are among my worst fears	004	.042	.793
Eigenvalue	4.98	2.41	1.41
% of variance	41.45	20.10	11.77
Cronbach's alpha	.93	.80	.80

Table 4 shows that there is no significant difference between test and control schools on the social classroom environment measure at t1. At t2 and t3, the test group has significantly higher social classroom environment scores relative to the control group.

Table 5 shows a comparison of social classroom environment scores at t2 and t3 between test and control schools, using ANCOVA and Cohen's *d*. First, one can see that the differences between the unadjusted mean scores displayed in Table 4 and the adjusted mean scores displayed in Table 5 are small. The results from Table 5 moreover show that students who had participated in VIP Partnership have significantly higher social classroom environment scores for adjusted means at t2 and t3, relative to the control group. These results suggest that after having adjusted for the covariates, participation in VIP Partnership has significantly enhanced students' perceptions of the social classroom environment. However, the calculated effect sizes of 0.1 (t2) and 0.09 (t3) indicate that the adjusted differences between the test and control schools are small (Cohen & Steinberg, 1992).

Table 3. Correlations between dependent variables, covariates and school type.

	1.	2.	3.	4.	5.	6.	7.	8.
1. Social classroom environment t1 (C)	-							
2. Social classroom environment t2 (DV)	.55**	_						
3. Social classroom environment t3 (DV)	.44**	.62**	_					
4. Social anxiety t1 (C)	39**	32**	28**	_				
5. Loneliness 10th grade t1 (C)	28**	34**	30**	.29**	_			
6. Academic achievement t1 (C)	.11**	.12**	.14**	.04	08**	_		
7. Gender (C)	.03	.02	.02	20**	09**	15**	-	
8. Mother's education level (C)	.09**	.06*	.10**	01	06*	.30**	03	-
9. School typea	.01	06**	05*	.00	.04	03	.01	04

^{*} p < .05, ** p < .01. C = Covariate, DV = Dependent Variable. ^aTest schools = 1, control schools = 2.

Table 4. Comparison of test and control schools and unadjusted social classroom environment scores at t1, t2 and t3.

	Unadjuste	d mean (SD)	
	Test (<i>n</i> = 1045)	Control (<i>n</i> = 709)	Mean difference
Social classroom environment t1	4.96 (.91)	4.97 (.93)	01
Social classroom environment t2	5.11 (.90)	4.99 (.96)	.12**
Social classroom environment t3	5.05 (.93)	4.94 (.99)	.11*

^{*} p < .05, ** p < .01.



Table 5. Comparison of test and control schools, and adjusted social classroom environment scores at t2 and t3, using ANCOVA and Cohen's *d*.

	ANCOVA a	djusted mean	Mean difference	Cohen's d
	Test (n = 1045)	Control (n = 709)		
Social classroom environment t2	5.12	5.02	.10**	.10
Social classroom environment t3	5.05	4.96	.09*	.09

^{*} p < .05, ** p < .01. Bootstrap results are based on 1000 bootstrap samples. Covariates are evaluated at the following values: Social classroom environment t1 = 4.99, social anxiety t1 = 2.03, loneliness 10th grade t1 = 1.42, academic achievement t1 = 4.36, gender = 1.39, mother's education level = 1.66.

Further Examination of the Data

Given the small group differences presented in Table 5, the data material was further examined to see if any of the test schools stood out more favourably than others regarding possible effects of the programme. Change scores for the social classroom environment variable from t1–t2 and t1–t3 were therefore calculated for each school. The control schools were included to highlight potential differences between test and control schools in the development across time. Given that the results from Tables 4 and 5 indicated small differences between the unadjusted and adjusted mean scores, and due to a low n in some schools, the change scores were calculated by using the unadjusted rather than the adjusted mean scores. Effect sizes were calculated by dividing the change scores by the pooled standard deviation for each school.

As shown in Table 6, five test schools (1, 6, 7, 8 and 10) display a statistically significant increase on the social classroom environment variable from t1–t2, and effect sizes range from d = .19–.51. In contrast, the five remaining test schools and all the control schools display no statistically significant increase on this variable from t1–t2. Four test schools (1, 6, 7 and 10) moreover report a statistically significant increase on the social classroom environment variable from t1–t3, and effect sizes range from d = .16–.54. Conversely, control school 15 reports a statistically significant decrease on this measure from t1–t2 and t1–t3.

Given that five test schools displayed a statistically significant increase on the outcome variable from t1-t2, while the five remaining test schools did not, the data were examined for factors that

Table 6. Change scores (based on unadjusted means) and Cohen's d for all schools on the social classroom environment measure from t1–t2 and t1–t3.

School		t1–t	t1-t2		t1–t3		
	n	Change score	Cohen's d	Change score	Cohen's d		
1	136	.25***	.31	.17*	.18		
2	86	.01	.01	05	05		
3	45	.06	.07	13	13		
4	65	05	06	16	16		
5	117	.01	.01	06	06		
6	170	.18*	.19	.16*	.16		
7	87	.40***	.51	.49***	.54		
8	97	.25***	.28	.10	.09		
9	196	.03	.03	.01	.01		
10	70	.33**	.37	.28*	.28		
11	58	09	10	- .21	21		
12	205	.06	.07	.02	.02		
13	74	16	18	19	21		
14	47	.19	.19	.09	.09		
15	31	30*	43	45 **	- .67		
16	177	.12	.14	01	01		
17	125	04	- .05	.02	.02		

^{*} p < .05, *** p < .01, *** p < .001. Schools 1–10 are test schools and schools 11–17 are control schools. Statistically significant change scores and associated effect sizes are highlighted.

Adjusted mean scores at t2 and t3 by using social classroom environment scores at t1, social anxiety, loneliness in 10th grade, academic achievement, gender and mother's education level as covariates.

could contribute to explaining this difference. The only area where these groups differed was on the number of years that teachers had used the programme, which was indicated by data from a teacher questionnaire. In the five schools that displayed an increase, 13 out of 42 (31%) teachers reported that they had used VIP Partnership since its beginning in 2015. The corresponding number was one teacher out of 36 (3%) in the schools that did not display any increase. Otherwise, no factors were found that could explain the difference in development from t1-t2 in these two groups, neither in terms of mother's education level, field of study (general or vocational education), grades, school size, or teachers' attitudes toward the VIP Partnership programme.

Discussion

This study investigated whether participation in the VIP Partnership programme could improve students' perceptions of the social environment in school. On the one hand, results showed that students who had participated in the programme reported a more positive perception of the social classroom environment at t2 and t3, compared to non-participating students. These findings indicate that VIP Partnership has had some effect. On the other hand, the calculated effect sizes of d = .10 (t2) and .09 (t3) must be characterized as small (Cohen & Steinberg, 1992), and one should therefore be cautious when discussing how substantial the effect of the programme is. It is worth noting that the students in both test and control schools on average reported high scores on the social classroom environment measure at all time points. The limited effect might therefore be due to the fact that the social environment could not be greatly improved. Nonetheless, considering that the dependent variable in the study was based on questions designed to capture the basic components of VIP Partnership, one would perhaps expect finding larger differences between the test and control schools on the measure.

There may be several underlying causes as to why the effect of VIP Partnership appears to be limited. For instance, meta-analyses have indicated that universal preventive interventions tend to be less intensive than selective or indicated interventions, and therefore may exhibit lower effect sizes (Horowitz & Garber, 2006; Teubert & Pinquart, 2011). Effect sizes also tend to be smaller in interventions involving older students (e.g., January et al., 2011; Smith et al., 2004), as was the case in the present study. When comparing the effect sizes found in the current study with those reported in previous research, the results do not differ greatly from one another. For instance, meta-analyses evaluating the effectiveness of various universal social school-programmes have found average post-intervention effects of d = .15 on students' social behaviours (January et al., 2011), d = .22 on students' social and emotional development (Goldberg et al., 2019), and d = -.02-.12 on bullying and victimization (Smith et al., 2004).

Next, one can discuss whether the elements in VIP Partnership are something that many teachers already do, regardless of whether they have participated in the programme. Kraft (2018) argues that in education studies where the control group has access to resources similar to the intervention, one will expect smaller effects. In the present study, although the students in the control group did not participate in partnerships, they did have access to classmates and teachers in the same way that did the students in the test group. It is also probable that the control schools, even though they did not participate in the programme, have had some focus on student well-being and social relationships, which in turn may have influenced the students' perceptions of the social classroom environment. Other explanations for the small group-differences may also be found in variables that lie beyond the materials collected for this study.

Although VIP Partnership had a small effect at group level, a further investigation of the data indicated variations between schools regarding effects of the programme. First, there were five test schools compared to no control schools that reported a statistically significant increase on the social classroom environment variable from t1-t2. For four of these test schools, the increase remained statistically significant up to t3. This indicates that VIP Partnership has had some effect among certain schools. Effect sizes for the increase among these schools ranged from .19 to .51 (t1 to t2), and .16 to .54 (t1-t3). While Cohen has referred to effect sizes of .2 and .5 as small and medium respectively (Cohen & Steinberg, 1992), other theorists have argued that in educational intervention studies with strong designs, effect sizes of .2 can be of magnitude (e.g., Cheung & Slavin, 2016; Durlak et al., 2011; Hill et al., 2008; Kraft, 2018). The positive development over time among half of the test schools should therefore not be depreciated based on the seemingly low effects.

Following this, the results showed that the only characteristic separating the five test schools that reported an increase on the outcome variable, from the remaining test schools, was a higher proportion of teachers that had used the programme since it started in 2015. The effectiveness of VIP Partnership may thus be related to the number of years that the teachers have used the programme. If this assumption holds true, these results indicate that being in classrooms with teachers who are experienced in using VIP Partnership can have a positive impact on the students' perceptions of the social classroom environment. This is consistent with previous research that has emphasized the importance of the teacher for successful school interventions (Han & Weiss, 2005; Kam et al., 2003). These findings also suggest that the individual teacher's implementation of VIP Partnership is a key component of the programme's effectiveness and highlight the importance of conducting a thorough training for participating teachers.

Finally, although the overall effect appears to be limited, programmes such as VIP Partnership can contribute to raising awareness about the importance of a focus on social relationships and student wellbeing in school.

Limitations and Further Directions

There are some study limitations which must be considered when evaluating the study results. First, the study was not a randomized controlled trial, and group differences might have occurred for reasons other than the intervention effect. These limitations are however somewhat reduced by the way that the sample was recruited, and the large sample size. Second, although the VIP Partnership programme is not difficult to implement, it does require some preparation and follow-up from teachers in order to work. Future research should therefore have a clearer focus on teacher training and take into consideration the individual teachers' attitudes towards and practical implementation of the programme. Moreover, many of the participants in the present study had scores near the upper limit of the social classroom environment measure (ceiling effect). Future studies should therefore investigate whether some groups of students, such as those who start out at the lower end of the distribution range, may benefit more than others from participation in the programme. Forthcoming studies should also examine whether VIP Partnership can have a more comprehensive longer-term impact, such as reduced loneliness and improved mental health.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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References

Afari, E. (2013). The effects of psychosocial learning environment on students' attitudes towards mathematics. In M. S. Khine (Ed.), *Application of structural equation modeling in educational research and practice* (pp. 91–114). SensePublishers. https://doi.org/10.1007/978-94-6209-332-4

American Psychiatric Association. (2016). Anxiety disorders: DSM-5* selections. American Psychiatric Publishing. Andersen, P. L., & Dæhlen, M. (2017). Sosiale relasjoner i ungdomstida: identifisering og beskrivelse av ungdom med svake relasjoner til foreldre, skole og venner [Social relations in adolescence] (Report No. 8/2017). http://www.



- hioa.no/Om-OsloMet/Senter-for-velferds-og-arbeidslivsforskning/NOVA/Publikasjonar/Rapporter/2017/Sosialerelasjoner-i-ungdomstida
- Asher, S. R., & Wheeler, V. A. (1985). Children's loneliness: A comparison of rejected and neglected peer status. Journal of Consulting and Clinical Psychology, 53(4), 500-505. https://doi.org/10.1037/0022-006X.53.4.500.
- Bakker, J. T. A., & Bosman, A. M. T. (2003). Self-image and peer acceptance of Dutch students in regular and special education. Learning Disability Quarterly, 26(1), 5-14. https://doi.org/10.2307/1593680.
- Berndt, T. J., & Keefe, K. (1995). Friends' influence on adolescent's adjustment to school. Child Development, 66(5), 1312-1329. https://doi.org/10.2307/1131649.
- Bru, E., Idsøe, E. C., & Øverland, K. (2016). Psykisk helse i skolen [Mental health in school]. Universitetsforlaget.
- Cheung, A. C. K., & Slavin, R. E. (2016). How methodological features affect effect sizes in education. Educational Researcher, 45(5), 283-292. https://doi.org/10.3102/0013189X16656615.
- Cohen, J., & Steinberg, R. J. (1992). A power primer. Psychological Bulletin, 112(1), 155–159. https://doi.org/10.1037/ 0033-2909.112.1.155.
- Connor, K. M., Davidson, J. R., Churchill, L. E., Sherwood, A., Foa, E., & Weisler, R. H. (2000). Psychometric properties of the Social Phobia INventory (SPIN). New self-rating scale. British Journal of Psychiatry, 176, 379-386. https://doi.org/10.1192/bjp.176.4.379
- Connor, K. M., Kobak, K. A., Churchill, L. E., Katzelnick, D., & Davidson, J. R. (2001). Mini-SPIN: A brief screening assessment for generalized social anxiety disorder. Depression and Anxiety, 14(2), 137-140. https://doi.org/10.1002/
- Cook, T. D., Deng, Y., & Morgano, E. (2007). Friendship influences during early adolescence: The special role of friends' grade point average. Journal of Research on Adolescence, 17(2), 325-356. https://doi.org/10.1111/j.1532-7795.2007.00525.x.
- Danielsen, A. G., Samdal, O., Hetland, J., & Wold, B. (2009). School-related social support and students' perceived life satisfaction. Journal of Educational Research, 102(4), 303-320. https://doi.org/10.3200/JOER.102.4.303-320.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. Child Development, 82(1), 405-432. https://doi.org/10.1111/j.1467-8624.2010.01564.x.
- Farrington, D. P., & Ttofi, M. M. (2009). School-based programs to reduce bullying and victimization. Campbell Systematic Reviews, 2009(6), ii-148. https://doi.org/10.4073/csr.2009.6.
- Frentz, C., Gresham, F. M., & Elliott, S. N. (1991). Popular, controversial, neglected, and rejected adolescent: Contrasts of social competence and achievement differences. Journal of School Psychology, 29(2), 109–120. https://doi.org/10. 1016/S0022-4405(05)80003-2.
- Gådin, K. G., & Hammarström, A. (2003). Do changes in the psychosocial classroom environment influence pupils' health development? Results from a three-year follow-up study. Scandinavian Journal of Public Health, 31(3), 169-177. https://doi.org/10.1080/14034940210134121.
- Garcia-Lopez, L., & Moore, H. T. A. (2015). Validation and diagnostic efficiency of the mini-SPIN in Spanish-speaking adolescents. PLoS ONE, 10(8), 1-11. https://doi.org/10.1371/journal.pone.0135862.
- Goldberg, J. M., Sklad, M., Elfrink, T. R., Schreurs, K. M. G., Bohlmejier, E. T., & Clarke, A. M. (2019). Effectiveness of interventions adopting a whole school approach to enhancing social and emotional development: A meta-analysis. European Journal of Psychology of Education, 34(4), 755-782. https://doi.org/10.1007/s10212-018-0406-9.
- Greco, L. A., & Morris, T. L. (2005). Factors influencing the link between social anxiety and peer acceptance: Contributions of social skills and close friendships during middle childhood. Behavior Therapy, 36(2), 197-205. https://doi.org/10.1016/S0005-7894(05)80068-1.
- Han, S., & Weiss, B. (2005). Sustainability of teacher implementation of school-based mental health Programs. Journal of Abnormal Child Psychology, 33(6), 665-679. https://doi.org/10.1007/s10802-005-7646-2.
- Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. Clinical Psychology Review, 26(6), 695-718. https://doi.org/10.1016/j.cpr.2006.04.002.
- Hill, C. J., Bloom, H. S., Black, A. R., & Lipsey, M. W. (2008). Empirical benchmarks for interpreting effect sizes in research. Child Development Perspectives, 2(3), 172–177. https://doi.org/10.1111/j.1750-8606.2008.00061.x.
- Horowitz, J. L., & Garber, J. (2006). The prevention of depressive symptoms in children and adolescents: A metaanalytic review. Journal of Consulting and Clinical Psychology, 74(3), 401-415. https://doi.org/10.1037/0022-006X.74.3.401.
- Horowitz, L. M., & de Sales French, R. (1979). Interpersonal problems of people who describe themselves as lonely. Journal of Consulting and Clinical Psychology, 47(4), 762-764. https://doi.org/10.1037/0022-006X.47.4.762
- January, A. M., Casey, R. J., & Paulson, D. (2011). A meta-analysis of classroom-wide interventions to build social skills: Do they work? School Psychology Review, 40(2), 242–256. https://doi.org/10.1080/02796015.2011.12087715
- Junttila, N. (2010). Social competence and loneliness during the school years [Doctoral dissertation]. http://urn.fi/URN: ISBN:978-951-29-4226-8
- Kam, C. M., Greenberg, M., & Walls, C. (2003). Examining the role of implementation quality in school-based prevention using the PATHS curriculum. Prevention Science, 4(1), 55-63. https://doi.org/10.1023/A:1021786811186.



- Keefe, K., & Berndt, T. J. (1996). Relations of friendship quality to self-esteem in early adolescence. *The Journal of Early Adolescence*, 16(1), 110–129. https://doi.org/10.1177/0272431696016001007.
- Kraft, M. A. (2018). Interpreting effect sizes of education interventions (Working Paper). Brown University.
- Kupersmidt, J. B., Coie, J. D., & Dodge, K. A. (1990). The role of poor peer relationships in the development of disorder. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 274–305). Cambridge University Press.
- La Greca, A. M., Ehrenreich-May, J., Mufson, L., & Chan, S. (2016). Preventing adolescent social anxiety and depression and reducing peer victimization: Intervention development and open trial. *Child & Youth Care Forum*, 45(6), 905–926. https://doi.org/10.1007/s10566-016-9363-0.
- La Greca, A. M., & Harrison, H. M. (2005). Adolescent peer relations, friendships, and romantic relationships: Do they predict social anxiety and depression? *Journal of Clinical Child and Adolescent Psychology*, 34(1), 49–61. https://doi.org/10.1207/s15374424jccp3401_5
- La Greca, A. M., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Child Psychology*, 26(2), 83–94. https://doi.org/10.1023/A:1022684520514.
- Larsen, T. B., Urke, H., Tobro, M., Årdal, E., Waldahl, R. H., Djupedal, I., & Holsen, I. (2019). Promoting mental health and preventing loneliness in upper secondary school in Norway: Effects of a randomized controlled trial. *Scandinavian Journal of Educational Research*, 1–14. https://doi.org/10.1080/00313831.2019.1659405.
- Levpuscek, M. P., & Berce, J. (2012). Social anxiety, social acceptance and academic self-perceptions in high-school students. *Drustvena Istrazivanja*, 21(2), 405–419. https://doi.org/10.5559/di.21.2.06.
- Liem, G. A. D., & Martin, A. J. (2011). Peer relationships and adolescents' academic and non-academic outcomes: Same-sex and opposite-sex peer effects and the mediating role of school engagement. *British Journal of Educational Psychology*, 81(2), 183–206. https://doi.org/10.1111/j.2044-8279.2010.02013.x.
- Major, E. F., Dalgard, O. S., Schjelderup, K. M., Nord, E., Ose, S., Rognerud, M., & Aarø, L. E. (2011). Bedre føre var ... Psykisk helse: Helsefremmende og forebyggende tiltak og anbefalinger [Mental health: Health-promoting and preventative measures and recommendations] (Research Report 2011:1). https://www.fhi.no/publ/2011/bedre-fore-var—psykisk-helse-hels/
- Masi, C., Chen, H.-Y., Hawkley, L., & Cacioppo, J. (2011). A meta-analysis of interventions to reduce loneliness. Personality and Social Psychology Review, 15(3), 219–266. https://doi.org/10.1177/1088868310377394.
- Miller, G. A., & Chapman, J. P. (2001). Misunderstanding analysis of covariance. *Journal of Abnormal Psychology*, 110 (1), 40–48. https://doi.org/10.1037/0021-843X.110.1.40.
- Neil, A. L., & Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. Clinical Psychology Review, 29(3), 208–215. https://doi.org/10.1016/j.cpr.2009.01.002.
- Norwegian Directorate of Health. (2018). Psykisk helse i skolen [Mental health in school]. https://www.helsedirektoratet.no/tilskudd/psykisk-helse-i-skolen
- Norwegian Ministry of Education and Research. (2003). *Veileder til opplæringsloven kapittel 9a Elevenes skolemiljø* [Guide to the Education Act, Chapter 9a Students' school environment]. https://www.nfk.no/_f/i22051624-8f32-4dff-bac7-68ba31dfc7f4/veileder_til_opplæringsloven_9a.pdf
- O'Connell, N. S., Dai, L., Jiang, Y., Speiser, J. L., Ward, R., Wei, W., ... Gebregziabher, M. (2017). Methods for analysis of pre-post data in clinical research: A comparison of five common methods. *Journal of Biometrics and Biostatistics*, 8(1), 1–8. https://doi.org/10.4172/2155-6180.1000334.
- OECD. (2009). OECD programme for International Student Assessment, students questionnaire.
- Ogden, T. (2009). Sosial kompetanse og problematferd i skolen [Social competence and problem behavior in school] (2nd ed.). Gyldendal Norsk Forlag.
- Olsen, M. I., & Traavik, K. M. (2010). Resiliens i skolen: Om hvordan skolen kan bidra til livsmestring for sårbare ung. Teori og tiltak [Resilience in school]. Fagbokforlaget.
- Parker, J. G., & Asher, S. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? Psychological Bulletin, 102(3), 357. https://doi.org/10.1037/0033-2909.102.3.357.
- Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology*, 29(4), 611–621. https://doi.org/10.1037/0012-1649.29.4.611.
- Parker, J. G., Rubin, K. H., Erath, S. A., Wojslawowicz, J. C., & Buskirk, A. A. (2015). Peer relationships, child development, and adjustment: A developmental psychopathology perspective. In D. Cicchetti (Ed.), Developmental psychopathology. Theory and research (Vol. 1, pp. 527–579). Wiley.
- Platt, B., Kadosh, K. C., & Lau, J. Y. F. (2013). The role of peer rejection in adolescent depression. *Depression and Anxiety*, 30(9), 809–821. https://doi.org/10.1002/da.22120 23596129.
- Riggio, R. E., Watring, K. P., & Throckmorton, B. (1993). Social skills, social support, and psychosocial adjustment. *Personality and Individual Differences*, 15(3), 275–280. https://doi.org/10.1016/0191-8869(93)90217-Q.
- Scott, L. S., Rock, D. A., Pollack, J. M., & Ingels, S. J. (1995). Two years later: Cognitive gains and school transitions of NELS: 88 Eighth graders. https://files.eric.ed.gov/fulltext/ED391844.pdf
- Segrin, C., & Flora, J. (2000). Poor social skills are a vulnerability factor in the development of psychosocial problems. Human Communication Research, 26(3), 489–514. https://doi.org/10.1111/j.1468-2958.2000.tb00766.x.



- Siegel, R. S., La Greca, A. M., & Harrison, H. M. (2009). Peer victimization and social anxiety in adolescents: Prospective and reciprocal relationships. Journal of Youth and Adolescence, 38(8), 1096-1109. https://doi.org/10. 1007/s10964-009-9392-1.
- Sklad, M., Diekstra, R., De Ritter, M., Ben, J., & Gravesteijn, C. (2012). Effectiveness of school-based universal social, emotional, and behavioral programs: Do they enhance students' development in the area of skill, behavior, and adjustment? Psychology in the Schools, 49(9), 892-909. https://doi.org/10.1002/pits.21641.
- Skotheim, S., Eng, H., & Undheim, A. M. (2014). Forebyggende tiltak i forhold til barn og unges psykiske helse som kan benyttes av skolehelsetjenesten [Preventive measures in relation to children and young people's mental health that can be used by the school health service]. Norwegian Directorate for Health. http://blog.medisin.ntnu.no/wpcontent/uploads/2014/10/Forebyggende-tiltak-i-forhold-til-barn-og-unges-psykiske-helse-8-2.pdf
- Smith, J. D., Schneider, B. H., Smith, P. K., & Ananiadou, K. (2004). The effectiveness of whole-school antibullying programs: A synthesis of evaluation research. School Psychology Review, 33(4), 547-560. https://doi.org/10.1080/ 02796015.2004.12086267
- Sørlie, M.-A., & Ogden, T. (2015). School-wide positive behavior support-Norway: Impacts on problem behavior and classroom climate. International Journal of School & Educational Psychology, 3(3), 202-217. https://doi.org/10. 1080/21683603.2015.1060912.
- Statistics Norway. (2018). Upper secondary education. https://www.ssb.no/en/utdanning/statistikker/vgu/aar
- Strand, G. M. (2019). Experiencing the transition to lower secondary school: Students' voices. International Journal of Educational Research, 97(1), https://doi.org/10.1016/j.ijer.2019.06.009.
- Teubert, D., & Pinquart, M. (2011). A meta-analytic review on the prevention of symptoms of anxiety in children and adolescents. Journal of Anxiety Disorders, 25(8), 1046-1049. https://doi.org/10.1016/j.janxdis.2011.07.001.
- Valås, H. (1999). Students with learning disabilities and low-achieving students: Peer acceptance, loneliness, selfesteem, and depression. Social Psychology of Education, 3(3), 173-192. https://doi.org/10.1023/a:1009626828789.
- Vickers, A. J., & Altman, D. G. (2001). Statistics notes: Analysing controlled trials with baseline and follow up measurements. British Medical Journal, 323(7321), 1123-1124. https://doi.org/10.1136/bmj.323.7321.1123.
- VIP School Programme. (2015). «Man har alltid noen å sitte med slik at ingen føler seg utenfor». Evalueringsrapport VIP-makkerskap - Et skolestartstiltak for bedre læringsmiljø [VIP Partnership evaluation report]. Akershus: Vestre Viken.
- VIP School Programme. (2016). En plass for alle. Evalueringsrapport VIP-makkerskap [VIP Partnership evaluation report]. Akershus: Vestre Viken.
- VIP School Programme. (2017a). Lærerveiledning [Teacher information guide]. Akershus: Vestre Viken.
- VIP School Programme. (2017b). VIP-makkerskap [VIP Partnership]. https://vestreviken.no/skoleprogrammet-vip/ om-skoleprogrammet-vip/vip-makkerskap#vip-og-makkerskap
- VIP School Programme. (2017c). VIP-makkerskap til eleven [VIP Partnership to the student]. Akershus: Vestre Viken.
- Wentzel, K. R. (1991). Relations between social competence and academic achievement in early adolescence. Child Development, 62(5), 1066-1078. https://doi.org/10.1111/j.1467-8624.1991.tb01589.x.
- Wentzel, K. R., & Caldwell, K. (1997). Friendships, peer acceptance, and group membership: Relations to academic achievement in middle school. Child Development, 68(6), 1198-1209. https://doi.org/10.1111/j.1467-8624.1997. tb01994.x.
- Wiltink, J., Kliem, S., Michal, M., Subic-Wrana, C., Reiner, I., Beutel, M. E., ... Zwerenz, R. (2017). Mini-social phobia inventory (mini-SPIN): Psychometric properties and population based norms of the German version. BMC Psychiatry, 17(1), 377. https://doi.org/10.1186/s12888-017-1545-2.
- Woodhouse, S. S., Dykas, M. J., & Cassidy, J. (2012). Loneliness and peer relations in adolescence. Social Development, 21(2), 273–293. https://doi.org/10.1111/j.1467-9507.2011.00611.x.