Moral justifications of bullying within the context of school climate

C. J. A. Geurtzen

S1651293

July 2012

Rijksuniversiteit Groningen & Universität Zürich

Master Thesis Sociology

Supervisors:

Gijs Huitsing, MSc. (Rijksuniversiteit Groningen)

Prof. Dr. Sonja Perren (Universität Zürich)

Referent:

Prof. Dr. René Veenstra (Rijksuniversiteit Groningen)

Preface

In 2010 it was in the first place the love for the Swiss mountains that drew me to Bern, to spend my Erasmus semester during my bachelor at the University of Bern. It was also in Bern were I first started thinking about writing my master thesis in Switzerland as well. After returning to Groningen, I figured out that I would like to write my thesis in an 'academic environment', to be able to find out if this would be a possible future career I could picture myself pursuing.

People often tell me: "Wow, it must be extremely hard/complicated/expensive/difficult to organize and write your master thesis abroad." I think those people could not be more wrong. Yes, Switzerland is expensive, and yes, I did have to do some organizing before I came here. But these 'costs' are definitely outweighed by the 'benefits' that come along with writing a master thesis and doing an internship abroad.

First of all, the internship/thesis combination really worked out pretty well for me. I liked talking to the other people at the institute about their work, and about my own work. 'Casual' conversations about work really kept me motivated and inspired. It also gave me a better picture what working in science would be like. Also, if I encountered any problems with my thesis, help was always just around the corner.

Second, being in another country is usually accompanied by a few challenges. But I actually happened to like those challenges! Being new, and not knowing what people expected from me, left me feeling quite nervous in the beginning. But the good atmosphere at the Jacobs Center made that it did not take long before I felt at home. Also, the language was a humbling experience. Beforehand, I thought: "Well, I already spent one semester in Switzerland, so German: not a problem!" I have to admit that there is quite the difference between speaking German with friends, and on the other hand discussing statistics, SPSS

output and my thesis in general, in German. Not to mention the Swiss-German dialect at the coffee breaks. But here we are, five months later, and now I can really say: yes, German: not a problem!

Regarding the main topic of my thesis, bullying, I have to admit, I really needed to warm up. I have been fortunate enough to have never been in a class where bullying was a problem. So I do not have this personal 'feel' for bullying. But, as I was writing and reading, I really started to develop a strong curiosity for bullying. And by visiting the schools in June for data collection, the topic became more 'real' for me: I saw that the data were not just data, there were real students behind it.

Of course I would like to thank my supervisors. René, thank you for helping me arranging this internship and for making it possible for me to actually write my master thesis in Switzerland. Gijs, thank you for your input on my master thesis. I really appreciate that you always took the time to read what I wrote. Your feedback has really helped me to improve my thesis.

Sonja, thank you very much for offering me the opportunity to write my master thesis at the Jacobs Center. I appreciate it that you always took the time to discuss my thesis, and that you were always very clear about your expectations regarding my work. I really enjoyed working with you!

Summary

Risk factors for engagement in bullying can be found at several levels. At the individual level, moral disengagement is a risk factor for engagement in bullying behavior (Hymel, Rocke-Henderson, & Bonanno, 2005; Perren & Gutzwiller-Helfenfinger, 2012). Students with high scores on moral disengagement can engage in bullying behavior, while having the ability to disengage themselves from remorseful feelings that usually occur while engaging in behavior which is not concordant with one's moral standards. Therefore it was hypothesized that (1) high levels of moral disengagement are positively associated with the frequency of bullying in school and also predict increases in bullying. It was also hypothesized that (2) high levels of moral responsibility are negatively associated with the frequency of bullying in school and also predict decreases in bullying.

Risk factors for engagement in bullying can also be found at the school level. School represents an important part in adolescents' life: students are influenced by the nature and quality of social interactions at school. Therefore, when doing research on bullying, the social context of bullying should be taken into account. The present study hypothesized that students with high quality relationships with significant others (teachers and peers), are less likely to engage in bullying.

There can be interplay between individual level risk factors and school level risk factors. The mechanism behind this interplay might be in line with goal-framing theory (Lindenberg, 2008). This theory argues that the norms of significant others influence one's behavior strongly: the readiness to follow norms is increased. Thus, the relation between moral disengagement and bullying can be moderated by a school climate variable. Therefore it was hypothesized that the positive association between moral disengagement and bullying, as well as the prediction of increases in frequency of bullying, is moderated by the quality of

relationships with significant others. This means that students with high levels of moral disengagement are less likely to bully in a high quality relationships environment, in which significant others show that not engaging in bullying is the norm. It was also hypothesized that the negative association between moral responsibility and bullying, as well as the prediction of increases in frequency of bullying, is moderated by the quality of relationships with significant others. This means that students with low levels of moral responsibility are less likely to bully in a high quality relationships environment, in which significant others show that refraining from bullying is the norm.

To test the hypotheses, we used data from the second and third wave of the netTEEN study. Data were collected in twelve Swiss middle schools, with participants between 12 and 14 years old. Teachers also participated. To account for nested data, multi-level models were computed. First, a cross-sectional model was computed to describe the associations of the school climate variables, individual level variables, and their interactions with bullying. Second, a longitudinal model was computed to study whether those associations were stable over time. We were not only interested in associations between bullying and the school level and individual level risk factors, but also in change. If we can predict change, this is a strong implication for causality (Singer & Willet, 2003). In order to intervene in bullying, it is important to know what bullying predicts. Therefore, both cross-sectional and longitudinal models were computed. Both models had bullying as a dependent variable, and individual level variables (moral disengagement and moral responsibility) and school climate variables (student-student relationships, teacher-student relationships, teacher-teacher relationships, and parental involvement) as predictor variables.

At the individual level, consistent with previous findings (Hymel et al., 2005; Perren & Gutzwiller-Helfenfinger, 2012), moral disengagement was positively associated with bullying. Although moral responsibility was not associated with bullying; moral responsibility

significantly predicted decreases in bullying. At the classroom level, none of the school climate variables were associated with bullying. High quality teacher-student relationships predicted increases in bullying. This unexpected finding might be due to the fact that although students have high quality relationships with their teachers, this does not necessarily mean they have high quality relationships with their fellow students. Students can be 'bistrategic' (Hawley, 2003), which in this case could mean they behave prosocial when adults are around, and behave more aggressive amongst peers. Cross-level interactions showed that moral responsibility was only marginally significantly associated with bullying, but this relation was significantly moderated by teacher-teacher relationships. These results indicated that the impact of moral responsibility on bullying is moderated by the school climate: children with high scores on moral responsibility do not engage in bullying. Children with low scores on moral responsibility are also unlikely to engage in bullying, however, only in classrooms were teachers lack high quality relationships with other teachers. The more teachers report to have high quality relationships with other teachers, the more students who score low on moral responsibility engage in bullying behavior. This rather unexpected finding might be due to the fact that bullying is likely to occur during unstructured times, so teachers may be unaware of the bullying taking place (Crothers & Kolbert, 2010), and therefore are not able to intervene. The longitudinal model showed a significant interaction between student-student relationships and moral responsibility, indicating that the impact of moral responsibility on increases in bullying frequency is moderated by the school climate: low levels of moral responsibility predicted increases in bullying over time, but only in classrooms with high-quality teacher-student relationships. Moreover, inspecting the correlations at the classroom level, it was found that all the variables were positively and significantly correlated (apart from student-teacher relationships, which was negatively correlated with parental involvement and teacher-teacher relationships). This negative correlation of student-student relations with two other

school climate variables might be a cause for this interaction in the unexpected direction. However, this rather unexpected finding needs further exploration.

The findings in the present study emphasize the importance of moral responsibility. Moral responsibility seems to predict less engagement in bullying behavior; therefore students need to be stimulated to behave in norm-oriented and morally responsible ways.

Moral justifications of bullying within the context of school climate

Bullying is often defined as an aggressive, intentional act or behavior that is carried out by a group or an individual repeatedly and over time against a victim who cannot easily defend him or herself (Olweus, 1991). Risk factors for engagement in bullying can be found at several levels. At the individual level, moral justifications for bullying play an important role. Moral disengagement is a risk factor for engagement in bullying behavior (Hymel, Rocke-Henderson, & Bonanno, 2005; Perren & Gutzwiller-Helfenfinger, 2012). Students with high scores on moral disengagement can engage in bullying behavior, while having the ability to disengage themselves from remorseful feelings that usually occur while engaging in behavior which is not concordant with one's moral standards. The first research question in the present study is: do students with high scores on moral disengagement engage more frequently in bullying behavior?

School represents an important part in adolescents' life: students are influenced by the nature and quality of social interactions at school. Students are influenced by their peers: Students who associate with peers who bully are more likely to engage in bullying behavior themselves (Espelage & Swearer, 2003). Therefore, when doing research on bullying, the social context of bullying should be taken into account. At the school level, school climate is a risk factor for engagement in bullying behavior. This study examines risk factors within the context of the school climate. The emphasis is on the relationships-dimension, therefore the second research question is: do students in a high quality environment (with significant others - peers and teachers) engage less frequently in bullying behavior?

There can be an interplay between individual level risk factors and school level risk factors. The mechanism behind this interplay might be in line with goal-framing theory (Lindenberg, 2008). This theory argues that the norms of significant others influence one's

behavior strongly: the readiness to follow norms is increased. Therefore, the third and last research question is: is the relation between moral justification and engagement of bullying moderated by the school climate?

A cross-sectional model was computed to describe associations between the predictors and bullying. However, to examine the stability of these associations over time, also a longitudinal model was computed. Cross-sectional data can only show associations, and not change, whereas longitudinal data do show change. In order to intervene in bullying, it is important to know what risk factors predict change in bullying. If we can predict change, this is a strong implication for causality (Singer & Willet, 2003). Therefore, both cross-sectional and longitudinal models were computed.

Bullying

Bullying typically occurs between a bully and a victim, within a greater social environment (Espelage & Swearer, 2010). For bullying, the larger social environment usually implies the school, and more specific: the student's classroom.

Most research on bullying focuses on the individual level. Only recently, researchers focus on the dyadic level: the relationship between the bully and the victim. However, not only individual characteristics determine whether a bully-victim relationship will develop: interactions between individuals taken place within a broader system. Bully-victim relationships are imbedded in the school context. Pepler, Craig, & O'Connell (1999) and Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen (1996) suggested that the social context of bullying (e.g. peer groups, teacher-student relationships) should be taken into consideration as well, because interactions between individuals take place within a broader system. For example, playground observations showed that in 85% of the observations of bullying, the peer group was present (Pepler et al., 1999).

Individual level risk factors: moral justifications

Moral standards are important in understanding individual differences in engagement in bullying (Perren & Gutzwiller-Helfenfinger, 2012). Moral disengagement means engaging in behavior which is not concordant with one's moral standards while claiming to adhere to these standards, and thus avoiding feelings like guilt. Moral disengagement can take place due to the ability to use cognitive mechanisms to disengage oneself from these remorseful feelings. Moral disengagement is positively associated with engagement in bullying (Hymel et al., 2005; Perren & Gutzwiller-Helfenfinger, 2012). Moral disengagement is negatively correlated with moral responsibility (Perren, Rumetsch, Gutzwiller-Helfenfinger, Malti, submitted for publication). Morally responsible behavior means that one does not justify ones own behavior which does not meet one's moral standards. Students with higher levels of moral responsibility have lower levels of (pro-) bullying attitudes (Perren et al, submitted for publication). Therefore it was hypothesized that (1) high levels of moral disengagement are positively associated with the frequency of bullying in school and also predict increases in bullying. It was also hypothesized that (2) high levels of moral responsibility are negatively associated with the frequency of bullying in school and also predict decreases in bullying.

School level risk factors: school climate

School climate is a complex construct which refers to the quality and character of school life (Cohen, McCabe, Michelli, & Pickeral, 2009). Life within school is shaped by its organizational structure, physical environment, instructional practices, interpersonal relationships, and overarching values, objectives and customs (Fan, Williams, & Corkin, 2011). Positive school climate is associated with a number of positive outcomes: academic achievement, school success, effective violence prevention, students' healthy development,

cooperative learning, group cohesion, respect, mutual trust, and school satisfaction (Cohen et al., 2009; Van Ryzin, 2011; Zullig, Huebner, & Patton, 2011).

Dimensions of school climate

Four dimensions define school climate: (1) safety, (2) teaching and learning, (3) the external environment, and (4) relationships (Cohen et al., 2009). Safety describes the physical and social-emotional safety in schools; teaching and learning consists of the quality of instruction, the social, emotional, and ethical learning, the professional development, and leadership; the external environment comprises the size of the school, curricular and extracurricular offerings, and the relationships dimension describes positive relationships, the school community and collaboration, and morale and connectedness.

The major dimension of school climate is the relationships dimension (Cohen et al., 2009). The school represents an important part in adolescents' life: Students spend a large amount of time interacting with fellow students and teachers. Students are influenced by the nature and quality of social interactions at school. Therefore, the current study focuses on the relationships within the school. In order to shape a positive school climate, schools should foster a high-quality relational environment (Wang & Dishion, 2012). The degree to which people feel connected to one another is an important factor in shaping school climate. Zullig et al. (2009) found that when students were asked to describe a positive school climate, connectedness was important to them. School connectedness means that students experience a sense of belonging to the school, and it can reduce the risk of negative outcomes, such as peer aggression (Hong & Espelage, 2012). The relationship dimension is disentangled into student-student relationships, teacher-student relationships, teacher-teacher relationships and parental involvement (Cohen et al., 2009).

Student-student relationships

Students form social groups within the school. Students outside these social groups are more likely to be victimized (Salmivalli, Huttunen, & Lagerspetz, 1997). Social relatedness is critical to students' engagement and academic success in school (Hughes & Kwok, 2007). Zullig et al. (2009) argue that school connectedness is highly important for students. Students who feel connected to their peers at school will most likely have more positive relationships, feel better about themselves and perform better academically (Orpinas & Horne, 2010). Students who perceived declines in peer social support engaged in problem behaviors over time (Mikami, Lerner, & Lun, 2010; Wang & Dishion, 2012).

It was expected that in classrooms with high quality student-student relationships, students tend to resolve conflicts peacefully and will be less likely to bully one another. Therefore it was hypothesized that (3) a positive school climate in which students experience support from their peers and feel connected to their peers, is negatively associated with the frequency of bullying in school and also predicts decreases in bullying.

Teacher-student relationships

Teachers play an important role in shaping students' experience in school. Meta-analysis of student-teacher relationships showed the impact of teacher's behavior on students' behavioral outcomes (Roorda, Koomen, Spilt, & Oort, 2011). Positive relationships between teachers and students are associated with more classroom engagement in learning activities (Hughes & Kwok, 2007; Roorda et al., 2011), social relatedness, academic achievement (Hamre & Pianta, 2001; Hughes & Kwok, 2007), less behavioral problems (Hamre & Pianta, 2001), the student's social functioning (Roorda et al., 2011), social and cognitive skills (O'Connor, 2010), and adjustment in school (Pianta, 1994).

Positive student-teacher relationships are characterized by closeness between teachers and students, whereas conflict between teachers and students is a feature of a negative

student-teacher relationship (O'Connor, 2010; Roorda et al., 2011). Closeness indicates the amount of warmth and open communication between teachers and students. Conflict is the extent to which the relationship is marked by disharmonious interactions (O'Connor, 2010), lack of personal sharing (Pianta, 1994) and dependency (Hamre & Pianta, 2001). Closeness, conflict and dependency are linked to children's peer victimization and aggression (Troop-Gordon & Kopp, 2011). Students who are overly dependent on their teachers are not able to solve conflicts on their own, and students whose relationship with their teacher is characterized by conflict are unlikely to be able to resolve conflicts in a peaceful way.

A supportive teacher helps the student deal with demands in school, and expresses interest in the students (Roorda et al., 2011). A supportive teacher can also prime students to behave norm-oriented. When students perceive their teachers as supportive, caring, respectful and interested, the students are more likely to ask for help when they themselves, or others, are bullied (Eliot et al., 2010). Thus, it was hypothesized that (4) a positive school climate in which students perceive their teachers as supportive and the student-teacher relationship is characterized by closeness, is negatively associated with the frequency of bullying in school and also predicts decreases in bullying.

Teacher-teacher relationships

Teachers play a key role in creating a positive school climate; teachers shape the environment in school (Espelage & Swearer, 2010; Orpinas & Horne, 2010; Pepler et al., 1999; Price, 2012). Successful school leadership and collaboration among teachers promotes an atmosphere which supports cohesiveness, shared visions and supporting each other (Beets et al., 2008). An atmosphere of trust and shared vision among teachers creates conditions which foster a general positive school climate (Price, 2012).

Cooperation between teachers helps them become better teachers. Through supporting one another and sharing ideas, teachers can become more capable with their students (Hargreaves, 2001). Capable teachers will improve their students' academic skills and will reduce their students' behavioral problems (Orpinas & Horne, 2010). An important aspect of the teacher to teacher relationship is that teachers can model respectful behavior by treating other teachers with respect (Orpinas & Horne, 2010). Teachers can promote connectedness within the school by exercising cooperation rather than competition with their colleagues.

Teachers are often the first responders in addressing bullying amongst their students (Crothers and Kolbert, 2010; Waasdorp, Pas, O'Brennan, & Bradshaw, 2011). Teachers can support the value of not accepting bullying, aggression and violence in school (Orpinas & Horne, 2010), and thereby priming their students to follow these norms as well. It is important that all teachers endorse positive behaviors. High quality relationships among teachers also stimulate communication about student's bullying behavior. By making colleagues aware of bullying episodes in the school, it might be easier to intervene.

Due to the great influence that teachers have on children's bullying behavior, the role of teachers supporting one another, and the importance of agreement among all teachers on how to reduce bullying behavior, it was hypothesized that (5) a positive school climate in which teachers support each other and there is shared vision amongst teachers, is negatively associated with the frequency of bullying in school and also predicts decreases in bullying.

Parental involvement

The role of parents in bullying research is often overlooked (Espelage & Swearer, 2008; Vickers & Minke, 1995). The teacher-parent relationship connects the family environment to the school environment (O'Connor, 2010). Parental school involvement is the most common indicator of parent-school relationships (Powell, Son, File, & San Juan, 2010). Examples of

14

parental school involvement are attending parent-teacher conferences, volunteering in school activities, and assisting their children with homework (Hughes & Kwok, 2007; Powell et al., 2010; Tan & Goldberg, 2009; Vickers & Minke, 1995). Parental school involvement is positively associated with student's enjoyment of school, academic achievement, the student's social skills, classroom engagement, students' school adjustment, low anxiety about school and, less problematic behavior (Hughes & Kwok, 2007; Powell et al., 2010; Tan & Goldberg, 2009). Lack of parental involvement is associated with bullying (Hong & Espelage, 2012).

Problems often arise when parents do not contact the school when necessary (Espelage & Swearer, 2008). When the teacher has more knowledge regarding students' personal problems, the teacher will be better able to develop a functioning relationship with the student (O'Connor, 2010). When parents and teachers have a functioning relationship, parents will stimulate their child to share any problems they encounter with their teacher (Powell et al., 2010). In this way parents enable their child to develop a better relationship with the teacher. Hence, we hypothesized that (6) a positive school climate in which parents show high levels of parental involvement (e.g. attending parent-teacher conferences, volunteering in school activities, and assisting their children with homework), is negatively associated with the frequency of bullying in school and also predicts decreases in bullying.

Interplay school climate and moral disengagement: goal-framing theory

There can be an interplay between individual level risk factors and school level risk factors. The mechanism behind this interplay might be in line with goal-framing theory (Lindenberg, 2008). In the goal-framing theory, Lindenberg (2008) argues that goal-frames determine what information we are sensitive to, what information we neglect how we process this information, what we like and dislike. Lindenberg (2008) identifies three overarching goals: hedonic, gain, and normative goals. When the hedonic goal-frame is focal (or activated), an

individual sees attractive things in a short-term light: one seeks excitement, avoids effort and uncertainty. When the gain goal-frame is focal, one seeks an improvement in one owns resources. A normative goal-frame is associated with appropriateness, and one seeks improvement which benefits the group as a whole, not merely an individual. Which goal is focal, depends on cues from the environment. Goal-frames are not chosen, but are subject to automatic priming effects. One cue from the environment is the presence of significant others. Significant others (e.g. teachers, parents, peers) have the power to strengthen one's normative goal-frame. The strengthening of the normative goal-frame is a function of the importance of the opinions and standards of significant others. The norms of significant others influence one's behavior strongly: the readiness to follow norms is increased. People who are not attached to significant others will have lower self-regulatory capacity. On the other hand, having high quality relationships with peers who bully could have a reversed effect and become a risk-factor: students who associate with peers who bully are more likely to engage in bullying behavior themselves (Espelage & Swearer, 2003).

The mechanism behind the interplay between individual level risk factors (moral disengagement) and school level risk factors (low quality relationships with significant others) might be explained with the goal-framing theory: e.g. students with low levels of moral responsibility might be encouraged by norm-following significant others, which whom they have high quality relationships, to behave according to a norm-oriented goal-frame, and thus not engage in bullying behavior. Therefore it was hypothesized that (7) the positive association between moral disengagement and bullying, as well as the prediction of increases in frequency of bullying, is moderated by the quality of relationships with significant others. It was also hypothesized that (8) the negative association between moral responsibility and bullying, as well as the prediction of increases in frequency of bullying, is moderated by the quality of relationships with significant others.

Gender

Many studies show that boys often engage more in bullying behavior than girls (e.g. Espelage, Bosworth, & Simon, 2000; Nansel, Overpeck Pilla, Suan, Simons-Morton, & Scheidt, 2001; Rigby, 1997), however more recently studies have found no significant differences between boys and girls (e.g. Goldstein, Young, & Boyd, 2008). To rule out any bias due to gender differences, we control for gender.

Conceptual model: main effects of school climate variables (student-student relationships, student-teacher relationships, teacher-teacher relationships, and parental involvement) on bullying, main effects of individual level variables (moral disengagement and moral responsbility) on bullying, and interaction-effects of school climate variables and invidual level variables on bullying.
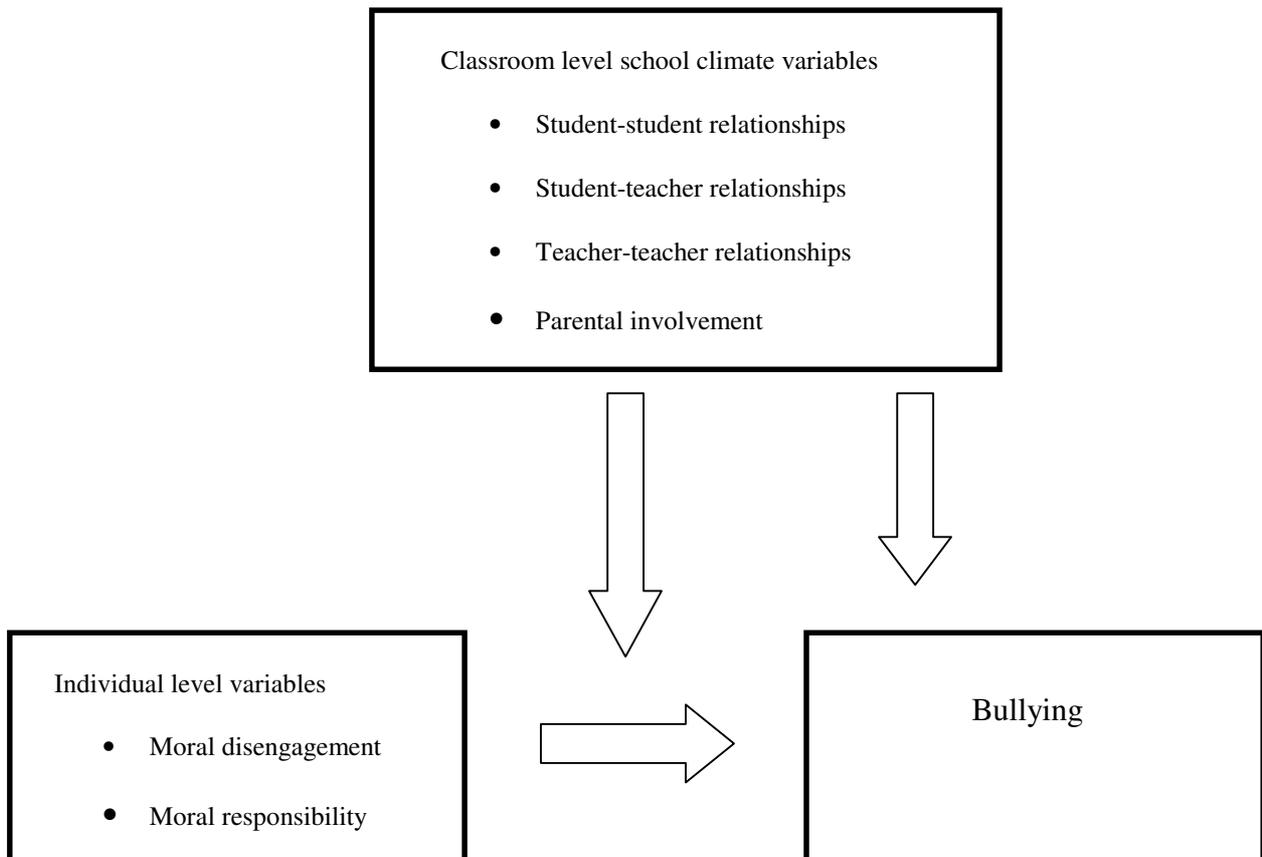
Methods

Sample: netTEEN study

The present study was part of the larger netTEEN study. The data used in the present study are from two waves of data collection in the netTEEN study, collected in May 2011 (t1 in the present study) and November 2011 (t2 in the present study). Schools participating at t1 (N=12) represent three cantons in German- and Italian speaking Switzerland. In each canton, 4 schools were willing to participate in the netTEEN study. These three cantons were selected due to their integrative school system, meaning students with different educational requirements are all in the same classroom. The schools were randomly selected. The schools in the original sample included 43 classrooms. In the present study only classrooms were the teacher completed the questionnaire were included (*N*=34).

Participants

The schools in the present study involved 34 classrooms and 647 students between 12 and 14 years old (M=13.7 years, SD=0.63) and attended seventh grade. 50.9% of the participants were female. To recruit the students, parents or guardians were sent an information letter and were offered to possibility to refuse participation. In addition, teachers and principals also completed a questionnaire.

Procedure

Students completed electronic questionnaires on laptops in their classroom, whilst being supervised by research assistants. Students, who were not able to be present at the time of the data collection, were offered the possibility to complete the questionnaire online. The students were guaranteed confidentiality.

Measures

Dependent variable: bullying. To measure involvement in bullying behavior, this study used scales developed by Alsaker (2003). The scale was slightly adapted and consisted six items (α=.80 at t1; α=.87 at t2). Students were first given the definition of bullying; the presence of imbalance of power and frequency were emphasized. The students were then asked if they participated in the following behaviors since the beginning of the school year: 'laughing about other students' behavior'; 'shut other students out'; 'spreading rumors'; 'threatening other students'; 'physically hurting other students'; 'stealing or breaking other students' belongings'. Answers were ranging from 'never' to 'almost daily' on a five-point scale. For each student, the scores on the six items were averaged.

Individual level: moral disengagement and moral responsibility. To measure moral responsibility and moral disengagement, this study used scales developed by Perren, Rumetsch, Gutzwiller-Helfenfinger and Malti (submitted for publication). Students were given two hypothetical bullying situations. The first hypothetical situation concerned social exclusion: *"Imagine you and your friends have planned to hang out together after school. You invite another student to hang out with you and your friends, but you purposely tell him the wrong meeting point." If you would have done this, how would this make you feel?* The second hypthetical situation concerned humiliation: *"Imagine, during computer science class you send a humiliating picture of another student to all the students in the classroom". If you would have done this, how would this make you feel?* These hypothetical situations were followed by seventeen items, of which six items (α =.88) accounted for morally responsible justifications, e.g. 'I would have a bad conscience'; 'I would be ashamed'. Students could answer on a four-point Likert scale, with answers ranging from 'not true' to 'true'. Eleven items (α =.90) accounted for morally disengaged justifications, e.g. '(s)he deserved being bullied'; 'I am happy my plan succeeded'. Students could answer on a four-point Likert scale, with answers ranging from 'not true' to 'true'. For each student, both the score on moral

disengagement and the score on moral responsibility were averaged. To facilitate interpretation, both moral disengagement and moral responsibility variables were grand-mean centered.

Gender. Gender was dummy coded, with boys coded as 1 and girls coded as 0.

Classroom level

Student-student relationships. Teachers were asked to assess cohesion among their students. The scale student-student consisted of four items (α=.83): 'students help each other'; 'students trust each other'; 'students get along'; and 'strong cohesion among students'. Teachers could answer on a four-point Likert scale, with answers ranging from 'not true' to 'true'. Confirmatory factor analysis showed the scale was reliable (model fit: Chi^2=1.91, (df=2), CFI=1, $RMSEA$=0). For each teacher the scores on the four items were averaged. To facilitate interpretation, this variable was grand-mean centered.

Student-teacher relationships. Teachers were asked to assess their relationships with their students. The scale teacher-student consisted of two items (α=.90): 'I have a good relationship with my students' and 'I believe my students like having me as a teacher'. Teachers could answer on a four-point Likert scale, with answers ranging from 'not true' to 'true'. To facilitate interpretation, the composite variable was grand-mean centered.

Teacher-teacher relationships. Teachers were asked to assess their relationships with other teachers. The scale teacher-teacher consisted of four items (α=.87): 'teachers are motivated for their job'; 'strong cohesion among teachers'; 'teachers agree on school's policy'; 'teachers follow school's policy'. Teachers could answer on a four-point Likert scale, with answers ranging from 'not true' to 'true'. Confirmatory factor analysis showed the scale was reliable (model fit: Chi^2=3.03, (df=2), CFI=.98, $RMSEA$=.13). RMSEA slightly exceeds the acceptable range of .08. However, RMSEA tends to falsely reject models when N is small

(Brown, 2006). Teacher's N is relatively small (*N*=34), and since other model parameters are either acceptable or good, a good model fit is assumed. Therefore, for each teacher the scores on the four items were averaged. To facilitate interpretation, this variable was grand-mean centered.

Parental involvement. Teachers were asked to estimate parental involvement, which consisted four items (*α*=.83): 'parents are concerned about their children's educational needs'; 'parents attend parent-teacher conferences'; 'parents volunteer in extracurricular activities'; 'parents support their children in their educational development'. Teachers could answer on a four-point Likert scale, with answers ranging from 'not true' to 'true'. Confirmatory factor analysis showed the scale was reliable (model fit: *Chi²*=.88, (*df*=2), *CFI*=1, *RMSEA*=0). For each teacher the scores on the four items were averaged. To facilitate interpretation, this variable was grand-mean centered.

Analysis

In order to be able to test the hypotheses in the current study, null models of bullying at t1 (*Wald Z*=2.69, *p*<.001, *ICC*=.08) and t2 (*Wald Z*=3.06, *p*=.002, *ICC*=.10) were computed. The null models showed that the data were nested in classrooms: For bullying at t1 and t2 the variation at the classroom level was 8% and 10% respectively. Hence, multi-level analysis was performed, using multi-level regression in SPSS. Multi-level analysis controls for nested data structure. Treating students as if they were independent of their classroom ignores the complexity of the data. and violates the assumption of independent observations. Moreover, students in a group tend to be more similar on many important variables (Heck, Thomas and Tabata, 2010).

First, a cross-sectional model was computed using t1 bullying as dependent variable. Second, a longitudinal model was computed; using t2 bullying as a dependent variable, while

controlling for t1 bullying. Cross-level interactions between individual level predictors and school level predictors were included in both models, as well as the control variable gender, and the main effects of the school climate variables (student-student relationships, teacher-student relationships, teacher-teacher relationships and parental involvement.)

Results

Descriptive statistics and correlations

Individual level variables. Means, standard deviations and correlations of individual level variables are reported in table 1. The means and standard deviations are of the raw scores before grand-mean centering. The grand-mean centered variables used in the multilevel analyses have a mean of zero. At the individual level, several variables were strongly correlated. As expected, moral disengagement and moral responsibility were strongly correlated (r=-.53). Moral disengagement was also strongly and positively correlated with bullying at t1 (r=.44), and at t2 (r=.28). Moral responsibility was moderately and negatively correlated with bullying at t1 (r=-.29) and at t2 (r=-.25). Moral responsibility and gender were moderately correlated (r=-.32), meaning that in general boys have lower levels of moral responsibility. Furthermore, bullying at t1 and bullying at t2 were highly correlated (r=.42).

Classroom level variables. Means, standard deviations and correlations of classroom level variables are reported in table 2.The means and standard deviations are of the raw scores before grand-mean centering. The grand-mean centered variables used in the multilevel analyses have a mean of zero. At the classroom level, apart from student-teacher relationships, which was negatively correlated with parental involvement and teacher-teacher relationships, all the variables where positively and significantly correlated. These correlations indicate that having a high quality relationship with a significant other in school, is correlated with having high quality relationships with other significant others as well.

Table 1. Correlations, means and standard deviations of individual level variables. **p<.01, *p<.05.

N = 556	m	SD	Correlations				
Individual level variables			1.	2.	3.	4.	5.
1. Gender (1=boy)	50.9% female, 49.1% male		1				
2. Moral responsibility	3.03	.84	-.32**	1			
3. Moral disengagement	1.78	.65	.20**	-.53**	1		
4. Bullying t1	1.21	.39	.08	-.29**	.44**	1	
5. Bullying t2	1.27	.55	.18**	-.25**	.28**	.42**	1

Table 2. Correlations, means and standard deviation of classroom level variables. **p<.01, *p<.05.

N = 607	m	SD	Correlations			
Classroom level variables			1.	2.	3.	4.
1. Student-student relationship	3.15	.55	1			
2. Teacher-student relationship	3.59	.49	.20**	1		
3. Parental involvement	3.27	.54	.31**	-.05	1	
4. Teacher-teacher relationship	3.09	.62	.25**	-.09*	.17**	1

Table 3. Cross-sectional model of individual- and classroom level predictors on T1 bullying.

T1 Bullying Cross-sectional			
Students' N = 556, classroom's N=34	b	t	p
Intercept	1.22	53.78	.00
Gender	-0.01	-0.12	.91
Moral responsibility	-0.04	-1.78	.08
Moral disengagement	0.22	8.31	.00
Student-student relationships	-0.02	-0.70	.49
Teacher-student relationships	0.04	0.78	.44
Teacher-teacher relationships	0.02	0.56	.58
Parental involvement	-0.02	-0.54	.60
Student-student relationships*moral responsibility	0.01	0.24	.81
Student-student relationships*moral disengagement	-0.01	-0.09	.93
Teacher-student relationships*moral responsibility	-0.03	-0.65	.52
Teacher-student relationships*moral disengagement	0.06	0.84	.40
Teacher-teacher relationships*moral responsibility	-0.08	-2.19	.03
Teacher-teacher relationships*moral disengagement	-0.01	-0.18	.86
Parental involvement*moral responsibility	0.00	0.01	.99
Parental involvement*moral disengagement	-0.01	-0.19	.85

Cross-sectional multi-level model at t1

The results of the cross-sectional model in predicting bullying are reported in table 3. At the individual level, it was found that higher levels of moral disengagement were associated with higher levels of bullying (*b*=.22, *t*=7.94, *p*=.00). The school climate variables were not associated with bullying.

A significant cross-level interaction was found for teacher-teacher relationships and moral responsibility (*b*=-.08, *t*=-2.19, *p*=.03). Even after testing more parsimonious models,

the interaction remained significant. This interaction is plotted in figure 1, and implies that children with high scores on moral responsibility do not engage in bullying. Children with low scores on moral responsibility are also unlikely to engage in bullying, however, only in classrooms were teachers lack high quality relationships with other teachers. The more teachers report high quality relationships with other teachers, the more students who score low on moral responsibility engage in bullying behavior.

Other cross-level interactions failed to reach significance, i.e. the association between moral disengagement and bullying was not moderated by a classroom variable, and the association between moral responsibility and bullying was only moderated by teacher-teacher relationships.

Figure 1. T1 Bullying, cross-level interactions. The impact of moral responsibility on bullying is moderated by teacher-teacher relationships.
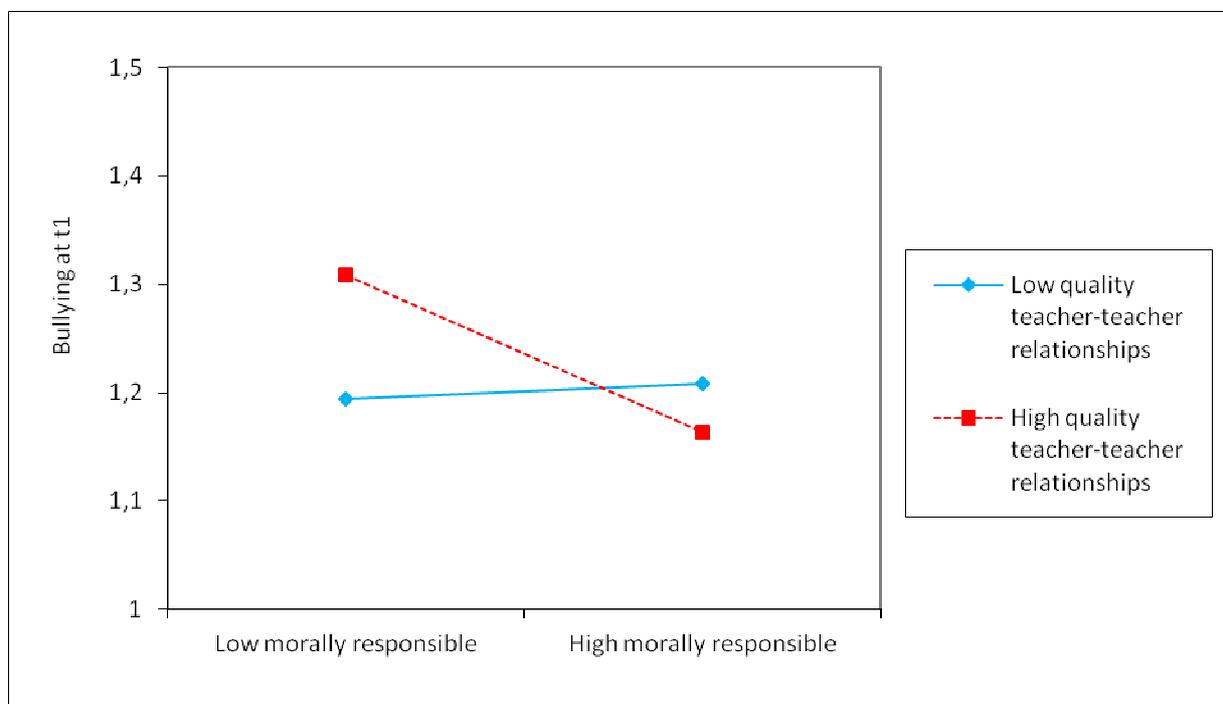
Table 4. Longitudinal model of individual- and classroom level predictors on T2 bullying, while controlling for T1 bullying.

| T2 Bullying Longitudinal			
Students' N = 530, classroom's N=34	b	t	p
Intercept	0.53	4.74	.00
Gender	0.20	3.41	.00
Moral responsibility	-0.16	-2.81	.01
Moral disengagement	0.04	0.83	.41
Student-student relationships	-0.10	-1.02	.32
Teacher-student relationships	0.19	2.05	.05
Teacher-teacher relationships	0.05	0.81	.43
Parental involvement	0.05	0.60	.56
Student-student relationships*moral responsibility	0.06	0.59	.56
Student-student relationships*moral disengagement	0.06	0.49	.63
Teacher-student relationships*moral responsibility	-0.27	-2.78	.01
Teacher-student relationships*moral disengagement	0.05	0.37	.71
Teacher-teacher relationships*moral responsibility	-0.03	-0.57	.57
Teacher-teacher relationships*moral disengagement	0.00	-0.04	.97
Parental involvement*moral responsibility	-0.08	-0.92	.63
Parental involvement*moral disengagement	-0.09	-0.85	.40
T1 Bullying	0.65	7.70	.00

Longitudinal multi-level model at t2

The results of the longitudinal model in predicting bullying are reported in table 4. It was found that higher levels of moral responsibility predicted decreases in bullying (b=-0.16, t=-2.81, p=.01). Additionally, males has stronger increases in frequency of bullying (b=.20, t=3.41, p=.00). Furthermore, it was found that, although only marginally significant, high

quality teacher-student relationships predicted stronger increases in levels of bullying (b=.231, t=2.41, p=.05). More significant predictions of school climate variables on bullying were not found.

A significant cross-level interaction was found for teacher-student relationships and moral responsibility (b=-.27, t=2.78, p=.01). Even after testing more parsimonious models, the interaction remained significant. This interaction is plotted in figure 2. This significant cross-level interaction implies that the impact of moral responsibility on increases in bullying frequency is moderated by a school climate variable: low levels of moral responsibility predicted stronger increases in bullying over time, but only in classrooms with high-quality teacher-student relationships.

Other cross-level interactions failed to reach significance, i.e. the prediction of change of moral disengagement on bullying was not moderated by a classroom variable, and the prediction of change of moral responsibility on bullying was only moderated by teacher-students relationships.

Figure 2. T2 Bullying, cross-level interactions. The impact of moral responsibility on bullying is moderated by teacher-student relationships (b=-.268, t=-2.778, p=.006).
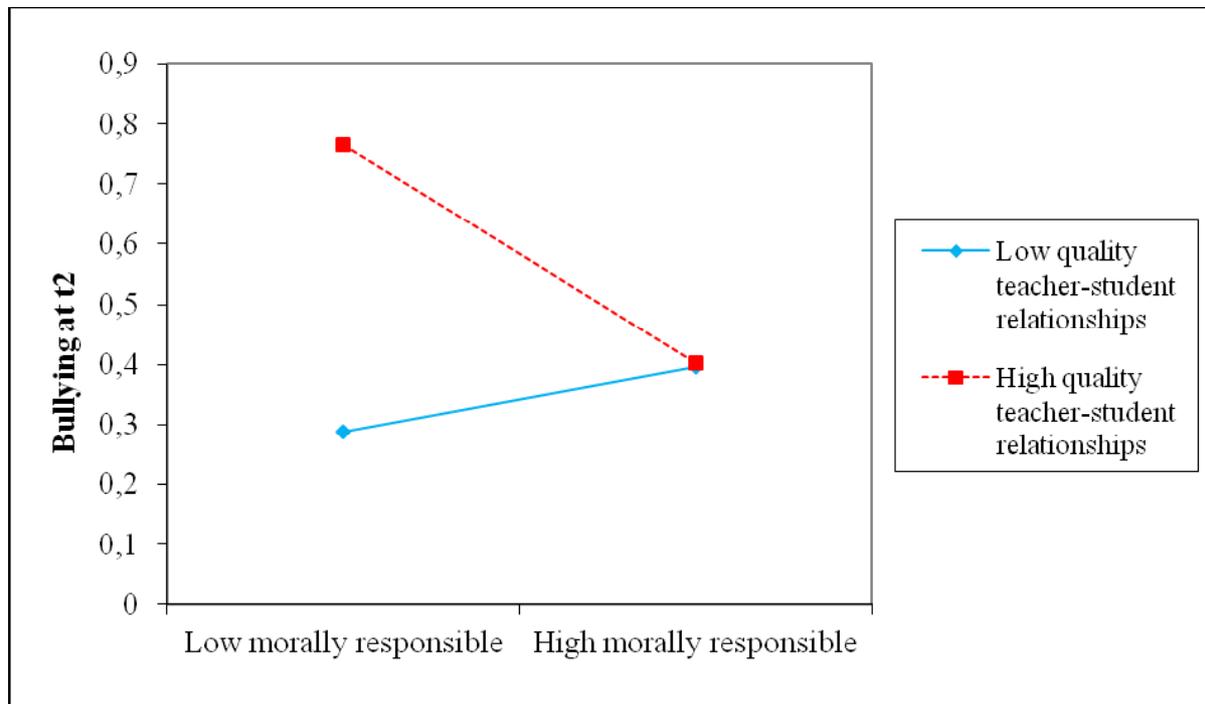
Discussion

The current study aimed to examine whether risk factors at the individual level (moral disengagement) and risk factors at the classroom level (lack of high quality relationships with significant others) influence the frequency of bullying in school, and can also predict changes in frequency of bullying in school. The present study also looked at the interplay between school climate and moral justifications of bullying. Data from two waves, collected in the netTEEN study, were analyzed in two multi-level models (cross-sectional and longitudinal) to test the hypotheses.

Individual level risk factors: moral disengagement and moral responsibility

Consistent with previous findings (Hymel et al., 2005; Perren & Gutzwiller-Helfenfinger, 2012), moral disengagement was positively associated with bullying. This result

implies that students who reported higher levels of moral disengagement are more likely to engage in bullying behavior than students who reported lower levels of moral disengagement. Despite the positive association between moral disengagement and bullying, moral disengagement did predict neither increases nor decreases in frequency of bullying. Therefore, the findings were only partly in line with hypothesis one (high levels of moral disengagement are positively associated with the frequency of bullying in school and also predict increases in bullying).

Moral responsibility seemed to be a stronger predictor for changes in bullying. Although moral responsibility was not associated with bullying; moral responsibility significantly predicted decreases in bullying. This is partly consistent with the second hypothesis (high levels of moral responsibility are negatively associated with the frequency of bullying in school and also predict decreases in bullying). This is also in line with earlier findings: Students with higher levels of moral responsibility have lower levels of (pro-) bullying attitudes (Perren et al., submitted for publication). Furthermore, because moral responsibility is a strong predictor for decreases in bullying, this finding offers possibilities for interventions: morally responsible behavior should be stimulated among students. By engaging the entire school, morally responsible behavior can become a powerful tool in reducing bullying. The morally responsible behavior can be stimulated by motivating bystanders to intervene when they witness bullying taking place. In this way, the students can 'spread' the morally responsible behavior: when the majority endorses resolving conflicts in a peaceful way, this can become the norm. Teachers also play a key role: they need to be aware of the influence of their behavior on the student's behavior. By modeling respectful behavior, they can set a norm as well.

School climate variables

Student-student relationships. Student-student relationships were neither associated with frequency of bullying, nor did it predict decreases in bullying, thereby rejecting the third hypothesis (a positive school climate in which students experience support from their peers and feel connected to their peers, is negatively associated with the frequency of bullying in school and also predicts decreases in bullying). A reason for the absence of significance might be contrary to the goal-framing theory (Lindenberg, 2008). It could be that by showing bullying behavior, students prime each other, not for norm-oriented behavior, but for engaging in bullying behavior. High quality relationships can in this way enhance engagement in bullying, instead of preventing students from engaging in bullying behavior. Salmivalli (1997) already argued that bullies look into their own network for support: A high quality network with other students can in this way promote bullying behavior. Additionally, Salmivalli (1997) found that students with higher propensity for engagement in bullying are more likely to belong to larger peer networks than more prosocial students and victims. This is another argument for the negative way in which significant others can function. However, student-student relationships were neither associated with frequency of bullying, nor did it predict decreases in bullying. To test the hypothetical explanation for the absence of findings, future research should ask not only teachers to rate the student-student relationships, but students as well. For students are most likely to be better assessors of these relationships than teachers. In the present study we asked neither students to rate student-student relationships, nor to report their friendships in the classroom (of which the aggregate can be a good proximate for high quality student-student relationships).

Teacher-student relationships. Teacher-student relationships were not associated with frequency of bullying, but it predicted increases in bullying, thereby rejecting the fourth hypothesis (a positive school climate in which students perceive their teachers as supportive and the student-teacher relationship is characterized by closeness, is negatively associated

with the frequency of bullying in school and also predicts decreases in bullying). There are multiple hypothetical explanations for this rather unexpected finding. Firstly, the unexpected finding might be due to the fact that although students have high quality relationships with their teachers, this does not necessarily mean they have high quality relationships with their fellow students. Students can be 'bistrategic' (Hawley, 2003), which in this case could mean they behave prosocial when adults are around, and behave more aggressive amongst peers. Secondly, as mentioned before, during adolescence the teacher-student relationship might not influence the student as much as his relationships with other students. However, the student-student relationships were not associated with bullying either. Therefore, again, to examine which relationship is more influential, future research on school climate should include student reports on the different relationships as well, because students are more likely to be better assessors of their relationships with fellow students. Thirdly, it can be hypothesized that teachers can prioritize a high quality relationship with their students, but thereby losing their authoritarian role. They might think it is important to be a 'friend' of their students - and therefore rating the teacher-student relationships as high quality - instead of being an authority figure. By trying to be a friend of the class, the teacher can lose the ability to regulate students' (bullying) behavior. Fourthly, teachers might rate their relationship with students as good, while in fact those students are overly dependent on their teacher. Dependency is linked to peer victimization and aggression (Troop-Gordon & Kopp, 2011). Students who are overly dependent on their teachers might not be able to independently resolve conflicts with peers. Finally, the fact that teachers give socially desirable answers might be part of this finding as well. More than with the other relationships, rating the relationship with the students as bad, might make the teacher look bad. Whereas the other relationships do not influence the capabilities of the teacher as much, the relationships with students do. However, despite all the possible explanations, this result remains unexpected; therefore it should be taken cautiously and needs further exploration.

Teacher-teacher relationships. Teacher-teacher relationships were neither associated with frequency of bullying, nor did it predict decreases in bullying, thereby rejecting the fifth hypothesis (a positive school climate in which teachers support each other and there is shared vision amongst teachers, is negatively associated with the frequency of bullying in school and also predicts decreases in bullying). The influence of teacher-teacher relationships might be little due to the fact that behavioral problems like bullying are likely to occur during unstructured times, so teachers may be unaware of the bullying taking place (Crothers & Kolbert, 2010), and therefore are unable to intervene.

Parental involvement. Parental involvement was neither associated with frequency of bullying, nor did it predict decreases in bullying, thereby rejecting the sixth hypothesis (a positive school climate in which parents show high levels of parental involvement (e.g. attending parent-teacher conferences, volunteering in school activities, and assisting their children with homework), is negatively associated with the frequency of bullying in school and also predicts decreases in bullying). The absence of significant findings for parental involvement might be due to the fact that this has more impact on the students' classroom engagement and behavior in lower grades than when they reach adolescence, like the students in the current sample (Hamre & Pianta, 2001; Hughes & Kwok, 2007).

Interplay between individual level risk factors and school climate.

First, it was hypothesized that the positive association between moral disengagement and bullying, as well as the prediction of increases in frequency of bullying, is moderated by the quality of relationships with significant others. However, none of the school climate variables seemed to moderate the effect of moral disengagement on bullying, thereby rejecting the seventh hypothesis (the positive association between moral disengagement and bullying, as

well as the prediction of increases in frequency of bullying, is moderated by the quality of relationships with significant others).

Second, it was also hypothesized that the negative association between moral responsibility and bullying, as well as the prediction of decreases in frequency of bullying, is moderated by the quality of relationships with significant others. The association between moral disengagement and bullying was moderated by teacher-teacher relationships. This implies that children with high scores on moral responsibility do not engage in bullying. Children with low scores on moral responsibility are also unlikely to engage in bullying, however, only in classrooms were teachers lack high quality relationships with other teachers. The more teachers report to have high quality relationships with other teachers, the more students who score low on moral responsibility engage in bullying behavior. This result does not support the hypothesis that teachers can, by showing respectful behavior to other teachers, prime students to behave in norm-oriented way. Because teachers are often the first responders in addressing bullying amongst their students (Crothers and Kolbert, 2010; Waasdorp, Pas, O'Brennan, & Bradshaw, 2011), it was expected that when teachers have high quality relationships with other teachers, they can support each other in noticing and changing the bullying behavior. This rather unexpected finding might be due to the fact that bullying is likely to occur during unstructured times, so teachers may be unaware of the bullying taking place (Crothers & Kolbert, 2010), and therefore are not able to intervene.

The impact of moral responsibility on changes in bullying is moderated by teacher-student relationships. This implies that the impact of moral responsibility on increases in bullying frequency is moderated by a school climate variable: low levels of moral responsibility predicted stronger increases in bullying over time, but only in classrooms with high quality teacher-student relationships. This effect is expected in the way that low levels of moral responsibility predicted stronger increases in bullying. However, it is unexpected that

this effect is only found in classrooms with high quality teacher-student relationships. It seems that the interaction between teacher-student relationships and moral responsibility is highly influenced by the higher levels of bullying in classrooms where teacher reported high quality teacher-student relationships. Levels of bullying do show less increase in classes with high quality teacher-student relationships, however, due to the high levels of bullying at t1 in those classes, the bullying level at t2 is the same as in classrooms with low quality teacher-student relationships. Moreover, inspecting the correlations at the classroom level, it was found that all the variables were positively and significantly correlated (apart from student-teacher relationships, which was negatively correlated with parental involvement and teacher-teacher relationships). This negative correlation of student-student relations with two other school climate variables might be another cause for this interaction in the unexpected direction.

Relevance, strengths and limitations

Relevance. Whereas the majority of bully research relies on only students' viewpoints (Waasdorp et al., 2011), the present study examined the relation between school climate, as measured by teacher perceptions of the relationships, and bullying, as reported by students. This study examines the teacher's view of school climate. Teacher's views of school climate are important: teachers are usually responsible for implementing a bullying intervention (Menesini, Fonzi, & Smith, 2002). However, we also asked the students about the bullying behavior. Most studies focus on the separate relationships in the schools, which can pose a methodological threat unto the results. There is then a risk that associations are inflated due to shared informant and shared method variance (Roorda et al., 2011). The current study uses multiple informants: students and teachers. Additionally, studies on bullying often use cross-sectional data (Roorda et al., 2011; Zullig et al., 2011). The current study uses longitudinal

data from the netTEEN-study. Whereas previous studies on bullying often concentrate on solely the bully-victim relationship, this study involves the social context of bullying.

Limitations. The present study had several limitations. Due to the design of the study, school climate variables were based on teacher reports and therefore only available at classroom level. This design neglects the value of the students' perspective on the social interaction within the schools. Because bullying is most likely to take place during unstructured activities and students can present themselves as proscocial towards the teachers, but aggressive towards peers, teachers might not be able to rate student-student relationships accurately enough. Likewise, important information is lost when students' perspective of the teacher-student relationship is not reported. Therefore, future research might want to measure school climate variables from students' viewpoint as well.

Another limitation in this study is the fact that the classroom teacher filled out the questionnaire, but this may not be the teacher who spends the most time with the specific class. Other teachers might spend more time teaching this class, and therefore might be better able to rate the quality of the several relationships withint the class.

Finally, self-reports were used to asses bullying. However, bullies are usually more reluctant to report engagement in bullying than victims.

Strengths. Despite the limitations, the results from the present study are important for several reasons. First, longitudinal models are rather rare in bullying research. Due to the longitudinal design we were able to draw conclusions regarding causality. However, despite the longitudinal design, t1 and t2 are only six months apart. Future research could use a larger timeframe, in order to examine changes in school climate, moral disengagement, moral responsibility and frequency of bullying over a longer period of time. Second, despite the

restrictions of only using teacher reports, the teacher perspective is very important and is too often overlooked.

This study showed the importance of moral responsibility. An implication for future anti-bullying interventions might be to focus more on moral responsibility. Moral responsibility seems to predict less engagement in bullying behavior; therefore students need to be stimulated to behave in norm-oriented and morally responsible way. By engaging the entire school, morally responsible behavior can become a powerful tool in reducing bullying. The morally responsible behavior can be stimulated by motivating bystanders to intervene when they witness bullying taking place. In this way, the students can 'spread' the morally responsible behavior: when the majority endorses resolving conflicts in a peaceful way, this can become the norm. Teachers also play a key role: they need to be aware of the influence of their behavior on the student's behavior. By modeling respectful behavior, they can set a norm as well.

References

Beets, M. W., Flay, B. R., Vuchinich, S., Acock, A. C., Li, K.-K., & Allred, C. (2008). School climate and teachers? Beliefs and attitudes associated with implementation of the positive action program: A diffusion of innovations model. Prevention Science, 9(4), 264–275.

Brown, T.A. (2006). Confirmatory Factor Analysis for Applied Research. New York, London: The Guilford Press.

Cohen, J., McCabe, E. M., Michelli, N. M., & Pickeral, T. (2009). School climate: Research,

policy, practice, and teacher education. Teachers College Record, 111(1), 180–213.

Crothers, L. M., & Kolbert, J. B. (2010). Teacher's management of student bullying in the classroom. . In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), Handbook of Bullying in Schools: An International Perspective (pp. 49-59). New York, NY: Routledge.

Eberly, J. L., Joshi, A., & Konzal, J. (2007). Communicating with families across cultures: An investigation of teacher perceptions and practices. The School Community Journal, 17(2), 7–26.

Eliot, M., Cornell, D., Gregory, A., & Fan, X. (2010). Supportive school climate and student willingness to seek help for bullying and threats of violence. Journal of School Psychology, 48(6), 533–553.

Espelage, D.L., Bosworth, K., & Simon, T.R. (2000). Examining the social context of bullying behaviors in early adolescence. Journal of Counseling and Development, 78, 326-333.

Espelage, D. L., & Swearer, S. M. (2008). Current perspectives on linking school bullying research to effective prevention strategies. In T. W. Miller (Ed.), School Violence and Primary Prevention (pp. 335-353). New York, NY: Springer.

Espelage, D.L., & Swearer, S.M. (2003). Research on school bullying and vicimization: What have we learned and where do we go from here? School Psychology Review, 32, 365-383.

Espelage, D. L., & Swearer, S.M. (2010). A social-ecological model for bullying prevention and intervention. Understanding the impact of adults in the social ecology of

youngsters. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), Handbook of
Bullying in Schools: An International Perspective (pp.61-72). New York, NY:
Routledge.

Fan, W., Williams, C. M., & Corkin, D. M. (2011). A multilevel analysis of student
perceptions of school climate: The effect of social and academic risk factors.
Psychology in the Schools, 48(6), 632–647.

Goldstein, S.E., Young, A., & Boyd, C. (2008). Relational aggression at school: Associations
with school safety and school climate. Yournal of Youth and Adolescence, 37, 641-654.

Hamre, B. K., & Pianta, R. C. (2001). Early Teacher–Child Relationships and the Trajectory
of Children's School Outcomes through Eighth Grade. Child Development, 72(2), 625–
638.

Hargreaves, A. (2001). The emotional geographies of teachers' relations with colleagues.
International Journal of Educational Research, 35(5), 503–527.

Hawley, P.H. (2003). Prosocial and coercive configurations of resource control in early
adolescence: A case for the well-adapted Machivellian. Merril-Palmer Quarterly, 49
(3), 279-309.

Heck, R. H., Thomas, S. L., & Tabata, L. N. (2010). Multilevel and Longitudinal Modeling
with IBM SPSS. New York, London: Routledge.

Hong, S.J., & Espelage, D.L. (2012). A review of research on bullying and peer victimization
in school: An ecological system analysis. Aggressive and Violent Behavior, 17, 311-
322.

Hughes, J., & Kwok, O. (2007). Influence of student-teacher and parent-teacher relationships

on lower achieving readers' engagement and achievement in the primary grades. Journal of Educational Psychology, 99(1), 39–51.

Hymel, S., Rocke-Henderson, N., & Bonanno, R. A. (2005). Moral disengagement: A framework for understanding bullying among adolescents. Journal of Social Sciences, (Special Issue No. 8), 33-43.

Lindenberg, S. (2008). Social rationality, semi-modularity and goal-framing: What is it all about? Analyse & Kritik, 30, 669-687.

Mikami, A .Y., Lerner, M. D., & Lun, J. (2010). Social context influences on children's rejection by their peers. Child Development Perspectives, 4, 123-130.

Menesini, E., Fonzi, A., & Smith, P. K. (2002). Attribution of meanings to terms related to bullying: A comparison between teacher's and pupil's perspectives in Italy. European Journal of Psychology of Education, 17(4), 393–406.

Nansel, T.R., Overpeck, M.D., Pilla, R.S., Ruan, W.J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among U.S. youth: Prevalence and association with psychosocial adjustment. Journal of the American Medical Association, 16, 2094-2100.

O'Connor, E. (2010). Teacher–child relationships as dynamic systems. Journal of School Psychology, 48(3), 187–218.

Olweus, D. (1991). Bully/victim problems among school children: Basic facts and effects of a school based intervention program. In R. K. Pepler (Ed.), The Development and Treatment of Childhood Aggression (pp. 411-448). Hillsdale, N.J.: Erlbaum.

Olweus, D. (2010). Understanding and researching bullying: Some critical issues. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), Handbook of Bullying in Schools: An International Perspective (pp. 9-33). New York, NY: Routledge.

Orpinas, P, & Horne, A. M. (2010). Creating a positive school climate and developing social competence. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), Handbook of Bullying in Schools: An International Perspective (pp. 49-59). New York, NY: Routledge.

Pepler, D., Craig, W. M., & O'Connell, P. (1999). Understanding bullying from a dynamic systems perspective. In A. Slater, & D. Muir (Eds.), Developmental Psychology: An Advanced Reader. Blackwell.

Perren, S., Rumetsch, U., Gutzwiller-Helfenfinger, E., & Malti, T. Moral justifications for bullying (MOJUS): The development of a survey measure. Submitted for publication.

Perren, S., & Gutzwiller-Helfenfinger, E. (2012). Cyberbullying and traditional bullying in adolescence: Differential associations with moral values, moral emotions and morally disengaged justifications. European Journal of Developmental Psychology, 9 (2), 195-209.

Pianta, R. C. (1994). Patterns of relationships between children and kindergarten teachers. Journal of School Psychology, 32(1), 15–31.

Powell, D. R., Son, S.-H., File, N., & San Juan, R. R. (2010). Parent–school relationships and children's academic and social outcomes in public school pre-kindergarten. Journal of School Psychology, 48(4), 269–292.

Price, H. E. (2012). Principal–teacher interactions: How affective relationships shape principal and teacher attitudes. Educational Administration Quarterly, 48(1), 39–85.

Rigby, K. (1997). What children tell us about bullying in schools. Children Australia, 22, 28-34.

Roorda, D. L., Koomen, H. M. Y., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher–student relationships on students' school engagement and achievement: A meta-analytic approach. Review of Educational Research, 81(4), 493–529.

Singer, J.D., & Willett, J.B. (2003). Applied longitudinal data analysis. Modeling change and event occurrence. Oxford: Oxford University Press.

Salmivalli, C., Lagerspetz, K.M.J., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. Aggressive behavior, 22, 1-15.

Salmivalli, C., Huttunen, A., & Lagerspetz, K. M. J. (1997). Peer networks and bullying in schools. Scandinavian Journal of Psychology, 38(4), 305–312.

Slonje, R., & Smith, P. K. (2007). Cyberbullying: Another main type of bullying? Scandinavian Journal of Psychology, 49, 147-154.

Tan, E. T., & Goldberg, W. A. (2009). Parental school involvement in relation to children's grades and adaptation to school. Journal of Applied Developmental Psychology, 30(4), 442–453.

Troop-Gordon, W., & Kopp, J. (2011). Teacher-child relationship quality and children's peer victimization and aggressive behavior in late childhood. Social Development, 20 (3), 536-561.

Van Ryzin, M. J. (2011). Protective factors at school: Reciprocal effects among adolescents'

   perceptions of the school environment, engagement in learning, and hope. Journal of

   Youth and Adolescence, 40(12), 1568–1580.

Vickers, H. S., & Minke, K. M. (1995). Exploring parent-teacher relationships: Joining and

   communication to others. School Psychology Quarterly, 10(2), 133–150.

Waasdorp, T. E., Pas, E. T., O'Brennan, L. M., & Bradshaw, C. P. (2011). A multilevel

   perspective on the climate of bullying: Discrepancies among students, school staff, and

   parents. Journal of School Violence, 10(2), 115–132.

Wang, M., & Dishion, T. J. (2012). The trajectories of adolescents' perceptions of school

   climate, deviant peer affiliation, and behavioral problems during the middle school

   years. Journal of Research on Adolescence, 22(1), 40–53.

Zullig, K. J., Huebner, E. S., & Patton, J. M. (2011). Relationships among school climate

   domains and school satisfaction. Psychology in the Schools, 48(2), 133–145.