

University of Groningen

The classroom as context for bullying

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DOI:
[10.33612/diss.96793146](https://doi.org/10.33612/diss.96793146)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2019

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
Rambaran, J. A. (2019). *The classroom as context for bullying: a social network approach*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.96793146>

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Chapter 6

Conclusion and Discussion

This final chapter summarizes the research findings related to the school and classroom factors on bullying, victimization, and defending investigated in this study, discusses their implications, and indicates considerations for future research.

6.1 Summary and discussion of the findings

Bullying is the most common form of school violence among classmates and is generally seen as a group process (Menesini & Salmivalli, 2017). Much emphasis has been put on individual factors to explain bullying, such as temperament, personality, cognition, and emotion (Rivara & Le Menestrel, 2016); however, children are encapsulated in contexts, such as classrooms and schools. Moreover, classrooms vary greatly in rates of bullying behavior, peer victimization, and defending behavior (Salmivalli, 2010). This thesis aimed to understand which classroom factors might increase or decrease the risk for bullying among classmates (Brendgen & Troop-Gordon, 2015; Juvonen & Graham, 2014). So far, few studies provide insight on this matter for bullying behavior, peer victimization, and defending among students in elementary education.

To enhance our understanding of the extent to which bullying behavior and peer victimization depend on classroom factors, I adopted a relational framework (Rodkin et al., 2015) throughout this thesis. In this framework, bullying and peer victimization are considered as relational processes, by considering the power (status) asymmetry between bullies and their victims (Volk et al., 2014). For understanding the occurrence and development of positive peer relations, such as helping relationships between students, I adopted an evolutionary framework that involves communion (Ellis et al., 2012; Volk et al., 2012), referring to relational needs, affiliation, and closeness/intimacy (Ojanen, Sijtsema, & Rambaran, 2013). In the classroom context, this means that youth are (being) motivated to develop healthy peer relationships such as friendships and support relations. The two theoretical frameworks utilized in this thesis can be implied in a broader sense to help understand the occurrence and development of positive and negative peer relationships in school and classroom settings.

To answer the overarching question whether and to what extent bullying, victimization, and defending depend on the classroom context factors, I investigated classroom context

factors from two different angles: classroom composition on the one hand (structure and stability), and social relations and social norms (friendships and classroom climate) on the other hand. In this final chapter, I will summarize and discuss the findings. Figure 6.1 presents an overview of the research questions and empirical findings.

In four empirical studies, this thesis examined classroom context factors using social network analysis, focusing on structural factors (study 1 and study 2) and social factors (study 3 and study 4). Chapter 2 (study 1) examined degrees and direction of victim-bully ties in single-grade and multigrade classrooms to examine power differences based on age and grade. Chapter 3 (study 2) investigated the effect of stability in classroom composition on changes in victim-bully ties (that is, in schools with single-grades and multigrades). Chapter 4 (study 3) examined the dynamic interplay between victim-bully ties and friendship ties. Finally, Chapter 5 (study 4) examined social norms (through degree of bullying) and (dis)like ties in defending ties using an individual multilevel and social network approach.

6.1.1 Better off in single-grade than in multigrade classrooms?

In the first study, Chapter 2, I investigated whether and to what extent victim-bully relationships depend on (relative) age differences in a sample of single-grade classrooms where age differences between students are small and multigrade classrooms where age differences between students are large in order to study the effect of power imbalance on victimization in different classroom contexts. I found no evidence of differences in victimization prevalence in both types of classrooms nor evidence from the social network analyses (ERGMs) that victimization is associated with (relative) age and grade differences in any of the examined classroom contexts. Findings also revealed no clear sex differences in bullying involvement in single-grade and (administrative and pedagogical) multigrade classrooms.

Previous research pointed in the direction that children in administrative multigrade classrooms are not better or worse off in terms of socio-cognitive outcomes (e.g., academic achievement and social adjustment). In Chapter 2, I extend this research by showing that there is also no indication that multigrade classrooms increase the risk of victimization by classmates. This conclusion contradicts research showing that younger children are vulnerable in terms of victimization compared to their older classmates (Chaux & Castellanos, 2015).

In Chapter 2, I found that victimization relations in administrative multigrade classrooms occurred mostly between students who are in the same grade in their classroom, thus between children whose age differences are relatively small. This finding is in line with

Part I: classroom composition (structure and stability)		Part II: social relations and norms (friendships and climate)	
Classroom factors in bullying, victimization, and defending			
Chapter 2		Chapter 3	
Question(s)	<p>“Do multi-grade classrooms show a different degree of victimization compared to single-grade classrooms?”</p> <p>“To what extent does victimization depend on age differences between children, and if so, is this different for single-grade and multi-grade classrooms?”</p>	Chapter 4	Chapter 5
Method	<p>Non-parametric (one-way ANOVA on ranks) test in R</p> <p>Cross-sectional social network analysis using ERGMs in PNet</p>	Chapter 4	Chapter 5
Main Findings	<p>No evidence that single-grade classrooms and multi-grade classrooms differ in degree of victimization.</p> <p>No evidence of association between victimization and age differences in single-grade and multi-grade classrooms. Cross-grade victimization less likely than same-grade victimization in administrative multi-grade classrooms.</p>	Chapter 4	Chapter 5
Conclusions	<p>No evidence that single-grade and multi-grade classrooms differ in degrees of victimization nor a systematic indication that victimization is based on (relative) age or grade differences.</p>	Chapter 4	Chapter 5
Question(s)	<p>“Are newcomers in the classroom more likely to become victims?”</p> <p>“Does a stable classroom, where children generally have the same classmates, lead to fewer changes in bully nominations?”</p>	Chapter 4	Chapter 5
Method	<p>Longitudinal social network analysis using SIENA in R</p>	Chapter 4	Chapter 5
Main Findings	<p>Newcomers more likely to become victims, more so in unstable schools than in stable schools.</p> <p>Although stable classrooms do not necessarily show less change in victimization nominations than in unstable classrooms, victimization ties are more likely to be among students in the same-grade or same-classroom.</p>	Chapter 4	Chapter 5
Conclusions	<p>School and classroom stability and change have a minor impact on the formation of victim-bully relationships between children.</p>	Chapter 4	Chapter 5
Question(s)	<p>“To what extent do selection and influence processes explain bullying and victimization relations?”</p>	Chapter 4	Chapter 5
Method	<p>Longitudinal bivariate social network analysis using SIENA in R</p>	Chapter 4	Chapter 5
Main Findings	<p>Evidence of selection and influence among bullies: Friendships likely to be formed between children bullying the same victims, and children likely to start bullying the victims of their friends.</p> <p>No evidence of selection and influence processes among victims in childhood.</p>	Chapter 4	Chapter 5
Conclusions	<p>Evidence for group processes in bully-victim networks in childhood: Bullies select each other as friends, and bullies influence their friends.</p>	Chapter 4	Chapter 5
Question(s)	<p>“To what extent does defending of victims depend on the (dis)liking relationships between defenders and victims, and their relationships with other classmates as well as the influence of the amount of bullying in the classroom?”</p>	Chapter 4	Chapter 5
Method	<p>Cross-sectional multilevel Poisson regression analysis in R</p> <p>Cross-sectional bivariate social network analysis using ERGMs in XPNet</p>	Chapter 4	Chapter 5
Main Findings	<p>Students more likely by victims to defend more victims of bullying, more so in classrooms where bullying is high, whereas students disliked by victims tend to defend fewer victims regardless of the classroom degree of bullying.</p> <p>Children more likely to defend victims who they like (and who like them) than victims who they dislike (and who dislike them).</p> <p>Classroom degree of bullying had a negligible effect on the co-occurrence of defending and direct and indirect liking, and a modest strengthening effect on the lack of co-occurrence of defending and direct disliking.</p>	Chapter 4	Chapter 5
Conclusions	<p>No evidence that children defend fewer victims of bullying in a classroom context where degree of bullying is high. Defending is first and foremost driven by the direct friendly relationship between victim and defender, and to a lesser extent by the shared relationships with other classmates.</p>	Chapter 4	Chapter 5

Figure 6.1 Overview of the study questions and main findings and conclusions of the empirical chapters in this thesis.

previous research which shows that, besides a few socially isolated children, the highest rates of victimization are observed among students who have similar status positions, not necessarily between students with the highest status and the lowest status in the group (Farris & Felmlee, 2011; 2014). This implies that age and grade differences in schools and classrooms contribute relatively little to a power imbalance between students.

Interestingly, Chapter 2 found that the degree of victimization was similar in both single-grade classrooms and multigrade classrooms that are formed for administrative reasons, but lower in multigrade classrooms that are formed for pedagogical reasons. Although these findings were based on a few classrooms, they are in line with the pedagogical philosophy of schools to encourage prosocial relations among children by encouraging the provision of help across grades within the same classroom (Lillard & Else-Quest, 2006; Gray, 2011).

It should be pointed out that schools that have different grades within the same classroom as a consequence of grade/classroom mixing tend to be unstable in terms of student classroom composition over school years. Hence, an obvious next question is how this grade/classroom mixing affects children in terms of bullying and peer victimization, which is the focus of the research carried out in Chapter 3.

6.1.2 Classroom mixing and its consequences?

In the second study, Chapter 3, I investigated to what extent (stable) single-grade schools (with few classroom composition changes) or (unstable) multigrade schools (with many changes) lead to fewer changes in victim-bully relationships. Results of the longitudinal social network analyses (RSiena) showed that although stable schools do not necessarily show less change in bully nominations than in unstable schools, victim-bully relationships were more likely to form among students in the same grade and same classroom. Newcomers in the classroom were more likely to become victims, more so in unstable schools than in stable schools.

The findings of Chapter 3 suggest that school and classroom stability and change have a small impact on the formation of victim-bully relationships between children: the analyses provided no evidence that students who shared the same class before (referring to the number of shared classrooms) were more likely to be victimized in the stable schools with occasional classroom composition changes than in unstable schools with systematic changes. To some extent these findings are reassuring for schools that have to deal with changing conditions in their student population. Particularly in small cities or villages that undergo a decline in enrollment of students, an increase of uneven classroom sizes, and schools often consist of only a few school teachers (Veenman, 1995), schools are often forced to combine classrooms or grades.

However, although the findings from Chapter 3 suggest that classroom mixing has a relatively modest impact on the development of victimization relations, it may have consequences for the development of other interpersonal relations between students. Children may experience difficulties with maintaining friendships with their classmates when some of them move to a different classroom in the following school year. Previous research found that stability in the classroom composition positively affects the stability of friendship cliques (Neckerman, 1996). These findings suggest that classroom mixing may be detrimental for victims who experience difficulties with finding new friends and peers who are willing to defend them against their bullies. At the same time, classroom mixing also offers an opportunity for victims to make new friends. Previous studies have shown that having friends or defenders helps to protect victims against a vicious cycle of victimization and its negative experiences (Hodges et al., 1999; Sainio et al., 2011). A safe conclusion is that positive and negative relations do not operate in isolation, but are an integral part of the social context in which these relations unfold. To this end, the research carried out in the next study (Chapter 4) was designed to help understand how bullying relations and peer victimization in classrooms develop in the context of friendships with classmates.

6.1.3 Bullying as a group process in elementary education?

Although research suggests that bullying does not occur in isolation from other classmates, but takes place in the presence of several other members of the group (Salmivalli, 2010), most previous studies on bullying concentrated only on the victim-bully relationship (which was also the focus of the studies in Chapters 2 and 3). The participant roles approach suggest that classmates have (different) roles in bullying (Salmivalli et al., 1996; Salmivalli, 2010). Some children initiate the bullying, and others actively or passively join in. Bullies may influence their friends so that they too will start to bully the same victim. To test these ideas, in Chapter 4, I examined to what extent friendship selection and influence/ contagion processes affect the formation and development of victim-bully relationships using longitudinal social network analyses (RSiena). The findings provide evidence for friendship selection and influence processes in bully-victim networks in childhood: Friendships developed between children who bullied the same classmate (selection), and victims were bullied by their bully's friends (influence). By examining bullying relations together with friendships, two important features of bullying among school children are highlighted, namely its collective character (referring to the behavior of a group of individuals), and that it is based on social relationships in the group (Salmivalli et al., 1996; Lagerspetz et al., 1982). The findings suggest that bullies through friendships with classmates experience direct support for their bullying behavior. The findings indicate that in order to better understand the social nature of victim-bully relationships, they should be studied in combination with positive social relationships.

The degree of bullying is an indication of social norms in the classroom (Salmivalli, 2010; Sentse et al., 2007), as it can be viewed as what most others do in a given situation or social context (Deutsch & Gerard, 1955; Cialdini et al., 1990). Such norms might help to understand why classmates are less likely to intervene in bullying by defending fewer victims (Salmivalli, 2010; Salmivalli, Voeten, & Poskiparta, 2011), which is the focus of the final study in Chapter 5.

6.1.4 Bullying in a classroom context and defending victims?

In the fourth and final study, Chapter 5, I examined the extent to which victim-defending relationships depend on the (dis)liking relationships between defenders and victims, and their relationships with other classmates. I also examined the extent to which the amount of bullying in the classroom (defined as the bullying norm) affect these relations. The relations between defending, (dis)liking, and the bullying norm were examined using two analytical approaches: a multilevel individual (Poisson regression analysis) and a social network approach (ERGMs).

I examined defending relations in late childhood, among fifth-graders, because by then peer hierarchies related to bullying are established (Farmer et al., 2011b). Moreover, at this stage of childhood, students have a higher degree of self-efficacy making them more able to engage in defending than younger children (Meter & Card, 2015). Further, as children grow older they learn about diverse social strategies to solve situations without using aggression. This puts them in a stronger position to help others (victims) in need.

Multilevel Poisson regression analysis showed a positive relation between defending and liking nominations by victims, which was stronger in a classroom with a higher degree of bullying, with no additional effect of disliking. The social network analysis indicated that defending is first and foremost driven by the direct friendly relationship between victim and defender, and to a lesser extent by the shared relationships with other classmates, which is in line with preconceptions concerning defending (Meter & Card, 2015; Thornberg et al., 2012). It should be noted that the direct reasons for why children refrain from defending were unexamined.

The findings from both approaches also show that the direct effect of liking is much stronger than the direct effect of disliking. Apart from a strengthening effect of bullying norms on the relation between liking and defending in the individual approach, no other effect of bullying norms was found. It should be noted, however, that although descriptive norms (referring to the average bullying behavior) are widely used in bullying research, there are other ways to examine classroom norms. Norm salience – referring to the association between social status and behavior or attitudes, might be relevant (Dijkstra & Gest, 2015;

Laninga-Wijnen et al., 2017; Rambaran, Dijkstra, & Stark, 2013). Of further relevance are injunctive norms – referring to expectations about social rewards attached to behavior or attitudes (Henry et al., 2000), which might operate differently for boys and girls (Busching & Krahé, 2015). The investigation of classroom norms would benefit from further refinements in that field. Future researchers are encouraged to take on a wider perspective of classroom norms.

6.2 Insights and directions for future research

Doing social network research has gained popularity in (social) science in recent years (Robins, 2015), because of the fact that 1) more researchers acknowledge that behaviors they previously considered as individual attributes of students are actually relational; and, 2) advancements in social network methods have made it possible to investigate the dependencies in relational patterns (network structure).

Collectively, the four empirical studies in this thesis have revealed insights regarding the importance of (1) the network structure, sex, and grade (age), (2) interdependence of networks, (3) classroom composition changes, (4) and the analytic approach in understanding bully-victim and victim-defender relationships across different classroom contexts. I will discuss some directions for future research, focusing on other school and classroom factors, positive peer relations, early childhood and (early) adolescent networks, and individual factors.

6.2.1 Network structure, sex, and grade (age)

The first two studies revealed that networks of peer victimization are similar in single-grade and multigrade classrooms (Chapter 2) and schools (Chapter 3). The peer victimization networks in these two different school and classroom types have the same network structure. These findings suggest that although single-grade and multigrade schools and classrooms differ in how they were formed, peer victimization in these different contexts showed the same network structure. The structure of the sparse victimization networks in both classroom and school types can be characterized by a few simple network structures. Complex structural network patterns involving indirect connections are hardly present in these sparse (low density) networks. This is common for bully-victim networks (Huitsing et al., 2012; Huitsing & Veenstra, 2012), reflecting the power imbalance between the bully and victim. This information might be beneficial to researchers who consider removing multigrade classrooms from their sample of networks for a “meaningful comparison” between classrooms.

Next to the importance of the network structure, students' sex and their grade (age) proved to be important in understanding networks of bully-victimization and of defending. Although differences between the investigated school and classroom contexts were relatively minor, as shown in study one (Chapter 2), study two (Chapter 3), and study three (Chapter 4), boys were more involved in bullying than girls and targeted both girls and other boys. This finding underscores that bullying situations are being dominated mostly by boys. These gendered processes in bullying may have spillover effects on positive peer relationships of children. Concerning friendship and defending processes, friendship and defending occurred mostly between children of the same sex, as shown in study three (Chapter 4) and four (Chapter 5). Researchers should be aware of same-sex and cross-sex patterns in bully-victim networks. Also students' grade (age) in a school or classroom context is highly relevant in understanding bully-victim networks. In fact, same-grade victimization appeared to be the strongest predictor of victim-bully ties (next to network structure), as shown in study one (Chapter 2) and study two (Chapter 3). Particularly in stable (single-grade) schools same-grade victimization is very high, which might be due to maintaining separate classrooms (grades) across the school years. In multigrade classrooms and schools, victimization occurs mostly between same-grade students.

6.2.2 Interdependence of networks

The final two studies (in Chapter 4 and Chapter 5) revealed that bully-victim networks and victim-defending networks cannot be seen separately (as univariate networks) but are better understood through analyzing them together with other network types. By applying a multivariate network approach, researchers are able to better understand the occurrence and development of more complex network structures that result from the interdependence of networks. In the third study (Chapter 4), it was shown, through triangulation of positive (friendship) and negative (bullying) networks, that victim-bully relationships were related to friendships groups; in the fourth study (Chapter 5) it was shown that victim-defending relationships were related to (dis)liking relationships at the dyadic and triadic level. This information might be beneficial to researchers who study relational behavior.

6.2.3 Classroom composition changes

For social network scientists low stability in school and classroom composition often forms a major concern, as this complicates the estimation procedure, particularly in the case of sparse networks such as bully-victim networks. Methodologically, the second study (Chapter 3) shows how to deal with schools with many changes in classroom composition. In this study, I demonstrated how bully-victim networks with low composition stability at the classroom level can be examined in a meaningful way at the school level. There, I incorporated effects in the network model that captured stability and change in classroom

composition, enabling examination of their effects on victim-bully relationships. This information might be beneficial to researchers who deal with many composition changes at the classroom level.

6.2.4 An individual or social network approach

Chapter 5 provides a direct comparison of two different approaches for examining relational behavior. Most (bullying) researchers tend to aggregate peer nomination data into individual-level measures instead of treating them as they were measured namely as network relations. The fourth and final study (in Chapter 5) aimed to find out the differences between these two approaches. It is clear that the findings from both approaches are similar and indicate that defending behavior depends most importantly on sympathy between defender and victim. Nonetheless, the social network approach is superior in examining defending and its relation with (dis)liking and bullying norms. It is statistically the preferred option because it does not violate the assumption of independence of observations within classrooms. Moreover, it allows researchers to test more subtle or intricate hypotheses (with the challenge to formulate such hypotheses with sufficient precision).

6.2.5 Some directions for future research

Other school and classroom factors

It is important to realize that the school and classroom factors investigated in this thesis are not exhaustive. There are many other school and classroom factors that were not investigated (for an overview, see: Juvonen, 2018; Juvonen & Schacter, 2018), such as homogeneity of the student body, an unequal representation and status across groups, low tolerance of norm violations, and teaching methods promoting independence or negative interdependence (referring to competition) among students. These factors have been linked to an increased risk of negative attitudes, interactions, and peer relationships, and might thus also be relevant for the occurrence and development of bullying, victimization, and defending relations (Juvonen, 2018; Juvonen & Schacter, 2018). The many of school and classroom contextual factors pose a major challenge for researchers to find out which of them are important and under which circumstances they matter the most. I will discuss inclusive classroom norms as a promising avenue for future research.

Schools with more ethnic diversity who deal with bullying situations that are related to ethnic, cultural or racial background of the student may foster cross-ethnic friendships between students through inclusive norms for cross-ethnic relations (Tropp, O'Brien, & Migacheva, 2014; Monks, Ortega-Ruiz, & Rodríguez-Hidalgo, 2008). This, in turn, may positively affect their sense of vulnerability (feeling safer and less lonely) and ethnic

prejudice (Graham, Munniksmma, & Juvonen, 2014; Juvonen, Kogachi, & Graham, 2018), factors that could decrease bullying in schools. A recent study also shows that schools engaged in practices to promote inclusiveness and equity as a school program foster positive relationships between students (Rivas-Drake et al., 2019). Other recent research suggests that a positive classroom climate, for instance through student support, school as a community (connectedness), and cooperative learning, reduces the prevalence of bullying and victimization (Cornell et al., 2015; Fink et al., 2018; van Ryzin & Roseth, 2018). Although these findings are encouraging, more research on different classroom factors and their interplay is needed to help better understand the formation and development of peer relationships and social behaviors in childhood.

Focus on positive peer relations

Although Chapters four and five examined respectively friendship relationships and defending relationships, the focus in this thesis was on negative relationships (victim-bully relationships) in the classroom. Scholars recently started to investigate prosocial or helping relationships in the classroom (van Rijsewijk, 2018), which are more general types of positive relationships and may lead to the development of new friendships and possibly defending as well. Help networks that involve solving practical and emotional problems of students (e.g., with their homework or with their depressive symptoms) show some similarities with friendship networks, but only partly overlap and have distinct characteristics. For instance, help networks are less dense (have fewer ties) than friendship networks, consist of fewer mutual ties (where both students help each other), but are also mostly among same-sex classmates. Help networks also differ between classrooms in terms of structure: networks can be densely knit, such that every classmate helps another one, or they can be segmented such that helping occurs only incidentally in small separated groups in the classroom. Like defended victims, general help benefits specific others, such as low achievers and those who are rejected. An avenue for future research is to examine prosocial relations in childhood in schools with a clear philosophical background, such as Montessori or Jenaplan schools, as they stimulate prosocial behavior among children by encouraging the provision of help across the grades within the classroom, and to compare the findings from these schools with (stable) single-grade schools and unstable (unstable) administrative multigrade schools as they do not have such an explicit goal.

Networks in early childhood

Most social network research, not excluding the four studies in this thesis, focused on middle to late childhood or (early) adolescence (for a review: Veenstra et al., 2013). Not much is known about the networks of early elementary school children, mainly because it is difficult and time-consuming to capture their networks. Intensive longitudinal observational data

are needed to study interactions between young children. Nonetheless, children's peer relations develop rapidly when they first enter formal education, during this early period in childhood education, peer relations increasingly shape social behavior (Hawley, 1999).

Research in early childhood points in the direction that social networks of young children are structured in similar ways to that observed among older children (Huitsing & Monks, 2018; Kim & Park, 2018; Kiuru et al., 2017; Schaefer, Light, Fabes, Hanish, & Martin, 2010; Watling-Neal, Durbin, Gornik, & Lo, 2017). In the beginning of the school year, children become mutual friends in preschool classes and maintain mutual friends at the end of the school year. Some of these young children are more popular than others in their preschool classroom and receive more friendship nominations from others. Moreover, children tend to become friends of friends, indicating that they form friendship groups (Schaefer et al., 2010). Concerning aggression and defending processes, it was found that aggressive preschool children often are aggressive to other aggressive children, suggesting that young aggressors are less strategic than older children in targeting vulnerable children (Huitsing & Monks, 2018). Only one study investigated longitudinally the role of children's social networks on social behavior, and showed that peers influence children's levels of aggression and social status (Kim & Park, 2018). Apart from this study, no other research has investigated longitudinally the role of network processes in social behaviors in early childhood.

Networks in (early) adolescence

Research on peer relationships in (early) adolescence has increased exponentially over the past two decades, providing much insight into how relationships among adolescents develop over time (for a review: Brechwald & Prinstein, 2011). Most attention has been directed to the emergence and development of friendship relationships (for a review: Veenstra et al., 2013). However, friendships only represent a selective aspect of the adolescent peer ecology and adolescents can also be tied through negative relationships. A few studies investigated negative networks within a school context, most prominently dislike networks (e.g., Berger & Dijkstra, 2013; Pál et al., 2015; Rambaran et al., 2015). Bullying research could benefit from examining bullying, victimization, and defending networks in adolescence because bullying processes are likely to be different in adolescence than in childhood. The number of bullies increases or remains stable in early adolescence, whereas the number of victims decreases during this time (Nansel et al., 2001; Pellegrini & Long, 2002). This increase in bullying during early adolescence is followed by a decrease during mid- and late adolescence (Kretschmer et al., 2017), which suggests that victims are especially in a weak position in early adolescence when bullying peaks. Investigation of bullying networks in adolescence may be more complicated than in childhood because adolescents have more diverse social interactions with peers outside of the own school context. Besides school,

adolescent life for a large part takes place online, in their neighborhood, and at the sport club.

Individual-level factors

Inclusion of individual-level factors in this thesis was limited to sex and grade (age). It is likely that other individual factors are important as well, providing additional or even alternative explanations of victim-bully relationships and victim-defender relationships. For instance, in Chapter 2, physical appearance or physical strength might help to explain differences in children's social positions rather than their age (or grade). Peer perceived popularity is another important indicator of power (imbalance) to control or harm others (Salmivalli, 2010). Personality traits involving arrogance, exploitativeness, and impulsivity may also determine social dominance in bullying (Volk, Provenzano, Farrell, Dane, & Schulman, 2019). In Chapter 3, taking into account dispositional or behavioral characteristics of newcomers (e.g., being aggressive, withdrawn, previously victimized, having low acceptance or being in an isolated position) might have resulted in a more nuanced understanding of the effects of newcomers in terms of victimization in school. In Chapter 4, it is possible that friendship selection and influence processes among bullies are stronger when bullies are more popular; friendship selection and influence processes might have occurred when both victims are highly rejected. Finally, in Chapter 5, information about the characteristics of the victims and defenders might provide additional information about why defending relationships between victims and defenders are formed. By including other individual-level factors it would have been possible to understand under which circumstances bullying relations and defending relations are more likely to occur.

6.3 Concluding remarks

The classroom context is important for understanding children's interpersonal relationships. This thesis is a first step toward exploring the appropriateness of a social network approach in understanding the extent to which bullying, victimization, and defending relations depend on classroom factors. The findings from the four studies in this thesis suggest that the investigated classroom factors have a small impact on the occurrence and development of victim-bully relations and victim-defender relations. The findings indicate that bullying relations are not affected much by classroom composition (structure and stability). The findings highlight instead that bullying situations are the result of complex processes: victim-bully relations and victim-defender relations are mostly driven by the direct friendly relationship between children at school, underscoring the importance of incorporating peer factors to better understand bullying situations within the classroom

context. The findings from this thesis show that many children in elementary education are involved in bullying situations, either as bully or as victim. While the findings showed that bullies receive direct support for their bullying behavior, fortunately so do the victims: many of them received direct support from a defender. Nonetheless, bullying behavior and peer victimization is a persistent problem in childhood and continues to be a problem in adolescence. Understanding why bullying occurs and persists in some classrooms more than others should therefore be an ongoing effort of researchers.

