

WITH A LITTLE HELP FROM MY TEACHER

The role of teacher-student interactions in peer victimization at school

Isabel M. ten Bokkel

2021

Doctoral thesis offered
to obtain the degree of
Doctor in Psychology (PhD)

Supervisor: Prof. dr. Hilde Colpin
Co-supervisor: Prof. dr. Karine Verschueren

FACULTY OF PSYCHOLOGY AND EDUCATIONAL SCIENCES
SCHOOL PSYCHOLOGY AND DEVELOPMENT IN CONTEXT

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Cover design	*Josje van Stekelenburg | www.josjest.com*
Printing	*Ridderprint | www.ridderprint.nl*

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It is easier to build strong children

than to repair broken men.

-Frederick Douglass

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SUMMARY

Bullying and peer victimization are persistent problems in schools. Victimized students are at risk of experiencing many negative consequences in the short and long run. Although teachers are considered important interaction partners at school and key adults in the prevention and reduction of peer victimization, their role in victimization processes has only recently been investigated. The main goal of this dissertation was to examine the role of teacher-student interactions in peer victimization. Specifically, affective teacher-student relationships and teachers' responses towards bullying incidents may be crucial to tackle peer victimization and stimulate positive peer relationships.

Accordingly, the first aim of this dissertation was to clarify the role of affective teacher-student relationships in peer victimization. This aim was addressed by performing a multilevel meta-analysis (*N* = 185,881), investigating the link between teacher-student relationships on the one hand, and bullying perpetration and peer victimization on the other (Study 1). Results showed that higher-quality teacher-student relationships were related to lower levels of bullying perpetration and peer victimization. In a subsample of longitudinal associations, higher-quality teacher-student relationships were also related to less subsequent peer victimization. Several variables (e.g., teacher-student relationship indicator) affected the strength of the overall associations. In addition, data from a three-wave longitudinal study among 930 Flemish students (grades 4-6) were used to investigate transactional links between two dimensions of the teacher-student relationship (i.e., closeness and conflict) and peer victimization (Study 2). Results showed that closeness and conflict were uniquely associated with self-reported peer victimization within time, and change in variables was correlated at most time points. Moreover, more closeness consistently predicted less conflict across the school year, and vice versa. Yet, no evidence was found for cross-lagged associations between teacher-student relationships and peer victimization.

The second aim of this dissertation was to investigate the importance of teachers' responses towards bullying to peer victimization processes. To this end, longitudinal data from 874 victimized Dutch students (grades 4-6) and their teachers were used to examine the prevalence of victimized students' disclosure to the teacher, and the extent to which teachers' responses towards bullying (i.e., active vs. passive) can promote victimized students' disclosure (Study 3). Results demonstrated that three in four victimized students told someone and 58.3% of the disclosers told the teacher about their victimization. However, teachers' responses towards bullying did not predict victimized students' likelihood to disclose to the teacher at a later time point.

Taken together, the findings of this dissertation add to existing support for the link between teacher-student interactions and peer victimization. Directions for future research are discussed, such as differentiating between subtypes of bullying. Hopefully, this dissertation can inspire educational practice in prevention and intervention efforts against peer victimization, and ultimately help children to have a bright future ahead of them.

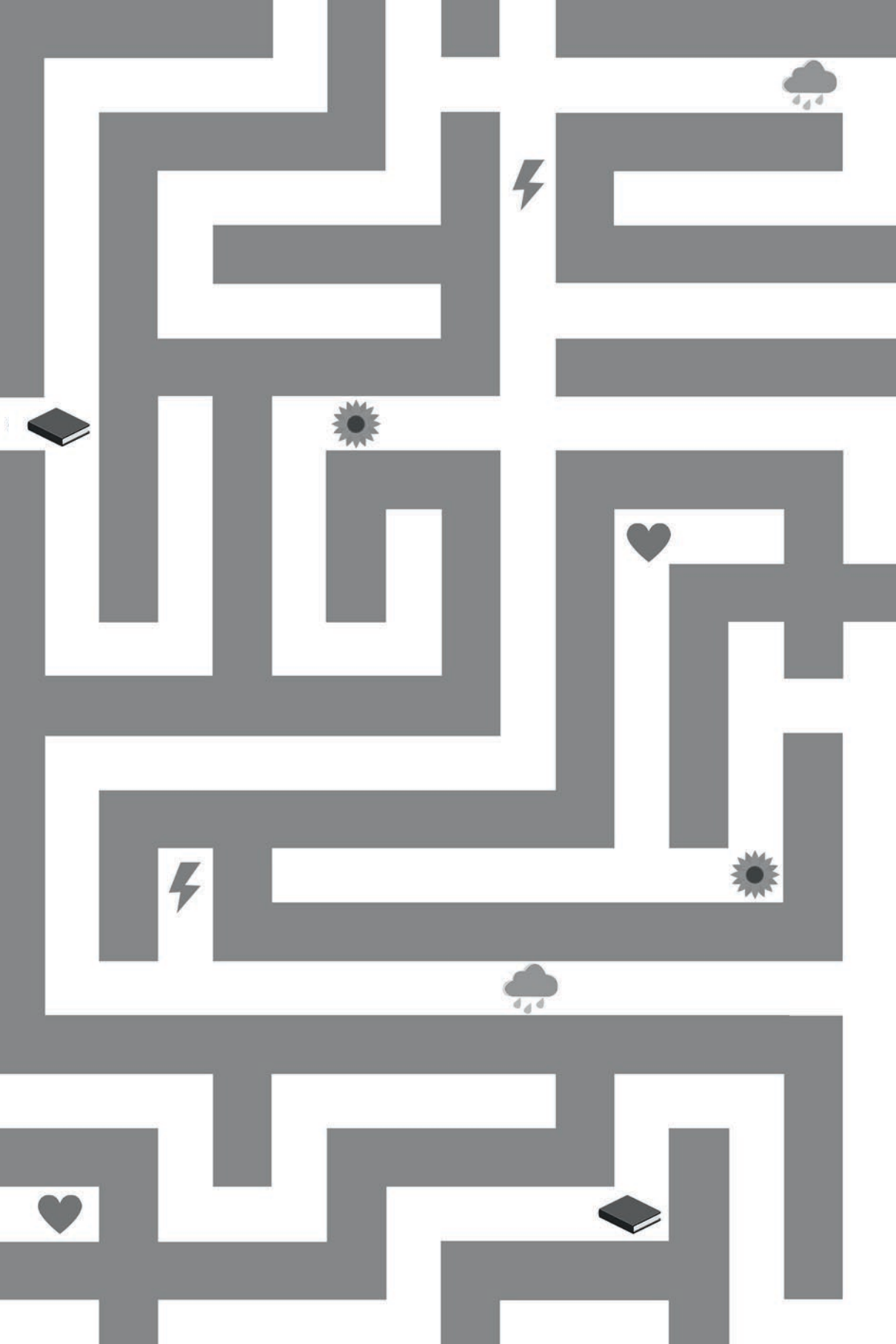
SAMENVATTING

Pesten en victimisatie door leeftijdsgenoten zijn hardnekkige problemen op scholen. Slachtoffers lopen risico op meerdere negatieve gevolgen op de korte en lange termijn. Hoewel leerkrachten worden gezien als belangrijke interactiepartners op school en sleutelfiguren bij het voorkomen en verminderen van pesten, wordt hun rol bij victimisatieprocessen pas recent bestudeerd. Het hoofddoel van dit proefschrift was om de rol van leerkracht-leeringinteracties bij victimisatie door leeftijdsgenoten te onderzoeken. De affectieve leerkracht-leerlingrelatie en de reacties van leerkrachten op pesten kunnen belangrijk zijn om victimisatie aan te pakken en positieve relaties tussen leeftijdsgenoten te stimuleren.

Het eerste doel van dit proefschrift was om de rol van affectieve leerkracht-leerlingrelaties bij victimisatie na te gaan. Dit gebeurde met een multilevel meta-analyse (*N* = 185,881) die het verband onderzocht tussen de kwaliteit van leerkracht-leerlingrelaties enerzijds, en pesten en victimisatie door leeftijdsgenoten anderzijds (Studie 1). Resultaten lieten zien dat een hogere relatiekwaliteit samenhing met minder pesten en victimisatie. In een subset van longitudinale associaties hing een hogere relatiekwaliteit ook samen met minder victimisatie op een later moment. Meerdere variabelen (bijv. indicator van de leerkracht-leerlingrelatie) beïnvloedden de sterkte van de verbanden. Daarnaast werden gegevens van een longitudinale studie met drie meetmomenten bij 930 Vlaamse leerlingen (4e-6e leerjaar) gebruikt om transactionele verbanden na te gaan tussen twee dimensies van de leerkracht-leerlingrelatie (nabijheid en conflict) en victimisatie (Studie 2). Resultaten toonden aan dat nabijheid en conflict uniek samenhingen met zelf-gerapporteerde victimisatie en dat veranderingen in de variabelen over tijd correleerden op de meeste meetmomenten. Ook voorspelde meer nabijheid minder conflict doorheen het schooljaar en andersom. Echter, transactionele verbanden tussen leerkracht-leerlingrelaties en victimisatie werden niet gevonden.

Het tweede doel van dit proefschrift was om het belang van leerkrachtreacties op pesten voor victimisatieprocessen te onderzoeken. Gegevens van 874 gepeste Nederlandse leerlingen (4e-6e leerjaar) en hun leerkrachten werden gebruikt om na te gaan hoe vaak gepeste leerlingen aan hun leerkracht vertellen over de victimisatie, alsook de mate waarin de reacties van leerkrachten op pesten (actief vs. passief) kunnen bevorderen dat leerlingen erover praten met hun leerkracht (Studie 3). Resultaten toonden aan dat drie op de vier gepeste leerlingen met iemand over de victimisatie praatte en dat 58.3% van hen het aan de leerkracht vertelde. De reacties van leerkrachten op pesten voorspelden niet of gepeste leerlingen al dan niet de leerkracht inlichtten op een later moment.

Samengevat dragen de bevindingen van dit proefschrift bij aan bestaande ondersteuning voor het verband tussen leerkracht-leerlinginteracties en victimisatie door leeftijdgenoten. Pistes voor toekomstig onderzoek worden besproken, zoals het maken van een onderscheid tussen subtypes van pesten. Hopelijk kan dit proefschrift de onderwijspraktijk inspireren bij het voorkomen en verminderen van victimisatie en uiteindelijk eraan bijdragen dat kinderen een mooie toekomst tegemoet gaan.



CHAPTER 1

GENERAL INTRODUCTION

Bullying is a frequent and persistent problem in schools (Inchley et al., 2020). Victimized students are at risk of experiencing devastating short- and long-term consequences in multiple domains (Arsenault, 2018; Moore et al., 2017). Teachers are important interaction partners at school, making them key adults in the prevention and reduction of peer victimization (Yoon et al., 2020). However, many questions about the role of teachers in peer victimization remain unanswered (Brendgen & Troop-Gordon, 2015). Therefore, the current dissertation focuses on the importance of teacher-student interactions for tackling peer victimization in schools. So far, teacher-student interactions have proven to affect student outcomes in several other domains (e.g., Lei et al., 2016; Roorda et al., 2017). We argue that the affective teacher-student relationship quality, as well as teachers' responses towards bullying incidents, may be crucial to address peer victimization and foster positive peer relationships. As these topics have received only recent research attention, studies are mainly cross-sectional and evidence is non-conclusive. To further improve our insight into the role of teacher-student interactions in peer victimization, this dissertation includes meta-analytic and longitudinal studies. Results can add to theory building and provide several implications for educational practice.

This introductory chapter summarizes existing evidence regarding the association between teacher-student interactions and peer victimization, and highlights several gaps in the literature that this dissertation aims to address. First, we provide a brief background on bullying, peer victimization, and the position of teachers as key interaction partners to address peer victimization in schools. Next, we highlight two theoretical frameworks often used to study the role of teachers in peer victimization: developmental systems models and attachment theory. Subsequently, we zoom in on literature investigating affective teacher-student relationships and teachers' responses towards bullying in relation to peer victimization, before providing an overview of the objectives and empirical chapters enclosed in the current dissertation.

Bullying and peer victimization

Bullying is most often defined as a subtype of aggression, characterized by repetition, an intention to harm, and a power imbalance between perpetrator and victim (Olweus, 1993). Despite prevention and intervention efforts, bullying is still prevalent worldwide. In a recent study covering 45 countries and over 220,000 students aged 11-15, 10% reported having been

bullied at school at least two or three times in the past few months (Inchley et al., 2020). Peer victimization can be defined as being the target of an aggressive action by one or more peers (Vitoroulis & Vaillancourt, 2015). Accordingly, bullying victimization is a subtype of peer victimization. In this dissertation, we will use the term peer victimization predominantly to refer to bullying victimization.

Scientific publications on bullying and peer victimization have exploded over the past two decades, from 689 hits in Web of Science until 2000 up to 17,140 hits until June 2021. This way, our understanding of (antecedents and consequences of) these phenomena has largely improved. For example, it is now known that bullying can occur in various ways. Physical bullying (e.g., kicking) and verbal bullying (e.g., name calling) can be considered direct, while relational bullying can be both direct (e.g., telling someone they cannot join a game) and indirect (e.g., rumor spreading) in nature (Monks & Smith, 2006; Stassen Berger, 2007). A relatively new type of bullying behavior is cyberbullying (e.g., posting compromising photos of someone online), in which electronic technology is used. The same criteria of traditional, offline bullying (i.e., repetition, intention, power imbalance) largely apply to cyberbullying as well (Olweus & Limber, 2018; Smith et al., 2012). Furthermore, prior research demonstrated that bullying is a group process which often involves multiple peers (Salmivalli, 2010). Next to perpetrators and victims, peers can have several other participant roles during a bullying episode (e.g., assistant, defender, outsider). This way, peers can either contribute to the maintenance or resolution of peer victimization (Salmivalli, 2010).

Regardless of the way in which bullying takes place and who is involved, a large body of research demonstrates that victimized students can experience many negative consequences that may persist into adulthood (Arsenault, 2018). For instance, a large-scale meta-analysis found strong causal associations between bullying victimization and subsequent negative outcomes including depression, anxiety, non-suicidal self-injury, and suicide attempts (Moore et al., 2017). Notably, children and adolescents were almost three times more likely to attempt suicide if they were bullied. Additionally, a review of longitudinal research showed connections between peer victimization and subsequent poor adjustment in social, emotional, behavioral, and academic domains (McDougall & Vaillancourt, 2015). Given these alarming outcomes, it is essential to better understand peer victimization and effectively intervene as early as possible. Although more and more insight in the victimization side of bullying is gathered, many questions remain unanswered (Brendgen & Troop-Gordon, 2015).

The role of teachers in peer victimization

The focus of recent research has extended from studying characteristics of bullying and victimized students to the investigation of the larger social context in which these students are embedded (Hong & Espelage, 2012; Thomas et al., 2018). Studying elements of the school setting, an environment in which bullying often takes place, can provide more insight into the significance of this setting for addressing peer victimization. Peers and teachers are key interaction partners at school, but bullying research has mostly focused on peer group processes (Salmivalli, 2010). Although this line of research is highly valuable, teachers also interact with students on a daily basis and are being held responsible for the instructional, affective, and behavioral classroom climate (Brendgen & Troop-Gordon, 2015). Teachers' role resembles that of peers' role as bystanders, but teachers are expected to intervene during bullying episodes and have more authority to change a situation than peers (Yoon et al., 2020). Farmer et al. (2011) even referred to teachers' influential yet understudied role in classroom dynamics as their "invisible hand" in shaping peer relationships.

Why and how would teachers affect peer victimization? To answer this question, we argue that it is valuable to focus on interactions between teachers and their students. In the current dissertation, 'teacher-student interactions' will be used as an overarching term referring to two aspects of these interactions. The first aspect concerns the affective teacher-student relationship, defined as the emotional quality of interactions between teachers and students (Pianta et al., 2003). In the remainder of this dissertation, the term 'teacher-student relationships' will consistently reflect the affective component of the relationship (as opposed to, for example, instructional support). The second aspect consists of teachers' response strategies towards bullying incidents. In the next section, the importance of teacher-student interactions for addressing peer victimization will be discussed using two prominent theoretical frameworks: developmental systems models and attachment theory.

Explanatory theories

Developmental systems models (DSMs) are a sound starting point to examine how teacher-student interactions could play a role in peer victimization. The basic premise of such theoretical models is that people are embedded in dynamic, multilevel systems that influence

them at different levels of proximity. Perhaps the most well-known DSM is the bio-ecological model of human development (Bronfenbrenner & Morris, 2006). This model states that human development can be influenced by reciprocal interactions between a human and other persons, when those interactions take place on a fairly regular basis over an extended period of time. When occurring in the immediate environment of the human, these influences are labelled as proximal (Bronfenbrenner & Morris, 2006). Persons in this proximal environment, or microsystem, include parents, close friends, peers, and teachers. Several researchers have attempted to grasp the theoretical underpinnings of bullying and peer victimization from an ecological perspective (Ettekal et al., 2015; Hong & Espelage, 2012; Thomas et al., 2018). In line with the goal of the current dissertation, we will focus on the role of teacher-student interactions in shaping bullying and peer victimization. An example of a conceptual model shedding light on the role of teachers in peer victimization at the classroom level from a DSM perspective, is the peer ecology model (Gest & Rodkin, 2011). This model proposes that teachers are able to affect bullying and peer victimization in two ways. The first way is through general interactions with students in the class group, including teachers' affective or emotional support towards students (Hamre et al., 2013; Pianta et al., 2003). Positive interactions between teachers and the class group may set the tone for the development of a supportive classroom environment (Hamre et al., 2013). Specifically, teachers can affect social dynamics in the classroom by providing rules and modeling expected social behavior towards peers (Farmer et al., 2011; Gest & Rodkin, 2011). The second way is by means of peer network-oriented practices (i.e., conscious choices and strategies aimed at impacting peer relationships), including teachers' responses towards bullying incidents (Gest & Rodkin, 2011). In the current dissertation, both general and network-oriented teaching practices will be investigated in relation to peer victimization processes.

Besides interactions with the class group, dyadic teacher-student interactions (i.e., between the teacher and a specific student) may also impact students' social-emotional adjustment (McGrath & Van Bergen, 2015; Sabol & Pianta, 2012). Insights from *attachment theory* (Bowlby, 1982) can help to clarify the importance of teachers for tackling peer victimization at the dyadic level. The original theory proposed that children look for proximity and connection with individuals who are available, approachable, and considered to be more successful at dealing with life challenges than themselves (Bowlby, 1982). Although this theory focuses on parent-child attachment, an attachment perspective on teacher-student

interactions posits that teachers can also serve as temporary or ad hoc attachment figures to whom students can turn when they experience situations that threaten their emotional security (Verschueren & Koomen, 2012). Although teachers are not exclusive attachment figures and care for multiple students simultaneously, they can still promote or undermine students' feelings of comfort and security through their interactions. By being a secure base from which students can confidently explore their environment and a safe haven to which students can turn for help and support in times of distress, teachers can foster students' positive development (Verschueren & Koomen, 2012). On the other hand, students who fail to use their teacher as a secure base and/or safe haven are posed at risk for developmental problems (e.g., Pianta et al., 2003).

Teacher-student interactions

Teacher-student relationships

Both DSMs and attachment literature highlight the potential importance of dyadic and classroom-level affective teacher-student relationships for students' development (e.g., Gest & Rodkin, 2011; Hamre et al., 2013; Verschueren & Koomen, 2012). The affective teacher-student relationship comprises individual features of the teacher and child, their representational models of the relationship, ways in which they exchange information, and external factors influencing the relationship (Pianta et al., 2003). The current dissertation focuses on teacher-student relationships as the key unit of analysis. Teacher-student relationships have shown to shape student outcomes in several domains. For example, a meta-analysis covering students from preschool to high school demonstrated that positive teacher-student relationships were associated with more student engagement, whereas negative teacher-student relationships were related to lower levels of engagement (Roorda et al., 2017). Moreover, Lei et al. (2016) demonstrated that indicators of positive teacher-student relationships (e.g., support, closeness) were related to less externalizing behavior problems, such as aggression and conduct problems. Conversely, indicators of negative teacher-student relationships (e.g., conflict, anger) were related to more externalizing behavior problems (Lei et al., 2016). Furthermore, positive teacher-student relationships have shown to prevent internalizing behavior problems. Spilt et al. (2019) showed that higher teacher involvement (e.g., affection) consistently predicted less subsequent depressive symptoms across the school year among

elementary school students. Moreover, using a five-wave longitudinal design, Pössel et al. (2013) showed that more emotional support by teachers predicted lower levels of depression among adolescents with average and high numbers of stressful life events in grades 8 to 12.

An emerging body of research has also investigated the role of teacher-student relationships in peer victimization. Following the aforementioned theoretical assumptions (e.g., Verschueren & Koomen, 2012), high-quality dyadic teacher-student relationships are likely to be associated with less peer victimization. Specifically, students with close, warm relationships with their teacher may be more likely to internalize positive views of themselves in relationships, and have better self-regulatory and conflict resolution skills (e.g., Pianta et al., 2003; Verschueren & Koomen, 2012). This helps students to become more self-reliant in exploring their social environment, and to establish positive relationships with peers as well (e.g., Sabol & Pianta, 2012). These students might also disclose peer problems to their teacher more easily, preventing emergence or continuation of peer victimization (Bjereld, 2018). Similarly, teachers are more likely to be aware of problems and act more promptly when situations involve students with whom they have close relationships (Reavis et al., 2010). Teachers' relationship with individual students could also function as an affective filter for peers. When peers perceived that teachers displayed supportive behavior towards more students, peers also reported more liking of each other (Hendrickx et al., 2016), potentially decreasing chances of peer victimization. Empirical research mostly supports these notions. In prekindergarten, teacher-child closeness predicted a decreased severity of peer victimization over time (Runions & Shaw, 2013). Moreover, studies in elementary schools showed that positive teacher-student relationships were related to less peer victimization concurrently and across the school year (e.g., Demol, Leflot, et al., 2020; Serdiouk et al., 2016). However, others found no evidence for this negative longitudinal link in elementary school (Elledge et al., 2016; Troop-Gordon & Kopp, 2011).

Regarding the classroom-level, teachers who display emotionally responsive interactions with the class group may scaffold a classroom climate in which students are expected to interact in a prosocial way with each other too (Gest & Rodkin, 2011; Hamre et al., 2013), making them more accepting towards peers and less likely to victimize each other. Although the majority of existing literature focuses on dyadic teacher-student relationships, positive classroom-level teacher-student relationships have been linked with lower rates of peer victimization concurrently in elementary school (Bae et al., 2019; Thornberg et al., 2018)

and over time in early adolescence (Behrhorst et al., 2020). Yet, Pabian and Vandebosch (2016) showed that higher teacher bonding to students was related to an increased risk of (traditional) peer victimization among early adolescents. Thus, evidence regarding the negative link between teacher-student relationships and peer victimization is promising yet non-conclusive.

Conversely, low-quality dyadic teacher-student relationships are likely to be associated with more peer victimization, as they prevent students from using their teachers as a secure base and/or safe haven (Verschueren & Koomen, 2012). That is, these students may not develop the skills necessary to successfully regulate their behavior and emotions (e.g., Pianta et al., 2003). Moreover, when students experience more negative interactions with their teacher, they are less likely to trust their teacher as a person to confide in when they experience peer problems. For example, victimized students may believe their teacher will make the situation worse or expect they will not be taken seriously (Bjereld, 2018). Likewise, teachers will probably be less aware of these students' feelings and needs, and less inclined to detect and act against peer victimization (Reavis et al., 2010). Additionally, observed negative teacher behavior towards individual students has shown to predict peers' subsequent perceptions of teacher disliking of these students, which forecasted a higher peer disliking status of these students later on (Hendrickx, Mainhard, Oudman, et al., 2017). In turn, more peer rejection has shown to be longitudinally related to more peer victimization (Demol, Leflot, et al., 2020). Concurrently, several studies have found that negative teacher-student relationships were related to more peer victimization (e.g., Marengo et al., 2018; Shin & Kim, 2008). Moreover, Runions and Shaw (2013) showed that prekindergarten teacher–student conflict predicted the likelihood of concurrent and first grade peer victimization. In contrast, Troop-Gordon and Kopp (2011) found that conflict did not forecast peer victimization in elementary school. Notably, teacher-student dependency (i.e., students' age-inappropriate overreliance on their teacher) predicted more peer victimization across the school year (Troop-Gordon & Kopp, 2011).

At the classroom level, negative teacher-student relationships are argued to set the tone for a disruptive classroom atmosphere in which students behave inappropriately towards each other (Gest & Rodkin, 2011; Hamre et al., 2013). Yet, we found no studies examining the association between negative classroom-level teacher-student relationships and peer victimization. Taken together, although several studies point towards the importance of teacher-student relationships for peer victimization, findings are non-conclusive and more research is needed.

Teacher responses towards bullying

Given their central and influential role in shaping peer dynamics (Farmer et al., 2011; Gest & Rodkin, 2011), we propose that teachers can also contribute to increased or decreased levels of peer victimization via their responses towards bullying incidents. Recent research has shown that teachers find it difficult to recognize bullying, estimate its seriousness, and respond to bullying successfully (van Verseveld et al., 2021). Teachers often respond differently depending on the context (Burger et al., 2015). Sometimes, teachers do not intervene at all. For example, teachers may be unaware of students being victimized in the classroom (Oldenburg et al., 2016) or do not sympathize with the victimized student (Yoon & Kerber, 2003). Moreover, teachers may not consider bullying problematic, put little effort in reducing bullying, or do not feel confident to successfully address bullying (Bauman & Del Rio, 2006; Veenstra et al., 2014). This is troublesome, as teachers could implicitly tolerate bullying behavior when they do not take a stance against it (Wachs et al., 2019). Campaert et al. (2017) demonstrated that non-intervention by teachers was related to increased bullying perpetration, mediated by a higher moral disengagement in students. In turn, victimized students may feel increasingly isolated and they can face a cumulation of negative consequences if their situation remains unchanged (Arsenault, 2018). Hence, it is essential to counter teacher misperceptions and train them to appropriately respond during bullying incidents.

Before being able to advise teachers about possibly effective response strategies, it is crucial to know *how* these responses may affect peer victimization processes. One way to investigate whether teacher responses successfully create a safe classroom environment, is by focusing on whether those responses can encourage victimized students to seek help from their teacher. Disclosure of victimization to a teacher can be very hard for victimized students and involves a trade-off between potential costs and benefits. Victimized students may choose to remain silent when they feel ashamed, when they believe they will not be taken seriously, or when they are afraid the situation might get worse (Bjereld, 2018; Blomqvist et al., 2020; Cortes & Kochenderfer-Ladd, 2014). These hesitations are reasonable, as T. Shaw et al. (2019) found that victimized students who spoke with an adult at school had an increased likelihood of continued victimization one year later. Moreover, research showed that peers can be unwilling or unable to defend a victimized student, depending on their own self-efficacy and

social status in the peer group (Pöyhönen et al., 2010). This raises the question whether and how certain teacher responses can enhance victimized students' willingness to disclose.

When teachers respond to a bullying incident, they can use a wide variety of strategies. For example, they can discipline the perpetrator or use strategies that support or comfort the victimized student (Bauman et al., 2008; Burger et al., 2015; Campaert et al., 2017; Rigby, 2014; Wachs et al., 2019). Strategies in which the larger peer group is involved are also regularly used, such as group discussion (Campaert et al., 2017; Wachs et al., 2019). Contacting parents or other adults to resolve bullying is also a possibility (Bauman et al., 2008; Burger et al., 2015; Troop-Gordon & Ladd, 2015). In some cases, a combination of multiple response strategies is used (e.g., Bayram Özdemir et al., 2021; Burger et al., 2015). So far, findings regarding the effectiveness of certain response strategies are non-conclusive. For example, Wachs et al. (2019) demonstrated that supportive-cooperative strategies (e.g., including all students in class) were the most successful in tackling bullying, whereas Campaert et al. (2017) found no association between group discussion and bullying. Furthermore, although correcting the perpetrator was perceived as desirable by students in some studies (e.g., Demol et al., 2021; Demol, Verschueren, et al., 2020), punitive strategies should be viewed as a last resort according to others (Wachs et al., 2019). In the current dissertation, we adopt the conceptualization of Troop-Gordon and Quenette (2010) by distinguishing between more active (i.e., involving direct efforts to stop bullying) versus more passive (i.e., involving little action to cope with bullying) teacher responses. This conceptualization is relatively exhaustive in describing possible intervention strategies and is often used in bullying literature, allowing for comparison of our study findings against existing studies on this topic. Furthermore, many studies regarding teacher response strategies focus on responses towards hypothetical bullying scenarios (e.g., Bauman & Del Rio, 2006; Demol, Verschueren, et al., 2020). The current dissertation examines teacher responses towards actual bullying incidents at school.

In line with attachment theory (cf. supra, Bowlby, 1982), teachers' responses towards bullying might signal to victimized students whether they are a safe haven to go to for help and support in times of distress. Specifically, teachers' responses towards bullying and their effectiveness are observed by all students in the classroom. When teachers display active responses towards bullying incidents (e.g., punishing the bully), they may convey a message to victimized students that they will address bullying and restore security once they are aware of the bullying incident. Similarly, these responses make clear to peers that bullying is not

tolerated (Troop-Gordon & Quenette, 2010). Indeed, prior research using hypothetical scenarios showed that students' perception of active teacher responses during bullying incidents (e.g., separating involved students) was related to an increased willingness to report bullying to their teachers (Cortes & Kochenderfer-Ladd, 2014). Conversely, by failing to show disapproval or take proper actions against bullying (e.g., by telling the student to ignore the perpetrators), teachers may implicitly convey a message to victimized students that bullying is acceptable and they should not expect the teacher's help in resolving it (Troop-Gordon & Quenette, 2010). In turn, such strategies might not create a safe environment for victimized students to speak up. Troop-Gordon and Quenette (2010) showed that perceived passive teacher responses increased the positive association between peer victimization and internalizing problems. Recently, passive teacher responses were found to augment the positive association between peer victimization and behavioral problems (Troop-Gordon et al., 2020). However, to date, the impact of teachers' self-reported responses towards bullying on victimized students' actual disclosure has not been examined.

Dissertation overview

Objectives

In conclusion, the role of teachers in peer victimization is understudied. Therefore, in line with developmental systems models and an attachment perspective on teacher-student interactions (e.g., Gest & Rodkin, 2011; Hamre et al., 2013; Verschueren & Koomen, 2012), we will examine two aspects of teacher-student interactions (i.e., affective teacher-student relationships and teacher responses towards bullying) to provide more insight into the significance of these interactions for tackling peer victimization. First, findings of this dissertation will help to connect the research domains of peer victimization and teacher-student interactions and can add to theory-building in both areas. Second, prevention and intervention of peer victimization is more effective when factors in the broader environment of the victimized students are targeted (Smith, 2017). Therefore, our findings may help to understand whether and how teachers' interactions with students can make a difference. Specifically, this dissertation may inform both current teachers and teachers-in-training about which relationships to establish with students and how to support victimized students to minimize peer victimization and its potentially detrimental consequences. Since bullying is likely

to remain prevalent in schools and warrant teachers' attention in the upcoming years, providing this information timely is crucial. Third, our findings may be highly relevant for improvement and testing of anti-bullying interventions. It can inspire intervention developers about ways to use teacher-student interactions as a resource to effectively address bullying (Pianta et al., 2003). Although several anti-bullying interventions exist and teachers often implement these programs, recent research indicates that teachers still experience difficulties to handle bullying situations (van Verseveld et al., 2021). Fourth, this dissertation may inspire policy makers to emphasize the importance of embedding social-emotional learning in the curriculum. That is, prior research has demonstrated that positive teacher-student relationships are able to improve students' engagement and achievement (Roorda et al., 2017). A dual focus, integrating academic and social-emotional learning goals, could help to improve students' academic achievement while also fostering their social skills and reduce peer victimization (Kochenderfer-Ladd & Ladd, 2016).

Following from this introductory chapter, the present dissertation has two objectives. The first objective is to further unravel the role of affective teacher-student relationships in peer victimization (**Part I**). This objective is addressed by means of a meta-analysis, investigating the link between teacher-student relationships on the one hand, and bullying perpetration and peer victimization on the other (*Chapter 2*). Moreover, data from a longitudinal Flemish study in a sample of 930 students (grades 4-6) are used to investigate reciprocal associations between dyadic teacher-student relationships (i.e., closeness and conflict) and peer victimization across one school year (*Chapter 3*). The second objective is to investigate the importance of teacher responses towards bullying for peer victimization (**Part II**). To this end, longitudinal data from 874 victimized Dutch students (grades 4-6) and their teachers are used to examine the prevalence of victimized students' disclosure to teachers, and the extent to which teachers' responses towards bullying can promote victimized students' disclosure later on (*Chapter 4*). In the next section, we will explain the empirical chapters and study samples in more detail and conclude by providing a schematic overview of the current dissertation (Table 1.1).

Empirical chapters and study samples

In *Chapter 2*, we focus on the first objective of the dissertation by examining the link between teacher-student relationships and peer victimization in a meta-analytic study. This study (Study 1) had three main goals. The first goal was to provide an overall association

between teacher-student relationships and peer victimization based on existing empirical literature in this field. Similarly, the second goal was to investigate the overall association between teacher-student relationships and bullying perpetration. Results could provide unique insights into whether the impact of teacher-student relationships is similar for bullying perpetration and victimization, possibly indicating two ways to reduce bullying in schools. Based on our theoretical frameworks and prior research, we expected that a higher-quality teacher-student relationship (i.e., a more positive or a less negative relationship) would be related to less bullying perpetration and less peer victimization (see Chapter 2 for more information). The third goal was to investigate whether these overall associations depended on multiple characteristics of the sample and study methods. Regarding sample moderators, we expected the association between teacher-student relationships and bullying perpetration and peer victimization to be stronger for students from low socio-economic and ethnic minority backgrounds, and students in elementary as compared to high school. We formulated no distinct expectations about whether associations would be stronger for boys or for girls. Regarding methodological moderators, we expected the overall association between teacher-student relationships and bullying perpetration and peer victimization to be stronger for negative indicators of teacher-student relationships (e.g., conflict) as compared to positive indicators (e.g., closeness), and in associations using the same informant (e.g., twice self-report) as compared to different informants (e.g., once self- and once peer-report). Additionally, the moderating effects of dyadic versus classroom-level measures of teacher-student relationships and study design (i.e., cross-sectional vs. longitudinal) were tested in an exploratory way. After a thorough search, selection, and coding procedure, the final data set consisted of 64 written reports describing 212 effect sizes within 65 studies (*k*) that were published between 1999 and 2020. In total, 185,881 students from preschool to high school were included in the meta-analysis. Three-level meta-analytic models were used to investigate the overall link between teacher-student relationship quality and bullying perpetration (k = 25, N = 97,627, M_{age} = 13.00, SD_{age} = 2.69), and between teacher-student relationship quality and peer victimization (k = 57, N = 151,653, M_{age} = 10.96, SD_{age} = 3.25). Additionally, the longitudinal association between teacher-student relationship quality and subsequent peer victimization was assessed in a subset of 51 associations within 10 studies. The temporal sequence of variables was tested while controlling for the cross-sectional (T1) association between teacher-student relationships and peer victimization, and for the stability of peer victimization. Lastly,

moderation analyses were performed to investigate whether overall associations depended on characteristics of the sample (i.e., gender, ethnicity, socio-economic status, educational level) and the study methodology (i.e., teacher-student relationship indicator, measurement level of teacher-student relationship, informant, study design).

In *Chapter 3*, we examined bidirectional associations between two teacher-student relationship dimensions (i.e., closeness and conflict) and peer victimization at three time points within one school year (Study 2). Their understudied bidirectional paths were tested to adequately grasp the significance of teacher-student relationships for peer victimization from a DSM perspective (Bronfenbrenner & Morris, 2006). We expected close teacher-student relationships to predict lower levels of peer victimization, and more peer victimization to predict less close teacher-student relationships over time. Conversely, we expected conflictful teacher-student relationships to predict more peer victimization across the school year and vice versa. Lastly, we expected negative prospective associations from closeness to conflict and the other way around (see Chapter 3 for more information). We investigated these hypotheses for self- and peer-reported victimization separately, to prevent a single-source bias. Investigating these processes for closeness and conflict simultaneously can help to understand which dimension(s) of the teacher-student relationship should be targeted to reduce peer victimization. Data were collected from Flemish elementary school students in fourth to sixth grade, as part of the *Teachers4Victims* project. This large-scale project examined the role of teachers in bullying and peer victimization processes. Data were obtained at the beginning (November), middle (February), and end (April) of school year 2018-2019. Study 2 included 930 students from 55 classrooms in 12 elementary schools who participated during at least two waves of data collection. Participants were 8 to 13 years old (M = 10.55, SD = 0.90, 53.9% girls). We assessed teacher-student relationships (i.e. closeness and conflict) using a self-report questionnaire, and peer victimization using self-reported and peer-nominated measures. Cross-lagged modeling was used to analyze the data. Two separate models were tested: one for self-reported and one for peer-reported peer victimization.

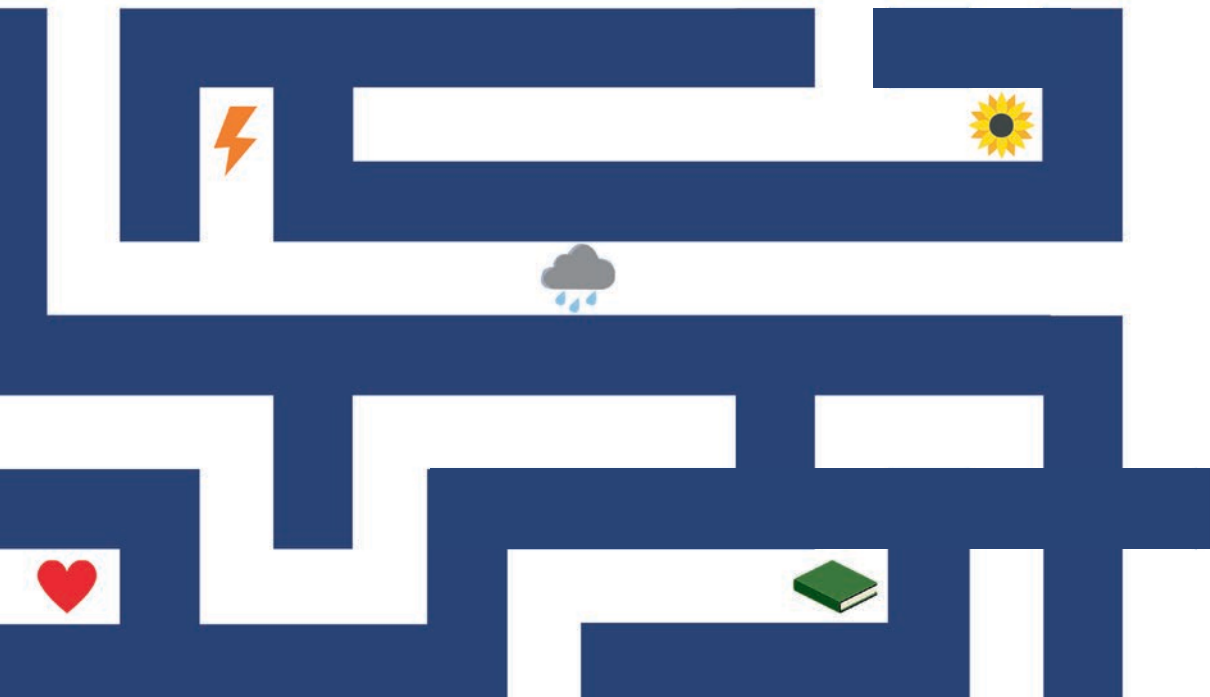
Chapter 4 describes a study investigating the role of teacher responses towards bullying in peer victimization processes (Study 3). Specifically, this study assessed the role teachers can play to promote disclosure by victimized students. The study had two goals. First, we examined the prevalence of disclosure to teachers in an exploratory manner. Second, we investigated the extent to which teachers' responses (i.e., active vs. passive) towards bullying longitudinally

predicted victimized students' disclosure to their teacher. More active teacher responses (i.e., reprimand aggressors, separate students, contact parents) were expected to promote victimized students' feelings of safety, and thereby increase their likelihood to disclose. Conversely, more passive teacher responses (i.e., advocate avoidance, assertion, or independent coping) were expected to signal an unsafe environment for disclosure, and subsequently predict a decreased likelihood for victimized students to disclose (see Chapter 4 for more information). We used data from *What Works Against Bullying,* a longitudinal, nationwide study regarding the effectiveness of anti-bullying programs in the Netherlands (Orobio de Castro et al., 2018). Data were collected at two time points: once at the beginning (September/October, T1) and once at the end (June/July, T2) of school year 2016-2017. Participants in Study 3 were a subsample of 874 students (M_{age} = 10.23, SD_{age} = 1.13, 46.3% girls) who reported that they were bullied at least two or three times in the months prior to T2. The 874 victimized students were located in 243 classrooms in 70 schools in the Netherlands. Peer victimization and disclosure to teachers were measured with student self-report questionnaires, and teachers' response strategies (i.e., active vs. passive) with teacher-reports. We used multilevel binary logistic regression with T2 disclosure to the teacher as the outcome variable to answer our second research question. Specifically, analyses were performed among all victimized students at T2 and among a subsample of these students who were also victimized at T1 (i.e., persistently victimized students, n = 316).

Table 1.1

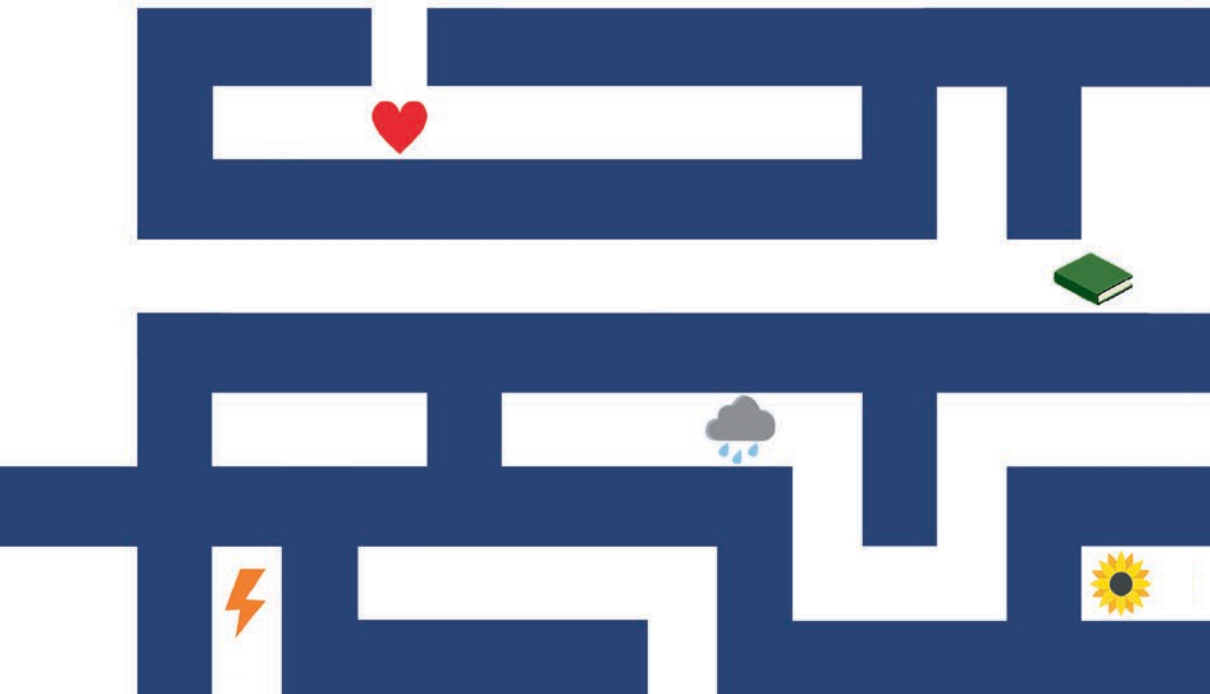
Overview of the Empirical Chapters and Studies

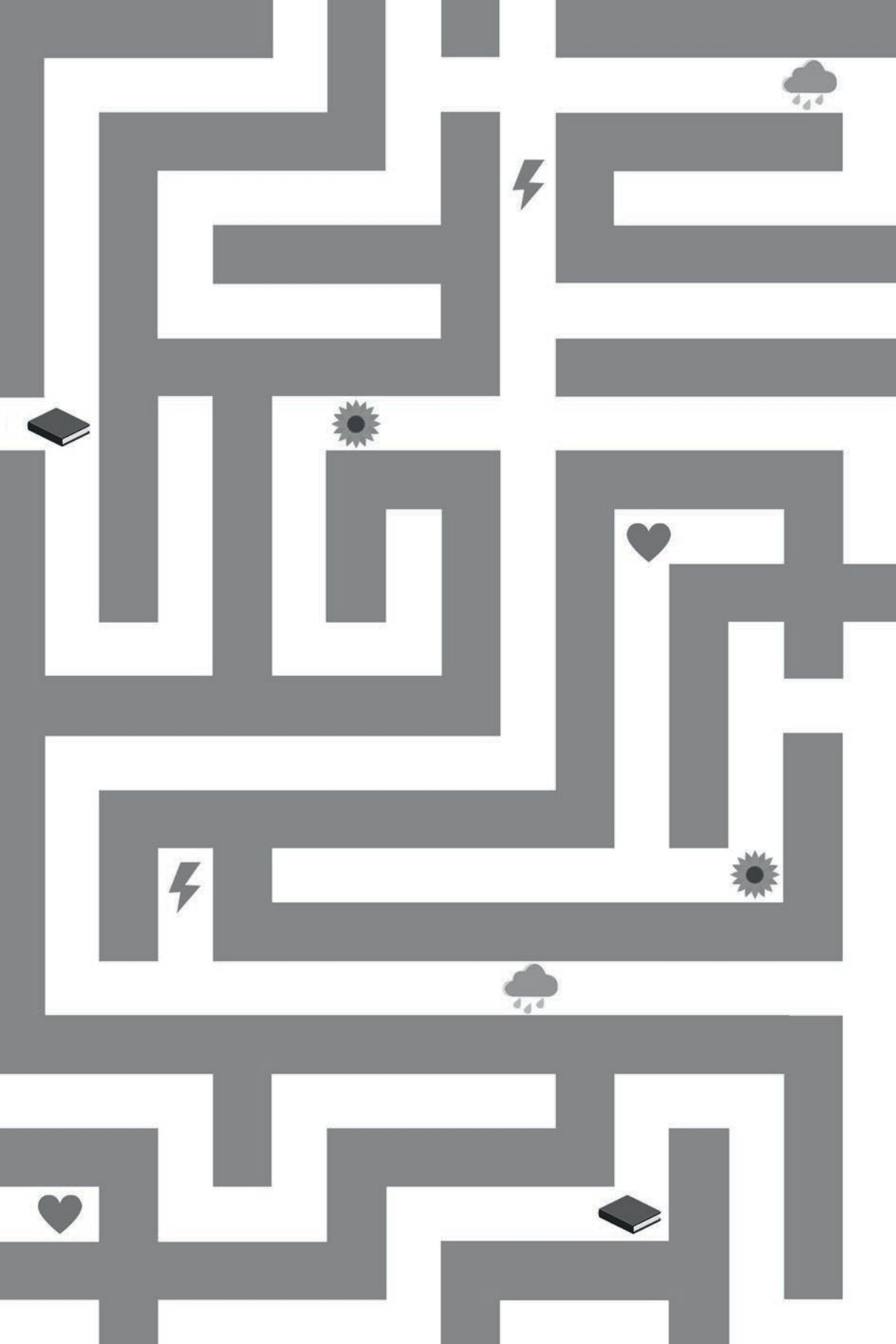
Chapter	Objective	Level	Study Design	Sample	Grades	*N*	Statistical Analyses
Part I							
Chapter 2	Teacher-student relationships	Dyadic and classroom	Cross-sectional and longitudinal	-	0-12	185,881	Three-level meta-analytic models and cross-lagged modeling
Chapter 3	Teacher-student relationships	Dyadic	Longitudinal	Teachers4Victims	4-6	930	Cross-lagged modeling
Part II							
Chapter 4	Teacher responses towards bullying	-	Longitudinal	What Works Against Bullying	4-6	874	Multilevel binary logistic regression



PART I

TEACHER-STUDENT RELATIONSHIPS





CHAPTER 2

THE ROLE OF AFFECTIVE TEACHER–STUDENT RELATIONSHIPS IN BULLYING AND PEER VICTIMIZATION: A MULTILEVEL META–ANALYSIS

This chapter is based on:

ten Bokkel, I. M., Roorda, D. L., Maes, M., Verschueren, K., & Colpin, H. (under review). The role of affective teacher-student relationships in bullying and peer victimization: A multilevel meta-analysis

ABSTRACT

The current multilevel meta-analysis aimed to synthesize evidence about the association between affective teacher-student relationships and two persistent problems in schools: bullying perpetration and peer victimization. In total, 65 primary studies (*k*) with 185,881 students from preschool to high school were included. Separate analyses were conducted for bullying perpetration (*k* = 25, *N* = 97,627) and peer victimization (*k* = 57, *N* = 151,653). Results showed significant small to medium negative overall correlations between teacher-student relationship quality and bullying perpetration, and between teacher-student relationship quality and peer victimization. In a longitudinal subsample, teacher-student relationship quality was also related to less subsequent peer victimization. Moderation analyses demonstrated stronger links between teacher-student relationship quality and bullying perpetration for ethnic minority students, and when the same informant reported about both variables. Associations between teacher-student relationship quality and peer victimization were stronger for negative teacher-student relationship indicators (e.g., conflict), and when the same informant was used.

Introduction

Bullying and peer victimization are persistent problems in schools. In a recent large-scale study, 10% of students aged 11-15 reported that they had been bullied at school in the past months and 7% indicated to have bullied others (Inchley et al., 2020). Bullying is most often defined as repeated and targeted aggression towards peers who experience difficulties to defend themselves (Olweus, 1993). Peer victimization can be conceptualized as being the target of an aggressive action by one or more peers (Vitoroulis & Vaillancourt, 2015). Although bullying and peer victimization can occur in various ways (e.g., physical, relational), research shows that victimized students may experience many negative consequences that can persist into adulthood, such as anxiety, depression, and academic difficulties (Arsenault, 2018; Schoeler et al., 2018). Current theoretical frameworks emphasize the influence of students' environment on bullying and peer victimization (Hong & Espelage, 2012; Thomas et al., 2018). Since teachers interact with students on a daily basis and are responsible for the instructional and emotional classroom climate (Brendgen & Troop-Gordon, 2015), focusing on their interactions with students may provide important insights in bullying and peer victimization processes. Recently, teachers have been proposed as key adults in the prevention and reduction of peer victimization (Yoon et al., 2020).

In line with this idea, several studies have focused on the role of affective teacher-student relationships in bullying dynamics. Affective teacher-student relationships refer to the emotional bond between teachers and students (Pianta et al., 2003). High-quality teacher-student relationships may set the tone for a supportive classroom atmosphere (Hamre et al., 2013), make individual students more likely to successfully regulate their emotions (Sabol & Pianta, 2012; Verschueren & Koomen, 2012), more prone to tell their teacher about peer problems, and the teacher more likely to intervene in bullying episodes (Reavis et al., 2010). Moreover, previous meta-analyses have shown associations between teacher-student relationships and students' externalizing behavior problems (Lei et al., 2016), executive functions (Vandenbroucke et al., 2018), academic emotions (Lei et al., 2018), engagement, and achievement (Roorda et al., 2017). However, a systematic overview of studies investigating the role of teacher-student relationships in bullying perpetration and peer victimization is still lacking.

Conducting a meta-analysis about this research topic would be valuable for several reasons. First, results of existing empirical studies on the association between teacher-student relationships and bullying or peer victimization are non-conclusive. More specifically, some studies found significant negative longitudinal links between the constructs (e.g., Behrhorst et al., 2020; Leadbeater et al., 2015), whereas others did not find evidence for such associations (e.g., Elledge et al., 2016; Košir et al., 2020). A meta-analysis allows for more robust conclusions about the cross-sectional and longitudinal link between teacher-student relationships and bullying and peer victimization. Second, a meta-analysis makes it possible to investigate whether characteristics of the sample (e.g., gender, socio-economic status) and study methodology (e.g., informant, dyadic vs. classroom-level teacher-student relationships) play a role in the strength of the overall associations. Third, examining the association between teacher-student relationships and two sides of the bullying phenomenon (i.e., perpetration and victimization) can potentially highlight two ways to reduce bullying in schools. In sum, this meta-analysis tried to fill several gaps in the literature by providing a systematic overview of existing studies about the association between teacher-student relationships, on the one hand, and bullying perpetration and peer victimization, on the other.

Theoretical frameworks

Teacher-student relationships are usually measured at the dyadic level (i.e., relationships between teachers and individual students) or at the classroom-level (i.e., relationships between teachers and the entire class group). Attachment theory offers an explanation for how dyadic teacher-student relationships may forecast student development (Bowlby, 1982). According to this theory, children seek proximity to and contact with available and responsive individuals, especially if their feelings of emotional security are threatened (Bowlby, 1982). Although the original focus of attachment theory was on parent-child relationships, it also highlights the potential importance of relationships with teachers. Teachers are not exclusive attachment figures and have to care for multiple students simultaneously, but they can still serve as temporary or ad hoc attachment figures (Verschueren & Koomen, 2012). More specifically, teachers may help to promote or undermine students' feelings of security and comfort in the classroom (Pianta, 1999; Verschueren & Koomen, 2012).

When students feel more safe and secure in their relationship with their teacher, they are more likely to confidently explore their social environment, regulate their emotions, resolve conflicts, internalize a higher sense of self-worth, and thus form similar positive relationships with peers (e.g., Sabol & Pianta, 2012; Verschueren & Koomen, 2012). Moreover, these students may be more likely to confide in their teacher when they experience problems with peers (Reavis et al., 2010). Likewise, teachers may be more sensitive to the emotions and needs of students with whom they have warm relationships, detect peer victimization more quickly, and intervene sooner (Reavis et al., 2010). In turn, students with high-quality teacher-student relationships are less likely to be involved in bullying and peer victimization. Studies on teacher-student relationships, inspired by attachment theory (Bowlby, 1982), usually measure positive dyadic teacher-student relationships with the indicator closeness. Closeness is the degree of open communication and warm interactions, in which children use their teacher as a safe haven and secure base (Pianta & Steinberg, 1992; Verschueren & Koomen, 2012).

In contrast, when students are emotionally dysregulated in the classroom due to more negative teacher-student relationships, this may elicit power-assertive and coercive behavior towards peers to compensate for feelings of insecurity and rejection (e.g., Weyns et al., 2019). Alternatively, students with low-quality teacher-student relationships may become more easily victimized by peers, as they are less likely to trust their teacher as a person to confide in when they experience peer problems (Bjereld, 2018). Consequently, when victimized students remain silent, teachers will be less aware of their situation and less likely to intervene in bullying situations (Reavis et al., 2010). Teacher-student conflict is often used as an indicator of negative relationship quality, and can be conceptualized as disharmony, insecurity, and negativity in the relationship (Pianta & Steinberg, 1992; Verschueren & Koomen, 2012).

Studies focusing on teacher-student relationships at group level can be understood from the Teaching Through Interactions framework (Hamre et al., 2013). This framework proposes that classroom-level teacher-student interactions are the most important indicators of the classroom climate. These interactions are considered as central drivers of students' learning and development, both in academic and social domains. The framework distinguishes between three domains of teacher-student interactions in the classroom: emotional support, classroom organization, and instructional support (Hamre et al., 2013). This meta-analysis focuses on emotional support (i.e., activities and efforts to promote students' social and emotional functioning), since this domain is linked with attachment literature and emphasizes

the importance of affective relationships between teachers and the class group (Hamre et al., 2013). In the context of emotionally supportive teacher-student relationships, a safe classroom atmosphere is created in which students feel comfortable to develop and express themselves, and interact with peers in a positive and appropriate way (Hamre et al., 2013). Similarly, Farmer et al. (2011) theorized that teachers' positive relationship with students may create a supportive emotional classroom context, which may set behavioral expectations for the development of supportive interactions with peers as well. In turn, teachers' emotional support leaves less room and need for negative peer interactions, including bullying and peer victimization (Gest & Rodkin, 2011).

Teacher-student relationships linked with bullying and peer victimization

Based on the aforementioned theoretical frameworks (e.g., Bowlby, 1982; Hamre et al., 2013; Pianta & Steinberg, 1992), the current meta-analysis focuses on teacher-student relationships at dyadic and classroom level. With regard to measuring teacher-student relationships, researchers often distinguish between positive (e.g., closeness, care, emotional support) and negative (e.g., conflict, dissatisfaction, unfair treatment) indicators. Some studies have investigated solely positive indicators of teacher-student relationships in relation to bullying and peer victimization (e.g., Flaspohler et al., 2009; Hong et al., 2020), whereas others focused on negative indicators (e.g., Diaz-Aguado Jalon & Arias, 2013; He et al., 2019), or included both positive and negative indicators of teacher-student relationships (e.g., Espelage et al., 2015; Runions & Shaw, 2013). The importance of both indicators for bullying and peer victimization might differ. That is, Vaish et al. (2008) argued that infants and children, like adults, have a negativity bias in their information processing. Specifically, they "attend more to, are more influenced by, and use to a greater degree negative rather than positive facets of their environment" (Vaish et al., 2008, p. 383). Accordingly, a meta-analysis demonstrated that negative teacher-student relationship indicators were more strongly linked to students' externalizing behavior problems than positive indicators (Lei et al., 2016). Therefore, this discrepancy between positive and negative indicators might also apply to bullying and peer victimization.

Several empirical studies across different age groups have investigated the association between positive teacher-student relationships and bullying and peer victimization. For instance, a cross-sectional study including students from fourth to eleventh grade

demonstrated that more positive teacher-student relationships at classroom level were related to less bullying perpetration and victimization (Bae et al., 2019). Among adolescents, more teacher care (combining items from dyadic and classroom level) was linked to lower levels of bullying (Hong et al., 2020). Longitudinally, Runions and Shaw (2013) found that more dyadic teacher-child closeness in prekindergarten buffered against more severe peer victimization over time. Positive dyadic teacher-student relationships have also shown to predict less peer victimization over time in elementary school (Serdiouk et al., 2016). In contrast, other studies in elementary school found that high-quality dyadic teacher-student relationships did not protect against later peer victimization (Elledge et al., 2016; Troop-Gordon & Kopp, 2011). Thus, although several cross-sectional and longitudinal studies indicate that high-quality teacher-student relationships are related to less bullying perpetration and peer victimization, evidence is not conclusive.

Regarding the association between negative teacher-student relationships and bullying and peer victimization, cross-sectional studies in elementary and high school showed that negative dyadic teacher-student relationships were positively related to bullying (e.g., Espelage et al., 2015) and peer victimization (e.g., Marengo et al., 2019). However, Garner et al. (2014) demonstrated that dyadic teacher-child conflict was not significantly associated with physical and relational victimization. Furthermore, Runions and Shaw (2013) showed that dyadic teacher–child conflict in prekindergarten was predictive of the likelihood of concurrent and first grade victimization. All in all, these mixed findings raise the question of how robust the link between negative teacher-student relationships and bullying and peer victimization is. Therefore, a meta-analytic approach is required to identify the cross-sectional and longitudinal association between teacher-student relationships and bullying and peer victimization with more certainty.

Moderating variables

In addition, several variables may affect the strength of the associations and create difficulties to draw general conclusions about this research topic. Prior meta-analyses showed that teacher-student relationships are more important for specific groups of students, and that associations with student outcomes may depend on methodological factors. As for student characteristics, the variables gender, ethnicity, socio-economic status (SES), and educational level may make a difference (e.g., Roorda et al., 2011; Vandenbroucke et al., 2018). With regard

to study methods, the indicator of teacher-student relationship quality (positive vs. negative), measurement level of teacher-student relationship (dyadic vs. classroom), informant, and study design are investigated as potential moderators of the overall associations (e.g., Lei et al., 2016; Roorda et al., 2011).

Gender. With respect to the question whether boys or girls benefit more from high-quality teacher-student relationships, different hypotheses exist (e.g., Ewing & Taylor, 2009; Roorda et al., 2011). According to the academic risk perspective (Hamre & Pianta, 2001), vulnerable children will be more influenced by experiences in their school context because they have more to gain or to lose than others. Therefore, it can be assumed that the association between teacher-student relationships and bullying and peer victimization will be stronger for boys than for girls, as they are at higher risk for academic and behavior problems (Hamre & Pianta, 2001). Alternatively, the gender role socialization perspective (Ewing & Taylor, 2009) assumes that girls are more oriented towards connection and intimacy in their social relationships than boys. Therefore, the impact of social relationships will most likely be stronger for girls' than for boys' school adjustment (Ewing & Taylor, 2009). Previous meta-analyses regarding different student outcomes suggest that both pathways are possible. For example, Lei et al. (2016) found that negative correlations between positive indicators of teacher-student relationships and students' externalizing problem behavior were stronger among girls than boys. Moreover, Roorda et al. (2011) showed that associations between teacher-student relationships and engagement were stronger in samples with more boys, but association between positive indicators of teacher-student relationships and achievement were stronger in samples with more girls. So far, research about the role of gender in the link between teacher-student relationships and bullying and peer victimization is limited and non-conclusive.

At-risk status. Furthermore, based on the academic risk perspective (cf. supra, Hamre & Pianta, 2001), teacher-student relationships might be more important for students at-risk for negative outcomes (i.e., students from a low SES or ethnic minority background). As mentioned above, at-risk students are argued to benefit more than others from a positive teacher-student relationship and experience more problems from a negative teacher-student relationship in the pathway towards (mal)adjustment. Stronger associations between teacher-student relationships and engagement and achievement have been found in samples with more students with a low SES (Roorda et al., 2011). Within the context of bullying and peer victimization, scarce research indicates that students from a low SES background bully their

peers more often and are victimized slightly more often than students from high SES backgrounds (Strohmeier et al., 2011; Wolke et al., 2001). Moreover, Wolke et al. (2001) reported that ethnic minority students were more likely to become victimized. Thus, further examination of this moderator is warranted.

Educational level. In addition, teacher-student relationships may have a stronger impact on bullying and peer victimization depending on students' educational level (i.e., elementary school or high school). First, students in high school are older than students in elementary school. Research has shown that, when students grow older, their relationships with peers and teachers become increasingly independent social contexts (e.g., Engels et al., 2016). Second, students in high school usually have different teachers for each subject. They see their teachers less often than students in elementary school and, hence, students might form fewer attachment relationships with their high school teachers (Bergin & Bergin, 2009). As a result, the impact of teacher-student relationships on high school students' social functioning will most likely be lower. Nevertheless, teachers may remain important for adolescents' development (e.g., Bergin & Bergin, 2009; Roorda et al., 2011). Therefore, it is relevant to investigate whether teacher-student relationships have a stronger impact on bullying and peer victimization in elementary as compared to high school.

Indicator and measurement level of teacher-student relationship. Regarding the indicator(s) used to measure teacher-student relationships (i.e., positive vs. negative), people may have a negativity bias in their information processing which makes them more susceptible to negative interactions than positive ones (cf. supra, Vaish et al., 2008). Therefore, and based on previous research (Lei et al., 2016), associations between teacher-student relationships and bullying and peer victimization are likely to be stronger when negative indicators of teacher-student relationships are investigated as compared to positive indicators. Moreover, the level on which teacher-student relationships are measured varies between studies (e.g., Hamre et al., 2013; Verschueren & Koomen, 2012). It is likely that variability exists in teachers' relationships with individual students within the same classroom. Indeed, teacher-student relationship quality at the classroom level has only been weakly associated with teacher-student relationship quality with individual students (e.g., Weyns et al., 2019). This implies that, although the overall teacher-student relationship quality in a class may be positive, relationships with individual students within this class may be negative. To date, evidence about the relative contribution of dyadic and classroom-level teacher-student relationships to

students' development is limited and mixed (e.g., Vandenbroucke et al., 2018; Weyns et al., 2019), making it critical to investigate their moderating role in the association between teacher-student relationships and bullying and peer victimization.

Informant. Furthermore, links between teacher-student relationships and bullying and peer victimization may depend on whether the same informant has been used to measure both constructs as opposed to different informants. Namely, effect sizes between teacher-student relationships and engagement and achievement were found to be larger in studies that use the same informant as compared to different informants (e.g., Roorda et al., 2011), indicating a potential 'single-source bias'. Hence, we expected the link between teacher-student relationships and bullying and peer victimization to be stronger when the same informant reported about teacher-student relationships and bullying and peer victimization (e.g., twice self-report) than when different informants were used (e.g., once self- and once peer-report).

Study design. Lastly, the design of the study may affect the strength of the association between teacher-student relationships and bullying and peer victimization. Specifically, some studies assessed this link cross-sectionally (e.g., Humphrey & Symes, 2010; Thornberg et al., 2018), whereas others used a longitudinal design in which teacher-student relationships preceded bullying or peer victimization in time (e.g., Elledge et al., 2016; Lam et al., 2018). Moreover, the amount of time between measures may impact the strength of this link. Roorda et al. (2011) found that effects of positive teacher-student relationships were stronger in studies with fewer months between measures of teacher-student relationships and engagement or achievement, whereas, unexpectedly, associations with negative teacher-student relationships were stronger in studies with more months between measures. Therefore, moderator effects of study design will be assessed in two ways. First, the amount of months in between measures will be added as a moderator variable among all effect sizes. Second, only longitudinal associations allow us to draw conclusions about the temporal sequence of variables. Thus, general associations and the moderating effect of time between measures of teacher-student relationships (at the first time point) and peer victimization (at the second time point) will be investigated in a subset of longitudinal effect sizes.

The current study

So far, evidence about the role of teacher-student relationships in bullying perpetration and peer victimization is mixed and no systematic overview of research on this topic is available. The current multilevel meta-analysis aims to fill this knowledge gap. In addition, explanations for differences between study findings can be revealed by assessing several moderating variables (e.g., gender, study design). Findings may provide new theoretical insights into the association between teacher-student relationships, bullying perpetration and peer victimization. Moreover, findings can help school practitioners, policymakers, and anti-bullying interventions to gain more insight into the importance of teachers for tackling these persistent peer problems and improve positive peer relationships.

Building on theoretical frameworks and existing literature, we expected high-quality teacher-student relationships to foster students' feelings of security, self-regulation, and set the tone for the development of positive peer relationships in the classroom (e.g., Hamre et al., 2013; Verschueren & Koomen, 2012). Hence, high-quality teacher-student relationships are likely to buffer against bullying perpetration and peer victimization. Conversely, we expected low-quality teacher-student relationships to undermine students' feelings of security in the classroom, and increase their likelihood of becoming targets of peer victimization (e.g., Reavis et al., 2010; Yablon, 2010). Likewise, low-quality teacher-student relationships are expected to be related to more bullying perpetration (e.g., Espelage et al., 2015).

As for moderating variables, based on previous research, we expected the association between teacher-student relationships and bullying and peer victimization to be stronger for students from low SES and ethnic minority backgrounds (Hamre & Pianta, 2001; Wolke et al., 2001), and for students in elementary as compared to high school (Bergin & Bergin, 2009; Engels et al., 2016). Furthermore, we expected the link between teacher-student relationships and bullying and peer victimization to be stronger for negative as compared to positive relationship indicators (Lei et al., 2016), and in associations using the same informants to measure both constructs (Roorda et al., 2011). Finally, the moderating effects of gender (Ewing & Taylor, 2009; Hamre & Pianta, 2001), dyadic versus classroom-level teacher-student relationships (Hamre et al., 2013; Verschueren & Koomen, 2012), and study design (i.e., cross-sectional vs. longitudinal) were tested in an exploratory manner.

Method

Literature search

We performed a systematic literature search using three electronic databases: PsycInfo, ERIC, and Web of Science. Keywords were selected based on previous meta-analyses on related topics (Pouwels, Souren, et al., 2016; Roorda et al., 2017; Vandenbroucke et al., 2018). Regarding teacher-student relationships, the following keywords were used: *relation*, interaction*, closeness, support, warmth, acceptance, care, caring, relatedness, conflict, dependency, rejection,* and *neglect*. To limit results to the relationship between teacher(s) and student(s), the keywords *teacher** and *student*, child*, pupil*,* or *adolescent** were added. The following keywords represented bullying perpetration and peer victimization: *victim*, bully*, harass*,* and *mobb**. The database search included reports up to and including January 2020. Combined with additional reports sent by authors, the database search retrieved 3,213 unique reports. The meta-analysis was preregistered at the Open Science Framework, including keywords used for the literature search, main hypotheses, inclusion criteria, and planned analyses (https://bit.ly/3h9AbLJ). Contrary to the planned analyses, the literature search did not yield a sufficient number of teacher-related variables (i.e., teachers' gender, teaching experience) to assess them as moderators of the mean effect sizes.

Inclusion and exclusion criteria

To determine whether reports could be included in the meta-analysis, multiple inclusion criteria were formulated: Reports (a) are published and peer-reviewed journal articles or book(chapter)s, in line with previous meta-analyses focusing on teacher-student relationships (e.g., Roorda et al., 2017), (b) are written in English, (c) are empirical and quantitative in nature, (d) include samples of students up to 12th grade, (e) measure teacher-student relationships, bullying perpetration, and/or peer victimization as separate concepts, (f) include a measure of teacher-student relationships at the same time or before bullying perpetration or peer victimization was measured, as teacher-student relationships were considered as independent variables, (g) and include sufficient statistical information to obtain a Pearson product-moment correlation coefficient (*r*). With regard to bullying perpetration and peer victimization, we were specifically interested in these phenomena among *peers*. Therefore, measures of bullying and victimization by other persons (e.g., parents, teachers) were excluded. Furthermore, this meta-

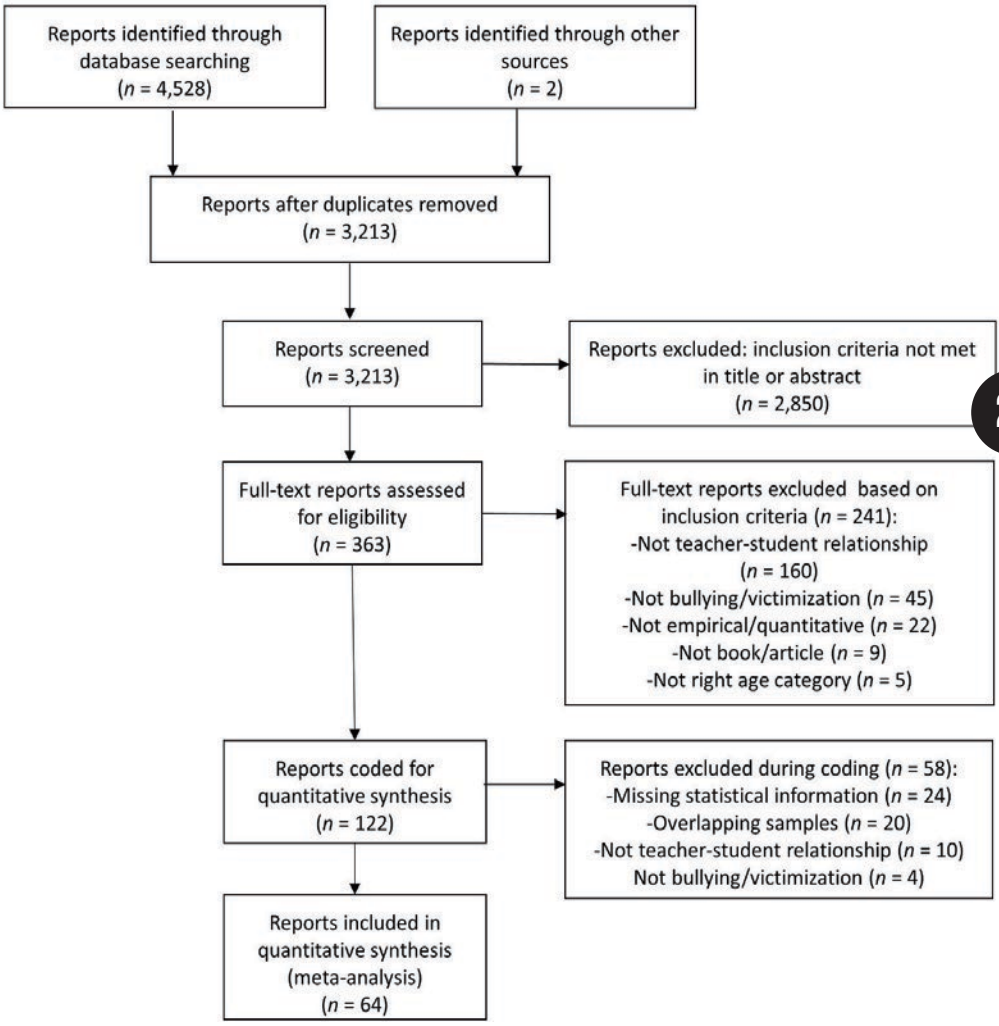
analysis focused on affective teacher-student relationships. Hence, other dimensions of the teacher-student relationship (e.g., academic support, classroom organization) were not included. Lastly, the variables could be measured with different instruments (e.g., questionnaires, observations), according to different informants (e.g., teachers, students), and at different levels (i.e., dyadic or classroom-level).

Data collection and coding

Based on a standardized protocol using the inclusion criteria mentioned above, reports passed through several coding rounds (Figure 2.1). The abstract and full-text screening were conducted by the first author and one out of two graduate-level students of the faculty of Psychology and Educational Sciences of KU Leuven. Screening occurred independently and blinded with the online application Rayyan (Ouzzani et al., 2016). Agreement between coders was high (i.e., 92.5% for abstract selection and 83.9% for full-text selection). Disagreements were resolved by consensus between coders and (if necessary) in consultation with co-authors. Next, information was extracted from the 122 remaining reports using an extensive and piloted coding manual. The first 40 reports were double-coded by the first author and one of the students, with meetings in between to discuss uncertainties. Another 25 reports (20%) were independently and double-coded to calculate inter-rater agreement (78.2%). Remaining reports were coded by the students, and all values were checked against the original values in the reports by the first author.

Figure 2.1

PRISMA Flowchart of Selection Process



When reports did not include sufficient statistical information for the planned analyses, an email was sent to the corresponding author (*n* = 51). In case of non-response, we contacted a co-author and checked whether different statistics in the report could be used to compute an effect size. Moreover, if it was unclear how one of the key variables was measured, this information was requested from study authors. Furthermore, in case of overlapping samples (*n* = 20), the report that provided the most relevant information and used the biggest sample was selected. Eventually, 64 reports were included in the meta-analysis. Within these reports, six associations contained the link between teacher-student dependency (i.e., age-inappropriate overreliance of students on their teacher; Pianta, 2001) and peer victimization, and none were found for bullying. This is not surprising, as the initial scale measuring dependency reported low reliability (Koomen et al., 2012) and, thus, has not been used often among researchers (Verschueren & Koomen, 2020). Therefore, in line with procedures of previous meta-analyses on teacher-student relationships (Lei et al., 2016; Roorda et al., 2017; Roorda et al., 2011), dependency was not included in the final data set.

Data set

The final data set contained 64 written reports, describing 212 effect sizes (*n*) within 65 studies (*k*) that were published between 1999 and 2020. Reports were 62 journal articles and two book chapters. A total of 185,881 students were included in the analyses (sample sizes ranged from 39 to 27,297 students). Moreover, 26 studies were conducted (mainly) in elementary school (i.e., preschool, kindergarten and elementary school) and 37 covered (mainly) high school (i.e., middle school, junior high, and high school). The link between teacher-student relationships and peer victimization was examined with 173 effect sizes and the link between teacher-student relationships and bullying perpetration with 39 effect sizes. Student and methodological characteristics of each individual effect size are presented in Appendix 1. Table 2.1 and Table 2.2 show descriptive statistics for moderator variables.

The 57 studies describing the 173 effect sizes that reflected the association between teacher-student relationships and peer victimization were conducted in Europe (*k* = 25), North America (*k* = 18), Asia (*k* = 7), Africa (*k* = 2), Australia (*k* = 3), and South America (*k* = 2). In total, 151,653 students with an average age of 10.96 years (*SD* = 3.25) participated. With regard to study design, 122 associations were cross-sectional and 51 longitudinal. Because only three associations contained teacher-student relationship measures about a combination of the

dyadic and classroom level (e.g., Berkowitz & Benbenishty, 2012), this subcategory was dropped in the moderation analyses.

The association between teacher-student relationships and bullying perpetration was examined with 39 effect sizes within 25 studies. Participants were 97,627 students (M_{age} = 13.00, SD_{age} = 2.69). Studies were conducted in Europe (k = 14), North America (k = 5), Asia (k = 1), Africa (k = 2), Australia (k = 1) and South America (k = 2). Two associations were longitudinal, the remaining 37 associations cross-sectional. Therefore, we were not able to investigate the moderating role of time on the association between teacher-student relationships and bullying perpetration. Additionally, three associations contained teacher-student relationship measures with questions about a combination of the dyadic and classroom level (e.g., Natvig et al., 2001). Consequently, this subcategory was removed from moderation analyses.

Table 2.1

Descriptive Statistics for Continuous Moderator Variables

	Bullying Perpetration			Peer Victimization		
	Mean (SD)	Range	*n*	Mean (SD)	Range	*n*
Gender (% girls)	50.01 (3.41)	42-58	36	49.58 (6.42)	10-60	170
Ethnicity (% minority)	31.37 (2.02)	5-51	16	32.04 (24.01)	5-93	87
SES (% low SES)	35.43 (13.30)	24-50	8	34.37 (24.59)	6-88	52
Months Between Measures	0.31 (1.34)	0-6	39	3.95 (9.54)	0-72	172

Note. *n* = number of effect sizes; SES = socio-economic status

Table 2.2

Descriptive Statistics for Categorical Moderator Variables

	Bullying Perpetration	Peer Victimization
	n	*n*
Educational Level		
Elementary School	14	86
High School	24	83
TSR Indicator		
Positive	33	138
Negative	5	34
TSR Level		
Dyadic	26	151
Classroom	9	18
Informant		
Different	7	52
Same	31	120

Note. *n* = number of effect sizes; TSR = teacher-student relationship

Coding of moderators

Students' Gender was coded as the proportion of girls participating in the study. Students' Ethnicity was coded as the proportion of students from an ethnic minority background participating in the study. Students' Socio-Economic Status (SES) was coded as the proportion of students from a low SES background (e.g., students with free school meal eligibility, low parental income) participating in the study. Educational Level described whether studies reported (mainly) about elementary school students (0 = *preschool, kindergarten, elementary school*) or high school students (1 = *middle, (junior) high school*). Teacher-Student Relationship Indicator was coded as the indicator of teacher-student relationships within each association (1 = *positive,* 2 = *negative*). Teacher-Student Relationship Level was coded as the level on which teacher-student relationships were measured (1 = *dyadic,* 2 = *classroom*). Informant indicated whether teacher-student relationships and bullying or peer victimization were reported by the same informant (coded as 0; e.g., twice a self-report measure) or by different informants (coded as 1; e.g., teachers reporting about teacher-student relationships, students reporting about peer victimization). Lastly, Months Between Measures was coded as the number of months in between the measurement of teacher-student relationships and peer victimization.

Statistical analyses

Overall associations. Pearson's product-moment correlation coefficient (*r*) was reported in most studies and used as the effect size. Two studies only provided a Spearman's rho coefficient (r_s). For consistency reasons, these values were transformed into Pearson's *r* using the formula of Rupinski and Dunlap (1996). Moreover, correlations measuring associations with negative teacher-student relationship indicators were recoded, so all correlations reflected a positive teacher-student relationship. This enabled us to assess the moderating role of teacher-student relationship indicator (positive vs. negative). Next, a Fisher's *Z*-transformation was applied to make the sampling distribution of Pearson's *r* more normally distributed (Lipsey & Wilson, 2001). Effect sizes were weighted by the inverse variance. After the analyses, values were back-transformed to Pearson's *r* to facilitate the interpretation of overall effects. As extreme effect sizes could threaten the robustness and validity of results, the presence of outliers was detected by examining whether values differed > 3 *SDs* from the mean. Analyses of the overall effect sizes were performed with and without these outliers (c.f., Maes et al., 2019). As outliers could highly impact results when few effect sizes are included, they were removed from moderator analyses.

Because many retrieved studies reported multiple effect sizes (e.g., using different informants or different teacher-student relationship indicators), three-level meta-analytic models were selected as the most appropriate way to analyze the data. This type of analysis does not make the strong assumption of independence of effect sizes, which traditional approaches do. Traditional approaches typically ignore dependence, average multiple effect sizes, or select only one effect size within primary studies (Cheung, 2014). With multilevel meta-analysis, researchers can use all relevant information (e.g., in order to assess moderator variables) and obtain maximum statistical power (Assink & Wibbelink, 2016; Cheung, 2014). Specifically, we conducted a three-level meta-analysis in which the total variance was decomposed into sampling variance of the extracted effect sizes (Level 1), variance between effect sizes from the same study (Level 2), and variance between studies (Level 3; Cheung, 2014). Because no single value exists for the sampling variance (the variance depends on the size of the study), the median sampling variance was used for this calculation. Data were analyzed using the metafor package (version 2.4-0; Viechtbauer, 2010) in software program R. In line with Assink and Wibbelink (2016), REstricted Maximum Likelihood (REML) was selected as the parameter estimation method. Analyses were performed for effect sizes between

teacher-student relationships and bullying perpetration, and teacher-student relationships and peer victimization, separately. Both cross-sectional and longitudinal associations were included in the analyses, to get a comprehensive overview of all available research. Next, the moderating role of student characteristics (i.e., Gender, Ethnicity, SES, Educational Level) and methodological characteristics (i.e., Teacher-Student Relationship Indicator, Teacher-Student Relationship Level, Informant, Months Between Measures) on the associations was assessed in the total data set. Specifically, testing the overall moderating role of Months Between Measures on the association between teacher-student relationships and peer victimization was only possible in a data set combining cross-sectional and longitudinal associations.

Longitudinal associations. The longitudinal association between teacher-student relationships and subsequent peer victimization was assessed in a subset of 51 associations within 10 studies. This was done by controlling for the cross-sectional (T1) association between teacher-student relationships and peer victimization, and for the stability of peer victimization (cf. Maes et al., 2019). Standardized regression coefficients were computed from the correlation coefficients between teacher-student relationships at T1 and peer victimization at T2, effect sizes were weighed by the inverse variance, and variance was decomposed at Level 1, Level 2, and Level 3. Sampling variance was calculated using the R code developed by Fernández-Castilla et al. (2020). Hence, the longitudinal link between the variables was examined in a strict way. Lastly, Months Between Measures was analyzed as a moderator of the longitudinal mean effect size. Analyses were performed in R with the metafor package (version 2.4-0; Viechtbauer, 2010), using the REML estimator (Assink & Wibbelink, 2016).

Publication bias. The presence of publication bias was examined in two ways. First, funnel plots were created to test whether studies converged around the pooled effect size as sample size increased. When publication bias is absent, plots are expected to be shaped like a symmetric funnel. The funnel is expected to be asymmetrical in case of publication bias. Put differently, only small studies with a significant, large effect size would get published, whereas small studies without a significant, large effect size would not be considered for publication (Harrer et al., 2019). Second, as an extension of Egger's regression test, sample size was added as a moderator to the four models: the first model for the overall associations between teacher-student relationships and peer victimization, the second model for the overall associations between teacher-student relationships and bullying perpetration, the third model for the stability of peer victimization, and the fourth model for the longitudinal associations between

teacher-student relationships and subsequent peer victimization. By evaluating the significance of these coefficients, it was tested whether the mean observed effect sizes depended on sample size (Card, 2012).

Results

Correlations containing each individual effect size are provided in Appendix 1. In line with Lipsey and Wilson (2001), correlations less than .10 were considered as small, between .10 and .25 as small to medium, around .25 as medium, between .25 and .40 as medium to large, and correlations greater than .40 as large.

Associations between teacher-student relationships and peer victimization

Overall associations. For the total data set, the 173 correlations between teacher-student relationship quality and peer victimization ranged from negative and large (r = -.41) to positive and small to medium (r = .11), except for a negative and large correlation (r = -.64) in one study (Shin & Kim, 2008). Because this value differed > 3 *SDs* from the mean, trustworthiness of the value was questioned (Maes et al., 2019). The overall association between teacher-student relationship quality and peer victimization without the outlier, expressed using the estimated mean Fisher's Z, was -.14 (SE = 0.01, 95% CI [-0.17, -0.11], $t(171)$ = -10.35, p < .001). When back-transformed into its correlational form, the mean estimated effect size was r = -.14, 95% CI [-.17, -.11]. This can be regarded as a small to medium association. This association was negative, demonstrating that higher-quality teacher-student relationships were related to less peer victimization. Analyses with the outlier resulted in a similar estimated mean Fisher's Z of -.15 (SE = 0.02, 95% CI [-0.18, -0.12]).

Moreover, it was examined how the total variance was decomposed into sampling variance, within-study variance, and between-study variance. The median sampling variance was 0.002 and represented 15.1% of the total variance. Significant variability between effect sizes within studies was also found (0.005, χ^2 (1) = 502.03, p < .001), representing 34.9% of the total variance. Therefore, it was required to account for within-study variance by applying a three-level model instead of a two-level model. Lastly, significant variability between studies was found (0.007, χ^2 (1) = 35.42, p < .001) and represented 50.0% of the total variance. In sum, the significant within- and between-study variance indicates more variability in effect sizes than

may be expected based on sampling variance alone. Therefore, moderator analyses are useful to examine variables that possibly explain this variability.

Moderators. Table 2.3 displays results of the moderation analyses for the overall association between teacher-student relationships and peer victimization. The moderators Gender, Educational Level, Ethnicity, SES, Teacher-Student Relationship Level, and Months Between Measures were not significant. Only two variables significantly affected the strength of the association between teacher-student relationships and peer victimization. First, Teacher-Student Relationship Indicator (positive vs. negative) had a significant moderating effect, $F(1, 170) = 17.74$, $p < .001$. This finding implies that the association between teacher-student relationships and peer victimization was stronger for negative teacher-student relationship indicators, such as conflict ($b = -.21$), as compared to positive indicators, such as closeness ($b = -.12$). Second, Informant significantly affected the association between teacher-student relationships and peer victimization, $F(1, 170) = 10.56$, $p = .001$. Associations between teacher-student relationships and peer victimization were stronger when the same person reported on both teacher-student relationships and peer victimization ($b = -.16$) as opposed to when different persons reported on teacher-student relationships and peer victimization ($b = -.09$). Notably, the overall association remained significant when only a subsample of effect sizes based on different informants ($n = 52$) was used , $r = -.12$, 95% CI [-.08, -.16], $p < .001$.

Longitudinal associations. Within the subset of 51 longitudinal associations between teacher-student relationship quality and peer victimization, calculated regression coefficients ranged from -.22 to .06. The mean estimated effect of teacher-student relationships on subsequent peer victimization was -0.05 ($SE = 0.01$, 95% CI [-0.08, -0.02], $p < .001$). Hence, higher-quality teacher-student relationships at T1 were related to lower peer victimization at T2. Although this effect was small, it was found while controlling for the cross-sectional (T1) association between teacher-student relationship and peer victimization and the stability of peer victimization. The mean estimated stability coefficient for peer victimization was 0.45 ($SE = 0.05$, 95% CI [0.34, 0.56], $p < .001$). Additionally, regarding the stability of peer victimization, Months Between Measures was a significant moderator ($b = -.00$, 95% CI [-.01, -.00], $p = .006$). Thus, the stability of peer victimization was lower in studies with more time between measures. As for the effect of teacher-student relationships on subsequent peer victimization, it was not a significant moderator ($b = -.00$, 95% CI [-.00, .00], $p = .982$). Thus, the time between measures did not affect the strength of the effect of teacher-student relationships on peer victimization.

Table 2.3

Moderator Analyses of the Association Between Teacher-Student Relationships and Peer Victimization

Model	Moderator	*n*	*b*	SE *b*	95% CI	*F*	*df*	*p*
1	Gender[a]	170	.33	.32	-0.30, 0.97	1.09	1, 168	.298
2	Ethnicity[b]	87	.03	.09	-0.14, 0.21	0.16	1, 85	.688
3	SES[c]	52	.17	.12	-0.07, 0.41	1.99	1, 50	.164
4	Educational Level	169				0.41	1, 167	.523
	Elementary school	86	-.13	.02	-0.17, -0.09			
	High School	83	-.15	.02	-0.19, -0.11			
5	TSR Indicator	172				17.74	1, 170	<.001
	Positive	138	-.12	.01	-0.15, -0.10			
	Negative	34	-.21	.02	-0.25, -0.17			
6	TSR Level	169				0.25	1, 167	.619
	Dyadic	151	-.14	.02	-0.17, -0.11			
	Classroom	18	-.16	.04	-0.25, -0.07			
7	Informant	172				10.56	1, 170	.001
	Different	52	-.09	.02	-0.13, -0.05			
	Same	120	-.16	.02	-0.19, -0.13			
8	Months Between Measures	172	.00	.00	-0.00, 0.00	1.65	1, 170	.201

Note. For the categorical variables, regression coefficients represent the mean effect sizes (Fisher's *Z*) for each category; *n* = number of effect sizes; *b* = regression coefficient; SE = standard error; CI = confidence interval; TSR = teacher-student relationship.

[a] Proportion girls.

[b] Proportion students from an ethnic minority background.

[c] Proportion students with a low socio-economic status (SES).

Associations between teacher-student relationships and bullying perpetration

Overall associations. The 39 correlations between teacher-student relationships and bullying perpetration ranged from negative and medium to large (r = -.38) to positive and small (r = .01), except for a negative and large correlation (r = -.62) in one study (Hanif & Zaheer, 2018). Analyses of the overall association without the outlier resulted in an estimated mean Fisher's Z of -.18 (SE = 0.02, 95% CI [-0.22, -0.14], $t(37)$ = -9.18, p < .001). Back transformation into a correlation yielded an estimated mean effect size of r = -.17, 95% CI [-.21, -.14]. This small to medium negative correlation indicates that higher-quality teacher-student relationships were related to lower bullying. Analyses with the outlier resulted in a similar estimated mean Fisher's Z of -.20 (SE = 0.03, 95% CI [-0.25, -0.14]). The median sampling variance for this association was 0.001 and represented 11.5% of the total variance. Significant within-study variance was found (0.002, χ^2 (1) = 8.50, p =.004), representing 18.7% of the total variance, suggesting that differences in effect sizes reported within the same study were larger than expected based on sampling variance alone. Between-study variance was also significant with 0.007 (χ^2 (1) = 8.59, p =.003) and represented 69.9% of the total variance. Hence, moderator analyses were performed to gain more insight into variability within and/or between studies.

Moderators. Table 2.4 displays results of the moderator analyses of the overall association between teacher-student relationships and bullying perpetration. Most moderators (i.e., Gender, Educational Level, SES, Teacher-Student Relationship Indicator, and Teacher-Student Relationship Level) appeared non-significant. Two variables significantly affected the strength of the overall association, that is, students' Ethnicity and Informant. First, Ethnicity had a significant effect on the association between teacher-student relationships and bullying, b = -.26, 95% CI [-.44, -.07], p = .012. Specifically, associations were stronger in samples with more ethnic minority students than in samples with less ethnic minority students. Second, Informant appeared significant, $F(1, 36)$ = 6.76, p = .014. Similar to results for peer victimization, this finding indicates that associations between teacher-student relationships and bullying were stronger when the same informant was used to measure teacher-student relationships and bullying (b = -.19), as compared to different informants (b = -.10). Again, the overall association remained significant when performing analyses in a subsample of effect sizes based on different informants alone (n = 7), r = -.09, 95% CI [-.01, -.16], p = .03.

Table 2.4

Moderator Analyses of the Association Between Teacher-Student Relationships and Bullying Perpetration

Model	Moderator	*n*	*b*	*SE b*	95% CI	*F*	*df*	*p*
1	Gender[a]	36	.14	.74	-1.35, 1.64	0.04	1, 34	.849
2	Ethnicity[b]	16	-.26	.09	-0.45, -0.07	8.23	1, 14	.012
3	SES[c]	8	-.24	.48	-1.41, 0.92	0.26	1, 6	.628
4	Educational Level	38				1.52	1, 36	.225
	Elementary School	14	-.14	.03	-0.21, -0.07			
	High School	24	-.19	.02	-0.24, -0.15			
5	TSR Indicator	38				0.34	1, 36	.565
	Positive	33	-.17	.02	-0.21, -0.13			
	Negative	5	-.20	.04	-0.28, -0.11			
6	TSR Level	35				0.03	1, 33	.857
	Dyadic	26	-.17	.02	-0.22, -0.12			
	Classroom	9	-.16	.07	-0.29, -0.03			
7	Informant	38				6.76	1, 36	.014
	Different	7	-.10	.03	-0.17, -0.03			
	Same	31	-.19	.02	-0.23, -0.16			

Note. For the categorical variables, regression coefficients represent the mean effect sizes (Fisher's Z) for each category; *n* = number of effect sizes; *b* = regression coefficient; SE = standard error; CI = confidence interval; TSR = teacher-student relationship.

[a] Proportion girls.

[b] Proportion students from an ethnic minority background.

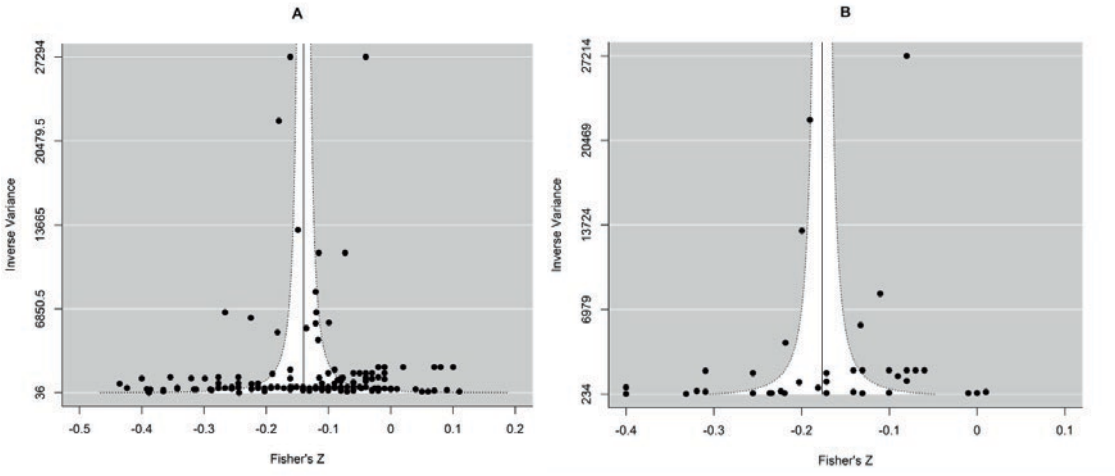
[c] Proportion students with a low socio-economic status (SES).

Publication bias

Funnel plots for the entire data set of cross-sectional and longitudinal associations between teacher-student relationships and peer victimization (Figure 2.2a) and between teacher-student relationships and bullying (Figure 2.2b), as well as for the subsample of longitudinal associations between teacher-student relationships and subsequent peer victimization (Figure 2.3a and Figure 2.3b), showed a mostly symmetrical shape. This suggests that the presence of publication bias was unlikely. As a further check, sample size was added as a moderator. Only for the pathway from teacher-student relationships to subsequent peer victimization, this moderator appeared significant. However, as estimates were close to zero, b = <.001, 95% CI [<.001, <.001], the impact of sample size on the estimated mean effect sizes was minimal.

Figure 2.2

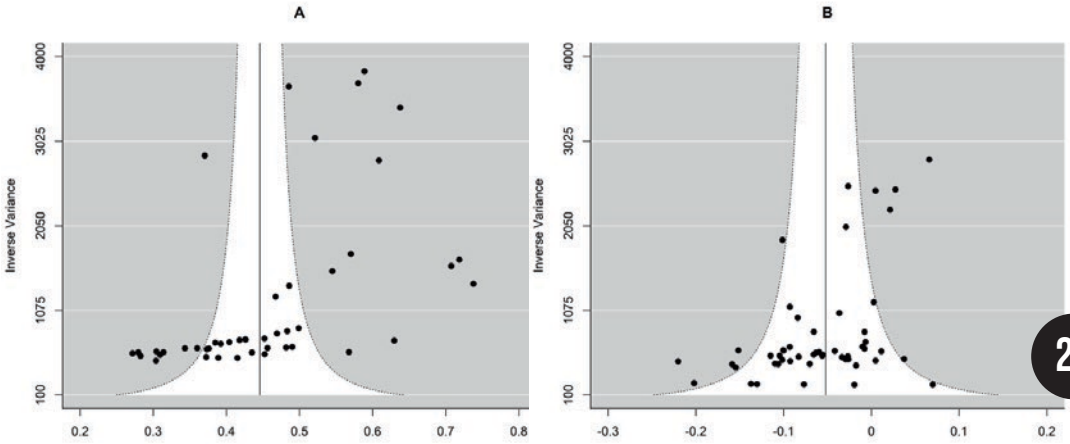
Funnel Plots for Effect Sizes of the Association Between Teacher-Student Relationships and Peer Victimization (A), and Between Teacher-Student Relationships and Bullying Perpetration (B)



Note. The weighted mean effect size is displayed with a solid vertical line. Two outliers were removed.

Figure 2.3

Funnel Plots for Effect Sizes of the Stability of Peer Victimization (A), and the Longitudinal Association Between Teacher-Student Relationships and Peer Victimization (B)



Note. The weighted mean effect size is displayed with a solid vertical line.

Discussion

Although teachers are considered key adults to tackle bullying in schools, results of studies investigating the association between affective teacher-student relationships and bullying perpetration and peer victimization are not conclusive (e.g., Bae et al., 2019; R. J. Shaw et al., 2019; Troop-Gordon & Kopp, 2011). Moreover, several characteristics of the sample and study methods might affect the strength of associations (e.g., Lei et al., 2016; Roorda et al., 2011). This study aimed to provide an overview of all existing research in this field by means of a state-of-the-art three-level meta-analysis. Results demonstrated negative, small to medium associations between teacher-student relationships and bullying perpetration, as well as between teacher-student relationships and peer victimization. Additionally, separate analyses focusing on longitudinal effect sizes between teacher-student relationships and peer victimization were performed. While controlling for their T1 association and the stability of peer victimization, higher-quality teacher-student relationships were related to less subsequent peer victimization. Furthermore, moderation analyses demonstrated stronger negative links between teacher-student relationships and bullying for samples with more ethnic minority students, and when the same informant reported about both variables. Associations between

teacher-student relationships and peer victimization were stronger for negative teacher-student relationship indicators (e.g., conflict) as compared to positive indicators (e.g., emotional support), and when the same informant was used to measure both variables.

Overall associations

Results of the current meta-analysis showed that higher-quality teacher-student relationships were related to lower levels of bullying perpetration and peer victimization. Thus, findings indicate that teachers may contribute to tackling bullying and peer victimization through the affective relationships with their students. This confirms previous research emphasizing the importance of studying characteristics of students' social context to gain insight into bullying and peer victimization processes (e.g., Ettekal et al., 2015). The results suggest that teachers are in a unique position to affect children's peer dynamics, both through the feelings of safety and security they can transmit to individual students (e.g., Verschueren & Koomen, 2012) and by means of the supportive classroom climate can they create (e.g., Hamre et al., 2013).

To date, most research on teacher-student relationships has focused on the role of teachers in peer victimization, testing the assumption that high-quality teacher-student relationships may protect children from being victimized. Interestingly, this study showed associations of similar magnitude for bullying perpetration. Bullying has been regarded as a means to achieve goals such as dominance or popularity among classmates (Sijtsema et al., 2009). When a high-quality teacher-student relationship helps to create a positive and tolerant classroom atmosphere and successfully regulate individual students' emotions, students may feel less need to use such negative behavior to improve their social status. Our findings thus call for more research on the role of teacher-student relationships in bullying, especially since tackling bullying can be viewed as an important step towards preventing and reducing peer victimization. Longitudinal research and studies examining working mechanisms could help to gain more insight into how teacher-student relationships are associated with bullying perpetration.

Additionally, teacher-student relationships were not only negatively related to peer victimization at the same time point, but effects also seemed to hold over time. The selected analyses were strict, given that the cross-sectional association between teacher-student relationships and peer victimization and the stability of peer victimization were taken into

account. Interestingly, the amount of time between measures did not affect the overall associations. This suggests that effects remain within the same school year (e.g., Serdiouk et al., 2016) but may also hold across school years (e.g., Runions & Shaw, 2013). Results contrast those of a prior meta-analysis, demonstrating that the time between measures affected the strength of associations between teacher-student relationships and students' engagement and achievement (Roorda et al., 2011). Future studies are encouraged to investigate how long-lasting the current promising effects are, as the maximum amount of time between measures was 72 months. Furthermore, more longitudinal research is needed to examine the effect of teacher-student relationships on subsequent bullying perpetration as well. Given the small number of longitudinal studies on this topic, this plausible pathway could not be tested in the current study.

Moderating effects

With regard to student characteristics, based on the academic risk perspective (Hamre & Pianta, 2001), overall associations were expected to be stronger for ethnic minority students and students from a low SES background. Support for this hypothesis was only found for the moderating effect of ethnic background on the link between teacher-student relationships and bullying perpetration. Results indicated that high-quality teacher-student relationships may especially help ethnic minority students to reduce their bullying behavior. Remarkably, similar moderating effects were not found for peer victimization. Broader societal factors (e.g., systemic bias) may be a third variable that was not accounted for in this study. The current findings underscore the benefit of focusing on two sides of the bullying phenomenon (i.e., perpetration and victimization) in findings ways to tackle this persistent peer problem. In addition, results showed that teacher-student relationships were equally important for students from diverse socio-economic backgrounds. This contrasts findings of Roorda et al. (2011), who demonstrated stronger links between teacher-student relationships and engagement and achievement when samples included more students from a low SES background. One possible explanation could be related to the analytical power, as for only eight out of 39 associations between teacher-student relationships and bullying perpetration, information about SES was provided. Future studies are encouraged to mention sufficient descriptive information about the sample under investigation. Regarding gender, tested in an exploratory manner, associations were robust and did not differ between boys and girls. In

general, moderators from the academic risk perspective might mostly affect educational (e.g., achievement, engagement) and to a lesser extent relational (e.g., bullying, peer victimization) outcomes. Additionally, results indicate that students could benefit equally from high-quality teacher-student relationships in elementary and high school to reduce bullying and peer victimization. Thus, even when students move to adolescence and spend less time with single teachers, teachers may remain important for students' development (Bergin & Bergin, 2009). This contrasts previous research in adolescence, describing decreasing importance of teachers as compared to peers for students' social development (e.g., Engels et al., 2016).

Moreover, in line with our expectations (Lei et al., 2016; Vaish et al., 2008), associations were stronger for negative teacher-student relationship indicators (e.g., conflict, dissatisfaction) as compared to positive indicators (e.g., closeness, care). This was only the case among studies covering peer victimization. In the analyses focusing on bullying perpetration, associations were robust across positive and negative indicators of teacher-student relationships. One possible explanation could be the limited number of effect sizes for negative indicators of teacher-student relationships (n = 5) as compared to positive indicators (n = 33). Based on our findings and previous research (Lei et al., 2016), future research is encouraged to further investigate negative indicators of teacher-student relationships in bullying and peer victimization. Examining both positive and negative indicators in the same study could also be a promising way to test their relative contribution to these peer problems.

Interestingly, results demonstrated that dyadic teacher-student relationship quality was not more or less important than the quality of relationships at classroom level: higher-quality teacher-student relationships at both levels were related to lower bullying perpetration and peer victimization. These findings extend those of previous meta-analyses which only assessed dyadic teacher-student relationships (e.g., Roorda et al., 2011). Our findings are promising, as they indicate two ways to reduce bullying and peer victimization in schools. Because the majority of included studies focused on dyadic (n = 177) instead of classroom-level teacher-student relationships (n = 27), more studies about the role of classroom-level teacher-student relationships in bullying and peer victimization, as well as studies combining dyadic and classroom-level teacher-student relationship measures in one study, are encouraged.

Lastly, in line with our expectations (Roorda et al., 2011), overall associations were stronger when the same person reported on teacher-student relationships and bullying perpetration and peer victimization, as compared to when different informants were used. Our

findings may reflect a single-source bias, especially because this moderating effect was found for both bullying perpetration and peer victimization. Notably, associations remained significant when only a subsample of associations based on different informants was analyzed, further confirming the robustness of the associations. Although some studies might have theoretically sound reasons for choosing one informant for multiple instruments when investigating bullying dynamics (Volk et al., 2017), our findings highlight the need for more multi-informant studies. This way, overestimation of associations is prevented and a more complete overview of classroom processes is created.

Strengths and limitations

This study has several strengths and limitations. Strengths include the use of positive and negative teacher-student relationship indicators and dyadic and classroom-level measures of teacher-student relationships. Moreover, this study focused on a broad age range of students from preschool to high school and on two sides of the bullying phenomenon (i.e., perpetration and victimization). Furthermore, multiple coders were used during the study selection process and discrepancies were discussed at each stage, resulting in a final set of studies based on deliberate decisions. Additionally, three-level meta-analytic models allowed us to optimally use all data present while taking the dependence of effect sizes into account. However, some limitations need to be mentioned as well. First, no conclusions about causality from teacher-student relationships to bullying perpetration and peer victimization or vice versa can be drawn from this study. A recent cross-lagged study indicated transactional pathways between peer victimization and teacher-student relationships (Demol, Leflot, et al., 2020). More cross-lagged studies are needed to indicate how teacher and peer relationships affect each other over time. Additionally, more longitudinal studies on the link between teacher-student relationships and bullying perpetration are required, since small to medium associations were found at mostly cross-sectional level. Second, negative teacher-student relationship indicators and classroom-level teacher-student relationships are less well-investigated than positive relationship indicators and dyadic teacher-student relationships, making it difficult to draw conclusions about the moderating role of these variables on our overall associations. Third, statistical power of analyses focusing on bullying perpetration was sometimes low (e.g., assessing the moderating role of SES) and some variables (e.g., gender) had a small variance. Also, several studies missed necessary statistical information to obtain a

correlation coefficient. Hence, we recommend researchers to provide sufficient descriptive information about their sample and key variables. Fourth, the used data were correlational in nature. More experimental and intervention studies are needed to distinguish which elements of the teacher-student relationship can aid to tackle bullying and peer victimization.

Practical implications

This meta-analysis shows that higher-quality teacher-student relationships are related to less bullying perpetration and peer victimization, and that effects on peer victimization could hold over time. These findings provide several practical implications. First, teachers and other school practitioners should become (more) aware of their role as facilitator of and role model for peer relationships (Gest & Rodkin, 2011). Investing in positive relationships with students could therefore not only be viewed as an addition to, but rather a prerequisite for improving students' academic knowledge (Bergin & Bergin, 2009). Relatedly, policymakers are encouraged to promote a dual focus by integrating academic and social-emotional learning goals in the curriculum (Kochenderfer-Ladd & Ladd, 2016). This focus may help to foster positive relationships in the classroom, make teachers more attentive to students' needs, and help to detect bullying and peer victimization sooner. This is essential, as only a minority of victimized students disclose their victimization to the teacher (ten Bokkel et al., 2021).

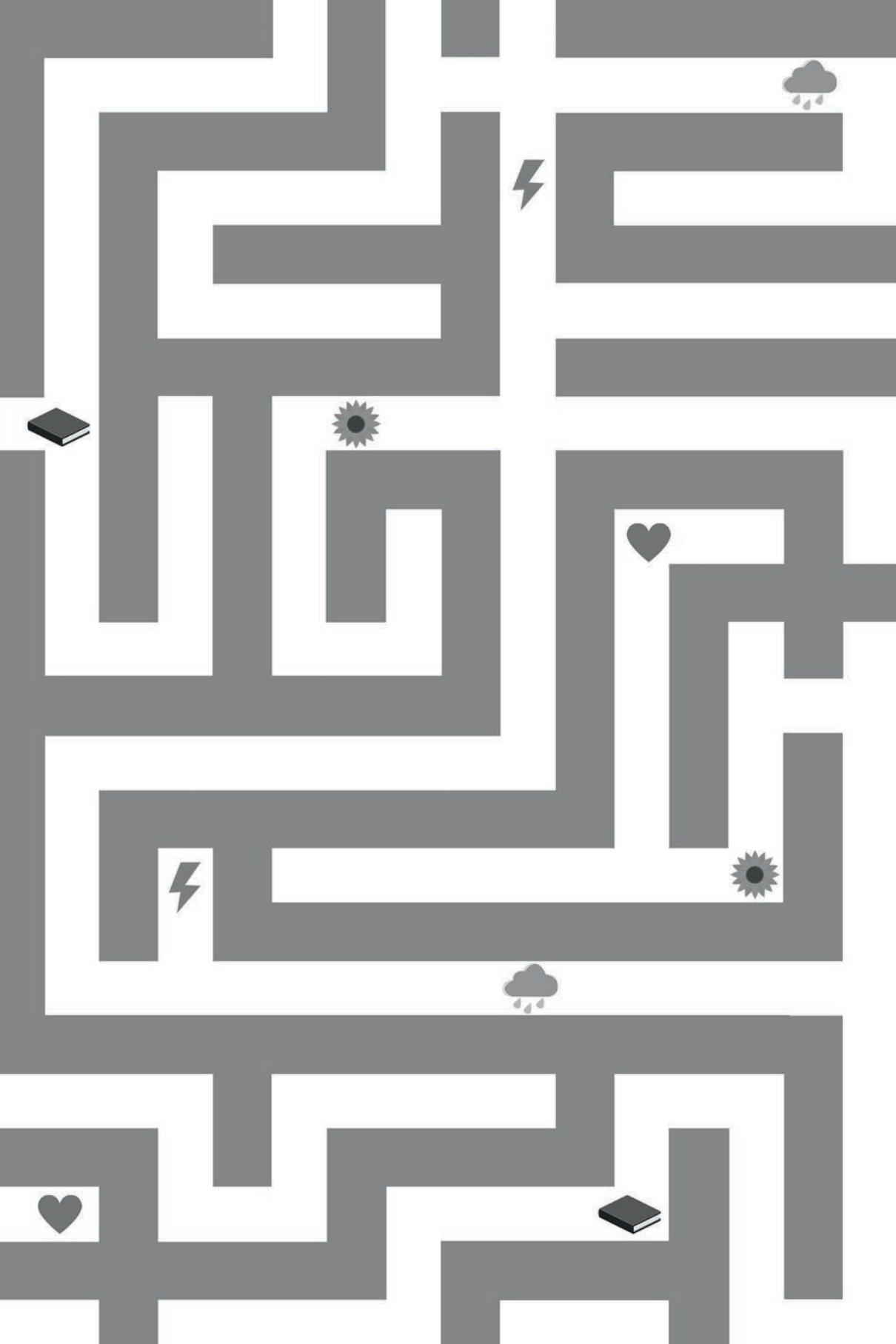
Second, existing anti-bullying interventions could benefit from more attention to improving positive teacher-student relationships and preventing negative teacher-student relationships. This is especially important, because teachers usually implement prevention and intervention programs. Specifically, our findings indicate that improving relationships with both individual students and the class group may aid to reduce bullying and peer victimization. Additionally, building positive teacher-student relationships seems not only important to tackle bullying and peer victimization in elementary school, but also in high school. Specifically, our findings indicated that high-quality teacher-student relationships were related to less bullying and peer victimization in both educational contexts. Moreover, our results suggest that teachers could specifically attend to the development of high-quality teacher-student relationships with ethnic minority students to reduce their bullying behavior.

When teachers are, somehow, not able to build high-quality relationships with individual students or their class group, they can implement several interventions. For example, My Teaching Partner is an intensive intervention targeted at enhancing Pre-K to high school

teachers' knowledge of and skills regarding effective teacher-student interactions in their own classroom (Gregory et al., 2017). Moreover, increased observed teacher sensitivity was found in the Relationship-Focused Reflection Program, aimed at improving difficult relationships with individual students by targeting teachers' mental representations (e.g., Spilt et al., 2012). Based on our findings, a focus on reducing negative teacher-student relationships seems especially important to tackle peer victimization. This was confirmed by results of the Good Behavior Game, a universal classroom intervention designed to reduce elementary school students' disruptive behavior and promote their prosocial behavior (Leflot et al., 2010). Results indicated that reduced negative remarks of intervention teachers (but not increased praise) predicted decreased disruptive behavior by students (Leflot et al., 2010).

Conclusion

The current multilevel meta-analysis provided a literature overview regarding the association between affective teacher-student relationships and two persistent peer problems (i.e., bullying perpetration and peer victimization) over the past twenty years. By examining 212 effect sizes within 65 primary studies and covering 185,881 students from preschool to high school, results indicated that higher-quality teacher-student relationships were related to less bullying perpetration and less peer victimization. In a subsample of longitudinal effect sizes, higher-quality teacher-student relationships were also related to less subsequent peer victimization These findings demonstrate that teachers may contribute to tackling the persistent problems of bullying and peer victimization in schools through their affective relationship with students. Furthermore, the association between teacher-student relationships and bullying was stronger among samples with more ethnic minority students and when the same informant reported about both variables. For peer victimization, associations were stronger when negative teacher-student relationship indicators were measured (e.g., conflict) as compared to positive indicators (e.g., closeness), and when the same informant was used. Thus, especially for peer victimization, reducing negative teacher-student relationships seems warranted. In general, teachers, school practitioners, policymakers and anti-bullying interventions could benefit from targeting the promotion of positive teacher-student relationships and the reduction of negative teacher-student relationships. Through more multi-informant, longitudinal and experimental studies, especially about bulling perpetration, the role of teachers in bullying and peer victimization can be further unraveled.



CHAPTER 3

RECIPROCAL LINKS BETWEEN TEACHER–STUDENT RELATIONSHIPS AND PEER VICTIMIZATION: A THREE–WAVE LONGITUDINAL STUDY IN EARLY ADOLESCENCE

This chapter is based on:

ten Bokkel, I. M., Verschueren, K., Demol, K., van Gils, F. E., & Colpin, H. (2021). Reciprocal links between teacher-student relationships and peer victimization: A three-wave longitudinal study in early adolescence. *Journal of Youth and Adolescence*, 1-15. https://doi.org/10.1007/s10964-021-01490-4

ABSTRACT

Although teachers play a central role in tackling peer victimization at school, no study so far has investigated transactional associations between positive and negative teacher-student relationship dimensions and peer victimization. At three time points within one school year, self-reported teacher-student closeness and conflict and self- and peer-reported peer victimization were assessed in a sample of 930 fourth to sixth grade students (M_{age} = 10.55 years, 53.1% girls). Cross-lagged models revealed negative within-time associations between closeness and self-reported peer victimization, and positive within-time associations between conflict and self-reported peer victimization at most time points. Whereas closeness and conflict negatively predicted each other across the school year, no bidirectional longitudinal effects were found between teacher-student relationships and peer victimization.

Introduction

Teachers are key adults in the prevention and reduction of peer victimization at school (Yoon et al., 2020). The current paper focuses on bullying victimization, in which students are the target of intentional and repeated aggression by one or more peers and find it difficult to defend themselves (Olweus, 1993). Since victimized students are at risk of experiencing many negative consequences that can persist into adulthood (e.g., Arsenault, 2018), it is vital to investigate which factors can increase peer victimization or buffer against it. Ecological and transactional frameworks propose that children develop through bidirectional interactions with their environment, if these interactions occur on a relatively regular basis over an extended period of time (Bronfenbrenner & Morris, 2006; Sameroff, 2009). Hence, teacher-student interactions have the potential to influence peer victimization and vice versa. Teachers' affective relationship with students (i.e., the emotional quality of interactions) has already shown to be associated with peer relationships in early adolescence (e.g., De Laet et al., 2014), including peer victimization (e.g., Demol, Leflot, et al., 2020). However, the extent to which positive teacher-student relationships (i.e., characterized by closeness) and negative teacher-student relationships (i.e., characterized by conflict) uniquely contribute to peer victimization over time has hardly been examined. Furthermore, the way in which peer victimization may affect teacher-student relationships has received little research attention so far. The scarce longitudinal studies on this topic have focused mainly on positive teacher-student relationships (e.g., Demol, Leflot, et al., 2020; Leadbeater et al., 2015) or only examined the pathway from teacher-student relationships to peer victimization (e.g., Runions & Shaw, 2013; Troop-Gordon & Kopp, 2011). The current study adds to existing literature by investigating reciprocal associations between two dimensions of the teacher-student relationship (i.e., closeness and conflict) and peer victimization across three time points within one school year in upper elementary school.

Teacher-student relationships and peer victimization

Several scholars have discussed the role of teachers in classroom peer dynamics. Farmer et al. (2011) proposed that teachers have one role as an authority figure who communicates societal rules and expectations regarding acceptable social behavior, and another as a facilitator of students' opportunities for social interaction with peers. As such, teacher-student

relationships may set the tone for the classroom climate and inform peers about the types of relationships they should form with each other (Farmer et al., 2011). In line with this idea, social referencing theory states that young children turn to their adult caregivers for constructing their own meaningful interpretations of situations (Walden & Ogan, 1988). Translating this theory to peer dynamics in the classroom, students at-risk of low peer status have shown to be disliked less and liked more by peers when they perceived that these students were disliked less and liked more by the teacher (Hendrickx, Mainhard, Boor-Klip, et al., 2017). Hence, it is likely that teachers' relationships with individual students form an affective filter impacting peers' attitude towards these students. In addition to social referencing theory, an attachment perspective on teacher-student relationships also explains why affective teacher-student relationships may impact peer relationships. Although attachment theory originally focused on parent-child relationships (Bowlby, 1982), teachers have been argued to serve as ad hoc attachment figures to whom students may turn when they experience challenges or distress (Verschueren & Koomen, 2012; Zajac & Kobak, 2006). Specifically, teachers can promote or undermine individual students' feelings of comfort and security through their interactions (Pianta et al., 2003; Verschueren & Koomen, 2012). By being a secure base to students for exploration of their social environment and a safe haven in times of stress, teachers are able to promote students' peer relationships.

When conceptualizing dyadic teacher-student relationships, scholars often distinguish between closeness and conflict as markers of positive and negative relationship dimensions (Pianta & Steinberg, 1992). In close teacher-student relationships (i.e., characterized by open communication and warm interactions), students use their teacher as a secure base and safe haven, which increases the likelihood that they confidently form positive relationships with their peers (Verschueren & Koomen, 2012). Also, in close teacher-student relationships, students may be more likely to tell their teacher about peer problems they experience, which might decrease the risk of peer victimization. Teachers themselves may also be more prone to detect and tackle peer victimization when it involves a student with whom they have a close relationship (Reavis et al., 2010). Conversely, teacher-student conflict (i.e., disharmony, insecurity, and negativity in the relationship) is viewed as a negative relationship dimension where students fail to use their teacher as a secure base and/or safe haven (Verschueren & Koomen, 2012). This may hamper these students' dealing with conflicts and poses them at risk

for problematic peer relationships (e.g., Pianta et al., 2003), including peer victimization. Moreover, teacher-student conflict may make students less likely to trust their teacher and disclose peer victimization. For example, students may believe their teacher will not take them seriously, blame them for the situation, or make the bullying worse (Bjereld, 2018). Similarly, teachers may be less aware of or interested in the emotions and needs of students with whom they have a lot of conflict, making it harder to detect and tackle peer victimization (Reavis et al., 2010).

Both positive and negative dimensions of the teacher-student relationship have been examined in association with peer victimization, with mixed results. Regarding positive teacher-student relationships, some studies found negative cross-sectional links with peer victimization (e.g., Bae et al., 2019; Raskauskas et al., 2010), whereas others did not find a significant association between the two constructs (e.g., Košir et al., 2020). In a longitudinal study focusing on grades 3 and 4, positive teacher-student relationships have shown to predict subsequent lower levels of peer victimization within and across grades (Leadbeater et al., 2015). However, others found that a close teacher-student relationship did not decrease peer victimization over time in late elementary school (Elledge et al., 2016; Troop-Gordon & Kopp, 2011). Research focusing on negative teacher-student relationships is more limited. Concurrently, positive associations between negative teacher-student relationships and peer victimization have been demonstrated (Marengo et al., 2019; Shin & Kim, 2008). In scarce longitudinal research, Runions and Shaw (2013) found positive associations between teacher-student conflict in prekindergarten and concurrent and later levels of peer victimization. However, in upper elementary school, this longitudinal association was not confirmed (Troop-Gordon & Kopp, 2011).

Although previous research indicates that closeness and conflict have small to moderate negative correlations (Engels et al., 2016; Reavis et al., 2010), and negative reciprocal longitudinal links between positive and negative relationship dimensions have been found (De Laet et al., 2016), both dimensions have hardly been examined together and over time in association with peer victimization. Moreover, existing research has mostly focused on young children. As stated above, teacher-student conflict in prekindergarten has been positively associated with the initial likelihood of peer victimization and the severity of first grade peer victimization (Runions & Shaw, 2013). Additionally, results revealed that higher teacher-student closeness in prekindergarten predicted less severe peer victimization in first grade

(Runions & Shaw, 2013). Furthermore, Reavis et al. (2010) showed that kindergarten teacher-student conflict was associated with more initial peer victimization but did not predict changes in peer victimization over time. Moreover, the study did not find evidence for a prediction of (changes in) peer victimization by teacher-student closeness (Reavis et al., 2010). This is in line with meta-analytic findings, showing that indicators of negative teacher-student relationships were more strongly related to students' externalizing behavior problems than indicators of positive teacher-student relationships (Lei et al., 2016). It is vital to examine the unique contribution of both dimensions of teacher-student relationship quality to peer victimization over time, as findings can potentially highlight two ways to reduce peer victimization.

In line with transactional models (cf. supra, Sameroff, 2009), it is also possible that peer victimization affects teacher-student relationships. This reverse pathway has rarely been examined, which could be due to the traditional focus on teachers as influential socializing agents in student outcomes (e.g., Gest & Rodkin, 2011). Yet, it is likely that teacher-student relationships are altered in response to peer victimization. In line with the principles of attachment theory (Bowlby, 1982), teachers could offer more support towards students who experience peer victimization and seek help from their teacher. Conversely, more peer victimization could predict less positive teacher-student relationships. Peer victimization has shown to increase the likelihood of subsequent externalizing (e.g., aggression, tantrums) and internalizing (e.g., depression, anxiety) problem behaviors (Leadbeater and Hoglund 2009), making it more challenging for teachers to sympathize with and provide help to victimized students. Limited existing studies provide more support for the second hypothesis. Although these studies only focused on positive teacher-student relationships, more peer victimization in grades 3 and 4 has shown to predict less positive teacher-student relationships within and across grades (Leadbeater et al., 2015). Moreover, more peer victimization at the beginning of the school year predicted less supportive teacher-student relationships in the middle of the school year in grades 4 to 6 (Demol, Leflot, et al., 2020). However, similar effects were not found between the middle and towards the end of the school year (Demol, Leflot, et al., 2020). In order to better understand how peer and teacher dynamics interact, it is relevant to investigate whether and in which direction teacher-student relationships and peer victimization affect each other over time.

Developmental considerations

The transition period from childhood to adolescence may be especially relevant for studying reciprocal links between teacher-student relationships and peer victimization. First, peer victimization is likely to be more prevalent among early adolescents than among younger or older students. Meta-analytic findings demonstrated a curvilinear association between age and frequency of victimization, with a peak in early adolescence (Tokunaga, 2010). Additionally, a recent large-scale study among 11- to 15-year-olds showed a decline in peer victimization at school as students grew older (Inchley et al., 2020). Second, research demonstrated that 43% of the students who were victimized in upper elementary school were also victimized in high school three years later (Scholte et al., 2007). Knowing which victimization predictors to address in upper elementary school is important, as tackling these may prevent students from developing stable or chronic victimization and related mental health problems later on (Arsenault, 2018). Third, students usually have only one homeroom teacher in elementary school. Therefore, the impact of teacher-student relationships on peer dynamics might be larger in elementary as opposed to high school, where students spend less time with a single teacher. In line with this idea, research in upper elementary school has shown that teacher-student relationship quality predicts peer likeability over time (De Laet et al., 2014; Hendrickx, Mainhard, Boor-Klip, et al., 2017), suggesting that teachers may still function as social referents for those students. In contrast, a cross-lagged study in high school found hardly any longitudinal links between teacher-student relationships and peer likeability (Engels et al., 2016). Thus, upper elementary school may function as a unique transition period to implement resources aimed at the prevention and reduction of peer victimization.

The current study

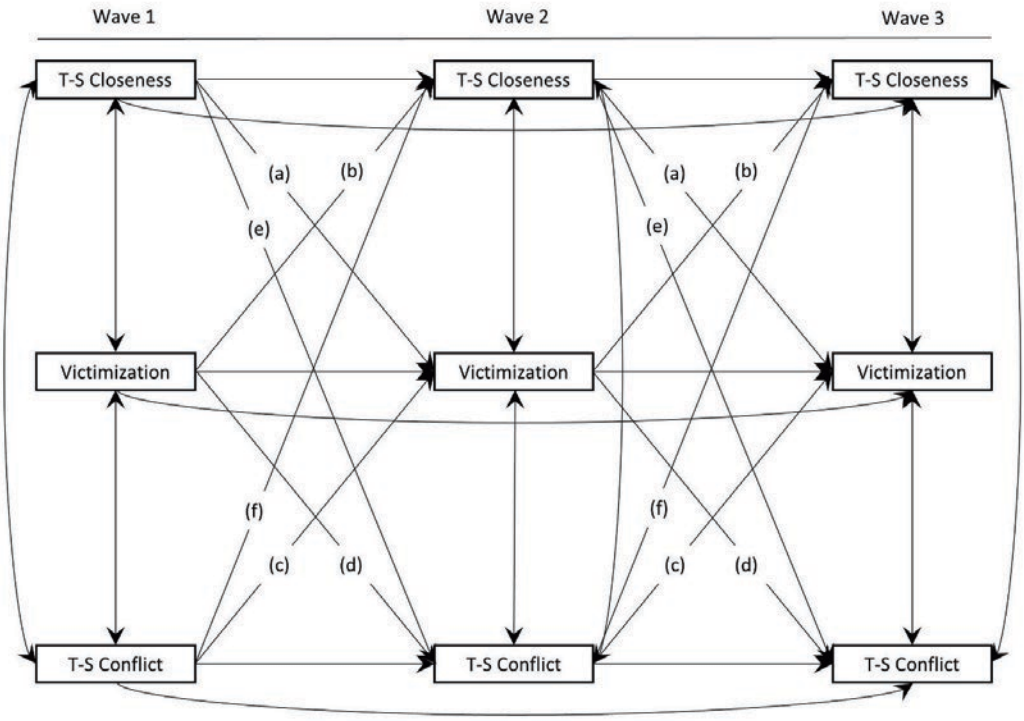
The current study aims to extend prior research in three ways. First, it will investigate bidirectional links between affective teacher-student relationships and peer victimization over time. Second, this study assesses teacher-student relationships in a multidimensional way, focusing on both positive (i.e., closeness) and negative (i.e., conflict) dimensions. Investigating their unique contribution can potentially highlight two ways to reduce peer victimization. Third, this study focuses on students in upper elementary school (grades 4-6), a transition period from childhood to adolescence with a peak in peer victimization. Findings can be useful to target teachers in anti-bullying interventions in an attempt to prevent peer victimization from

persisting into adolescence. Additionally, in general, some teachers may not feel confident tackling peer victimization or do not view it as part of their responsibility (Veenstra et al., 2014). Therefore, this study could help teachers understand the importance of their daily interactions with individual students for students' relationships with peers. Conversely, testing whether peer victimization affects the teacher-student relationship is crucial to prevent a cycle of negative peer and teacher relationships.

Based on theoretical frameworks and previous empirical studies, we formulated multiple hypotheses. Figure 3.1 shows a schematic overview of the hypothesized pathways. Several researchers have theorized about how positive teacher-student relationships may enhance positive relationships among students and decrease peer victimization (e.g., Farmer et al., 2011; Pianta et al., 2003; Verschueren & Koomen, 2012). Conversely, negative teacher-student relationships have been related to more problems in peer relationships, increasing the risk of peer victimization. Therefore, and in line with previous longitudinal research (e.g., Demol, Leflot, et al., 2020; Runions & Shaw, 2013), we expected close teacher-student relationships to be predictive of lower levels of peer victimization (path a). For the opposite path, based on limited evidence on this topic (Demol, Leflot, et al., 2020; Leadbeater et al., 2015), we expected more peer victimization to predict less close teacher-student relationships across the school year (path b). Moreover, in line with previous research findings (Reavis et al., 2010; Runions & Shaw, 2013), we expected teacher-student relationships characterized by conflict to predict more peer victimization over time (path c). We expected to find similar reverse effects (path d), based on transactional models (Sameroff, 2009). Lastly, we expected negative cross-time associations from closeness to conflict (path e) and from conflict to closeness (path f), based on the negative bidirectional associations between both relationship dimensions in prior research (De Laet et al., 2016). To assess whether associations are robust across different informants of victimization, transactional paths were investigated for self- and peer-reported victimization separately. This is important, given that correspondence between self- and peer-reported measures of victimization is generally low to moderate (e.g., Košir et al., 2020; Pellegrini & Bartini, 2000).

Figure 3.1

Hypothesized Associations Between Teacher-Student Closeness, Teacher-Student Conflict, and Peer Victimization



Note. Path labels reflect the formulated hypotheses; T-S = teacher-student.

Method

Participants and procedure

Data were collected among fourth- to sixth-grade elementary school students in in the Flemish community of Belgium at three time points within school year 2018-2019. Data collection occurred in November (Wave 1; W1), February (Wave 2; W2), and April (Wave 3; W3), with a time interval of approximately ten weeks between the time points. Before the data collection started, the Social and Societal Ethics Committee (SMEC) of KU Leuven provided ethical approval. Schools that implemented an anti-bullying program (e.g., KiVa) were not recruited. Once a school's principal and the classroom teachers decided to participate in the

study, active parental consent was sought for all students and 1,051 (81.5%) students received informed consent. Data were missing on at least two waves for 121 students (i.e., 'dropout group'), mostly due to a school that refrained from participation after W1. This resulted in a final sample of 930 students who were present during at least two waves of data collection. Students in the dropout group did not differ from the other students in terms of gender, teacher-student closeness, and peer victimization. However, students in the dropout group were older, $t(1049) = 2.03$, $p = .043$, $d = 0.90$, and reported lower levels of conflict with their teacher, $t(1021) = -2.95$, $p = .003$, $d = 0.64$.

The 930 participants in the study were located in 55 classrooms within 12 elementary schools. They ranged in age from 8 to 13 years ($M = 10.55$ years, $SD = 0.90$), and 53.1% were girls. Of these students, 30.9% were in fourth grade, 36.0% were in fifth grade, and 33.1% were in sixth grade. The majority of participants was born in Belgium (92.1%). Most participants indicated they spoke Dutch at home (86.6%), the remaining 13.4% spoke another language (e.g., French, Turkish, English). Questionnaires were administered during regular school hours, through a paper-and-pencil survey, under supervision of at least one master or doctoral student from the faculty of Psychology and Educational Sciences of KU Leuven. Books or ring binders were placed between participants to enhance privacy and reduce distractions, and confidentiality of students' responses was assured. Moreover, participants received a definition of bullying before completing questionnaires in order to leave less room for subjective interpretations. The supervisor read a description out loud in line with the definition of Olweus (1993). Participants could read the description again at any time during the administration on their own printed copy. Students' answers were matched across the three waves using individual identification codes.

Measures

Teacher-student relationships (self-report). The quality of the affective teacher-student relationship was measured with the Child Appraisal of the Relationship with Teachers Scale (CARTS; Vervoort et al., 2015). In the current study, the dimensions closeness and conflict were used. Closeness was measured with four items (e.g., 'I like to be with my teacher') and conflict was measured with seven items (e.g., 'I often quarrel with my teacher'). Items were scored on a 5-point Likert scale, ranging from 1 (*not true*) to 5 (*true*), and mean scores were

used in the analyses. Previous research supported the reliability and construct validity of the CARTS (Gregoriadis et al., 2020; Vervoort et al., 2015). In this study, reliability across the three waves was high for closeness (α = .84 - .88) and for conflict (α = .82 - .86).

Peer victimization (self-report). Self-reported peer victimization was assessed with the Social Experiences Questionnaire (Crick & Grotpeter, 1998). Students responded to ten items assessing their experienced relational victimization (e.g., 'How often are you left out on purpose when it's time to play or do an activity?') and physical/verbal victimization (e.g., 'How often do you get pushed or shoved?'). Items were scored on a Likert scale (1 = *never* to 5 = *always*). Subscales showed a large correlation at each time point (r = .58 - .74). Therefore, and since this study focused on comparing general self- and peer-reported victimization, we adopted the procedure of Leadbeater et al. (2015) by creating a composite score of peer victimization. Subsequently, mean scores across the ten items were calculated and used in the analyses. Reliability was high at each wave (α = .88 - .89).

Peer victimization (peer-report). Peer-reported peer victimization was assessed at all three waves with a peer nomination item of the Participant Role Questionnaire (Salmivalli et al., 1996). Participants responded to the following question: 'Which classmates are bullied at school by other students?'. An unlimited number of peer nominations was allowed to increase ecological validity (Marks et al., 2013); self-nomination was not allowed. Proportion scores were calculated by dividing the number of received nominations by the number of possible nominations. Although some sociometric constructs can be measured reliably with lower participation rates (Marks et al., 2013), a strict participation rate of at least 60% in each class was used to ensure reliability of the nomination procedure (Cillessen, 2009). Therefore, six classes in the sample with participation rates below 60% (n = 80) were excluded, resulting in 850 students. Additionally, three classes in which less than 10 students participated in the study (n = 20) were excluded from the analyses to prevent biased estimates of the key variables. This resulted in a final subsample of 830 students for the analyses with peer-reported peer victimization.

Statistical analyses

SPSS Statistics Version 27 was used to calculate descriptive statistics and correlations, and Mplus Version 8.4 was used for the main analyses (Muthén & Muthén, 1998-2017). Longitudinal reciprocal associations between teacher-student relationships (i.e., closeness and

conflict) and peer victimization were examined with cross-lagged models (Jöreskog, 1970). This analytical technique can indicate a temporal sequence of longitudinally measured variables by estimating three types of relations among these variables. The first type are autoregressive or stability relations, consisting of predictions of a variable based on prior measures of this variable (e.g., W3 closeness predicted by W1 closeness). The second type are within-time relations, or associations between variables measured at the same time point. This includes initial correlations at W1 (e.g., W1 closeness with W1 peer victimization), and residual correlations at W2 and W3 reflecting correlated change in variables over time (Klimstra et al., 2013). The third type are cross-lagged relations, predicting a variable based on prior measures of another variable (e.g., W2 closeness predicted by W1 peer victimization). Importantly, cross-lagged models assess reciprocal associations while controlling for all concurrent and previous levels of the variables in the model (Jöreskog, 1970).

Prior to analyzing the data, classroom-level intraclass correlations (ICCs) and design effect statistics (Peugh, 2010) were calculated, as students were clustered in classrooms. Since multiple variables had medium to large ICCs (Hox, 2010) and design effect estimates larger than 2, the 'complex analysis' option in Mplus was used to account for the hierarchical structure of the data by correcting the standard errors of estimates (Muthén & Muthén, 1998-2017). Moreover, the Maximum Likelihood with Robust standard errors (MLR) estimator was used. MLR estimates are robust to non-normality and non-independence of observations. Lastly, Full Information Maximum Likelihood (FIML) estimation was used to handle missing data. FIML reduces bias resulting from missing data and gives more accurate hypothesis tests than other estimators (Newman, 2014).

Two models were specified: one model investigating reciprocal longitudinal paths between teacher-student relationships (i.e., closeness and conflict) and self-reported peer victimization (Model A), and another model investigating reciprocal longitudinal paths between teacher-student relationships and peer-reported peer victimization (Model B). Whereas Model A was based on the entire sample of 930 students, Model B used the subsample of 830 students. In both models, we controlled for students' gender (0 = *boy*; 1 = *girl*) and age at W1 by allowing paths from gender and age to closeness, conflict, and peer victimization at each time point. For each model, we compared three types of nested models in an hierarchical manner to indicate the best fitting model for the data. In the first step, a model was tested in

which all paths were unconstrained. In the next step, as this was our study focus, cross-lagged paths were constrained to be equal over time (e.g., the path from W1 closeness to W2 peer victimization constrained to be equal to the path from W2 closeness to W3 peer victimization). In the final step, both cross-lagged and stability paths were constrained to be equal over time (e.g., the path from W1 closeness to W2 closeness constrained to be equal to the path from W2 closeness to W3 closeness). Because the MLR estimator was selected, the chi-square difference test with Satorra-Bentler (S-B) scaling correction was used to compare the fit of the nested models (Satorra & Bentler, 2010). In case of a significant difference ($p < .05$), model fit of the constrained model is considered worse than the unconstrained model. To assess model fit, the average comparative fit index (CFI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA) were calculated (Hu & Bentler, 1999; Steiger, 2007). Following their cut-off scores (Hu & Bentler, 1999), CFI values of ≥ .95 and ≥ .90 are considered as indicators of good and acceptable fit, respectively. SRMR values of ≤ .08 are considered as indicators of good fit, and RMSEA values of ≤ .06 and ≤ .08 are considered as indicators of good and reasonable fit, respectively (Hu & Bentler, 1999).

Table 3.1

Descriptive Statistics and Correlations Among Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Vict. W1	-													
2. Vict. self W2	.72**	-												
3. Vict. self W3	.63**	.75**	-											
4. Vict. peer W1	.34**	.29**	.22**	-										
5. Vict. peer W2	.33**	.36**	.29**	.67**	-									
6. Vict. peer W3	.28**	.30**	.25**	.60**	.66**	-								
7. T-S closeness W1	-.08*	-.08*	-.04	-.02	-.04	-.01	-							
8. T-S closeness W2	-.05	-.09*	-.05	-.01	-.01	-.01	.67**	-						
9. T-S closeness W3	-.06	-.08*	-.07*	-.01	-.01	-.01	.59**	.74**	-					
10. T-S conflict W1	.24**	.20**	.09**	.01	.05	.01	-.53**	-.44**	-.41**	-				
11. T-S conflict W2	.18**	.19**	.13**	-.01	.02	.01	-.43**	-.56**	-.50**	.66**	-			
12. T-S conflict W3	.13**	.13**	.14**	.01	.02	-.00	-.39**	-.49**	-.61**	.57**	.72**	-		
13. Age	-.18**	-.21**	-.16**	-.23**	-.17**	-.16**	-.05	-.05	-.09**	.05	.07*	.09**	-	
14. Gender	.02	.03	.03	-.00	.03	.05	.23**	.22**	.20**	-.21**	-.26**	-.26**	.01	-
N	908	888	905	930	930	929	907	886	905	907	887	905	930	927
Mean (SD)	1.92	1.84	1.74	0.05	0.04	0.03	4.02	3.93	3.86	1.53	1.61	1.56	10.55	0.53
	(0.68)	(0.68)	(0.63)	(0.09)	(0.08)	(0.07)	(0.93)	(0.98)	(1.04)	(0.66)	(0.74)	(0.68)	(0.90)	(0.50)
Observed range	1.00-	1.00-	1.00-	0.00-	0.00-	0.00-	1.00-	1.00-	1.00-	1.00-	1.00-	1.00-	8.77-	0.00-
	4.30	4.20	4.20	0.75	0.79	0.53	5.00	5.00	5.00	4.86	5.00	5.00	13.46	1.00

Note. *N* = number of participants; *SD* = standard deviation; Vict. = peer victimization; self = self-report; peer = peer-report; W1 = wave 1; W2 = wave 2; W3 = wave 3; T-S = teacher-student.

* $p < .05$. ** $p < .01$.

Results

Descriptive statistics and correlations

Descriptive statistics and bivariate correlations among the key variables are presented in Table 3.1. Mean scores on peer victimization (both self- and peer-report) were low. With regard to teacher-student relationships, mean scores on closeness were relatively high and mean scores on conflict were relatively low. As for the stability of the main variables, significant high and positive correlations were found for self-reported peer victimization (*r*s = .63 to .75), peer-reported peer victimization (*r*s = .60 to .67), closeness (*r*s = .59 to .74), and conflict (*r*s = .57 to .72) across the school year (Cohen, 1988). Moreover, at each time point, self-reported peer victimization was significantly and positively associated with peer-reported peer victimization (*r*s = 25. to .36) and conflict (*r*s = 14. to .24), and negatively with closeness (*r*s = -.07. to -.09). Significant high and negative correlations were also found between closeness and conflict at each time point (*r*s = -.53. to -.61). Next, self- and peer-reported peer victimization were significantly, negatively related with age (*r*s = -.16 to - .23). Specifically, students' W3 closeness was lower (*r* = -.09) and students' W2 and W3 conflict was higher (*r*s = .07 and .09, respectively) among older students. Lastly, girls reported significantly more closeness (*r*s = .20 to .23) and less conflict (*r*s = -.21 to -.26) than boys at each time point.

Cross-lagged analyses

To examine reciprocal longitudinal associations between teacher-student relationships and self-reported (Model A) and peer-reported (Model B) peer victimization, cross-lagged analyses were first tested using the unconstrained baseline model. This model showed a good fit, Model A: CFI = 1.000, SRMR = 0.006, RMSEA = 0.004; Model B: CFI = 1.00, SRMR = 0.004, RMSEA < .001. Next, the model with constraints on the cross-lagged paths was tested and did not indicate a significantly worse fit than the unconstrained model, Model A: S–Bχ2(6) = 6.00, *p* = 0.423; Model B: S–Bχ2(6) = 5.66, *p* = 0.462. Therefore, this more parsimonious model was preferred. The model demonstrated a good fit, Model A: CFI = 1.000, SRMR = 0.009, RMSEA = 0.003; Model B: CFI = 1.00, SRMR = 0.011, RMSEA < 0.001. Subsequently, the fully constrained model was tested, in which both the cross-lagged and autoregressive paths were set equal. This model showed a significantly worse fit than the model with only constrained cross-lagged paths, Model A: S–Bχ2(3) = 9.94, *p* = 0.019; Model B: S–Bχ2(3) = 12.62, *p* = 0.006. Hence, for

both Model A and B, the models in which only the cross-lagged paths could be considered equal across time were selected to interpret the results. The final models are displayed in Figure 3.2 (Model A) and Figure 3.3 (Model B). Only significant associations are presented.

In Model A (Figure 3.2), all constructs were relatively stable over time. In addition, teacher-student closeness and conflict were negatively associated at W1. Moreover, changes in closeness and conflict at W2 and W3 were strongly, negatively associated with one another. Results also revealed consistent cross-lagged associations, indicating that closeness negatively predicted conflict across the school year and conflict negatively predicted closeness over time. Regarding self-reported peer victimization and closeness, a negative within-time association was found at W1. Changes in peer victimization and changes in closeness from the beginning (W1) towards the middle (W2) of the school year were also negatively correlated. This trend did not persist until the end of the school year. That is, changes in peer victimization were no longer significantly associated with changes in closeness at W3. A positive within-time associations between self-reported peer victimization and conflict was found at W1, and changes in peer victimization and changes in conflict were positively correlated at W2 and W3. However, no cross-lagged effects of teacher-student relationships on self-reported peer victimization or vice versa were found. In Model B (Figure 3.3), focusing on peer-reported peer victimization, constructs were relatively stable over time as well. Again, teacher-student closeness and conflict were bidirectionally and longitudinally associated over time. That is, closeness consistently predicted less conflict across the school year and conflict predicted decreased closeness over time. No within-time and cross-lagged associations were found between teacher-student relationships and peer-reported peer victimization, when controlling for the clustered data, gender, age, and all previous and concurrent levels of the variables.

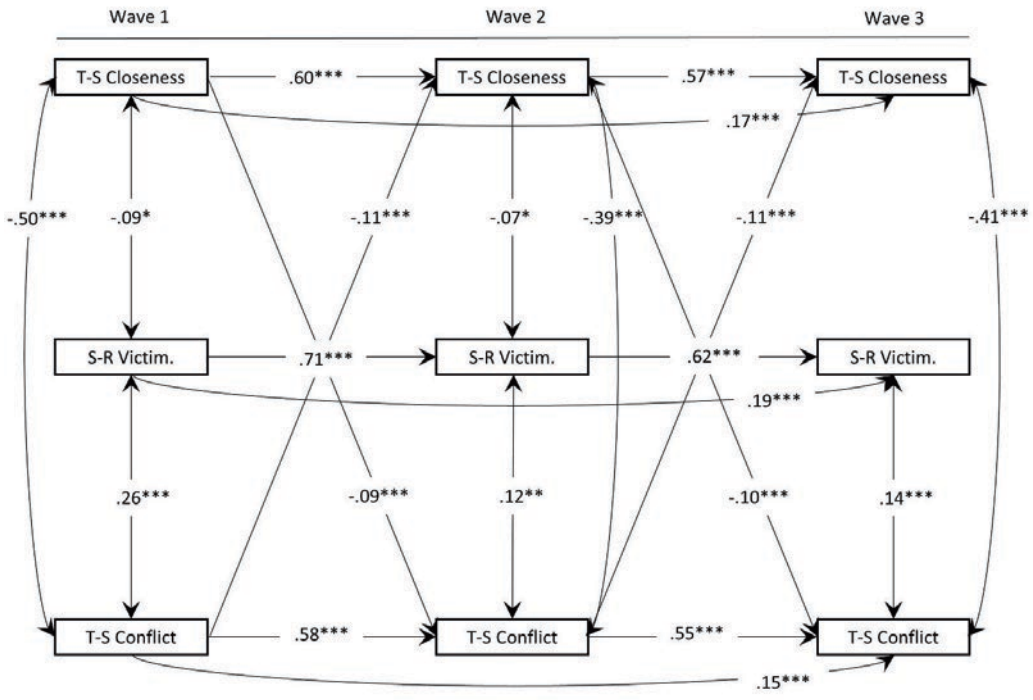
Alternate model analyses

Although model estimation terminated normally, a warning message appeared when using the “complex analysis” option in Mplus to account for the nested nature of the data. The warning message indicated a potential problem with the trustworthiness of the standard errors of two parameter estimates in the model, probably due to having more parameters than the number of clusters minus the number of strata with more than one cluster. Therefore, as a sensitivity analysis, results were compared against results of models in which the clustered data were not accounted for (i.e., without using robust standard errors). Again, the models with

constrained cross-lagged paths were a better fit to the data than the unconstrained model, Model A: S–Bχ2(6) = 5.26, p = 0.511; Model B: S–Bχ2(6) = 5.37, p = 0.498. In addition, the fully constrained model (i.e., both cross-lagged and stability paths constrained equal) had a significantly worse fit than the model with only constrained cross-lagged paths, Model A: S–Bχ2(3) = 10.45, p = 0.015; Model B: S–Bχ2(3) = 17.86, p < 0.001. Hence, for both Model A and B, the models with only constrained cross-lagged paths were used to interpret the results. The models demonstrated a good fit, Model A: CFI = 1.000, SRMR = 0.009, RMSEA < 0.001; Model B: CFI = 1.00, SRMR = 0.011, RMSEA < 0.001. The estimates were similar to those of the models with robust standard errors, and all significant paths remained significant.

Figure 3.2

Cross-Lagged Model of Teacher-Student Relationships and Self-Reported Peer Victimization

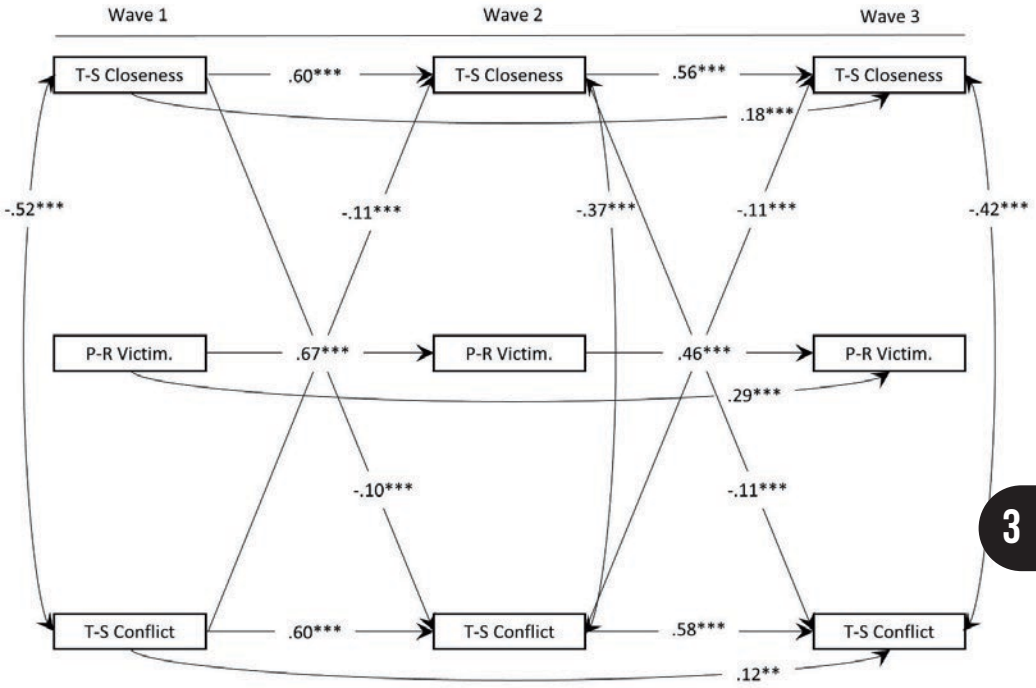


Note. The figure presents significant paths with standardized coefficients; T-S = teacher-student; S-R = self-report; Victim. = victimization; n = 930.

* p < .05. ** p < .01. *** p < .001.

Figure 3.3

Cross-Lagged Model of Teacher-Student Relationships and Peer-Reported Peer Victimization



Note. The figure presents significant paths with standardized coefficients; T-S = teacher-student; P-R = peer-report; Victim. = victimization; *n* = 830.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

Researchers have underscored the importance of teachers as key adults to tackle the persistent problem of peer victimization at school (Yoon et al., 2020). Prior studies have indicated the potential of teachers' affective relationships with students to shape peer dynamics, including peer victimization. However, existing literature on teacher-student relationships and peer victimization has mostly been cross-sectional, focused mainly on positive teacher-student relationships, or did not examine or control for the reverse effect of peer victimization on teacher-student relationships. Specifically in early adolescence, bidirectional associations between the variables are rarely studied. To address these gaps in the literature, the present study investigated reciprocal links between teacher-student relationships and peer

victimization among early adolescents. Specifically, a three-wave longitudinal study across one school year was conducted in a large sample of elementary school students (grades 4-6). A multidimensional (i.e., positive and negative teacher-student relationships) and multi-informant (i.e., self and peer) approach was used to investigate bidirectional associations. Cross-lagged analyses revealed that teacher-student relationships and peer victimization were mainly related within time but did not predict each other across the school year. Teacher-student closeness and conflict were longitudinally and negatively related over time. Below, these findings will be discussed in more detail.

Links between teacher-student relationships and peer victimization

On top of the high stability of all constructs across the school year, results demonstrated that teacher-student closeness was negatively related to self-reported peer victimization at the beginning of the school year. Moreover, changes in these variables towards the middle of the school year were negatively correlated (Klimstra et al., 2013). Specifically, when closeness increased towards the middle of the school year, self-reported peer victimization decreased. These findings are in line with and extend previous cross-sectional research demonstrating that more positive teacher-student relationships are associated with less peer victimization (e.g., Bae et al., 2019; Raskauskas et al., 2010). Moreover, more teacher-student conflict was related to more self-reported peer victimization at the beginning of the school year and positive changes in conflict were related to increased peer victimization towards the middle and the end of the school year. These results confirm and extend prior cross-sectional research about the positive association between negative teacher-student relationships and peer victimization (e.g., Marengo et al., 2019; Shin & Kim, 2008). The present findings generally show that, although students move towards adolescence, teacher-student relationships and peer dynamics are still connected in upper elementary school. As such, they are in line with previous cross-lagged research examining these associations in early adolescence (Demol, Leflot, et al., 2020; Weyns et al., 2018). Although the current study revealed correlated change between teacher-student relationships and peer victimization, it did not examine mediating mechanisms possibly explaining this association. For example, it would be interesting to link teacher-student relationships and peer victimization to peer evaluations of individual students (e.g., likeability) in future studies. Namely, peers' (dis)liking of certain students has shown to be affected by peers' perceptions of whether the teacher (dis)lisked this student (Hendrickx, Mainhard, Boor-

Klip, et al., 2017). This way, the underlying mechanism of the teacher as a social referent for peer victimization could become more clear.

In contrast, no within-time associations were found between teacher-student relationships and peer-reported peer victimization. Several explanations can be given for this discrepancy. First, the findings could indicate a single source bias. Previous research has shown higher associations between teacher-student relationships and student outcomes when the same informant reported about both constructs (Roorda et al., 2011). Alternatively, peer nominations might not capture the experience of peer victimization accurately. For example, it is nearly impossible for peers to notice all subtle forms of peer victimization. To grasp the three key characteristics involved in bullying victimization (i.e., intentionality, repetition, power imbalance), self-report measures might be more suitable than peer nominations (Olweus, 2013). Third, peer nominated and self-reported victimization scores are calculated in a different way and do not necessarily reflect exactly the same phenomena. That is, peer nominations measure the relative frequency of nominations of certain (extreme) students and most students are not nominated at all, while self-reports measure the experienced frequency or seriousness of peer victimization (Olweus, 2013). Researchers are encouraged to be aware of a single-source bias, and when possible, compare outcomes across multiple informants in future studies to get better insight into the robustness of findings.

Contrary to our expectations, no evidence for longitudinal effects of teacher-student relationships on peer victimization was found. These findings differ from several prior studies demonstrating significant associations between teacher-student relationships and later peer victimization (Demol, Leflot, et al., 2020; Leadbeater et al., 2015; Runions & Shaw, 2013). However, the results are in line with other studies that did not find strong evidence for teacher-student relationships as antecedents of later peer victimization among upper elementary school students (Elledge et al., 2016; Troop-Gordon & Kopp, 2011). One possible explanation for the current findings is that peer dynamics, including victimization, could already be relatively established in upper elementary school. This was evidenced by the high stability of peer victimization across the school year and by the similar findings across multiple informants of peer victimization. Another explanation concerns the skills associated with high-quality teacher-student relationships. As theorized by Troop-Gordon and Kopp (2011), warmth, obedience, and politeness might not be suitable skills to protect students from being victimized. It is worthwhile to further investigate underlying characteristics linking closeness and conflict

with peer victimization. Further, a strict analytical approach was used compared to several other studies by taking all previous and concurrent levels of the variables into account. Lastly, the short time-interval between the three waves possibly left little room for changes in teacher-student relationships and peer victimization. Consequently, cross-lagged effects on top of the stability of constructs could have been difficult to detect.

The present study design allowed to examine the reverse link as well. Specifically, it was tested whether more peer victimization predicted lower-quality teacher-student relationships over time. We did not find support for this hypothesis. These null findings held for closeness and conflict, and for self- and peer-reported peer victimization. Despite the fact that looking at the reverse pathway is a relatively new line of research, the current findings contrast those of Demol, Leflot, et al. (2020). Among students in grades 4-6, more peer victimization at the beginning of the school year predicted less supportive teacher-student relationships in the middle of the school year (Demol, Leflot, et al., 2020). Although these limited findings call for more research and we did reveal correlated change in the variables, the non-significant cross-lagged paths suggest that teacher and peer relationships may become more "separate worlds" in early adolescence in their influence on each other over time (Engels et al., 2016). Furthermore, the results underscore the importance of looking at constructs bidirectionally and over time instead of cross-sectionally. This way, the temporal sequence of variables can be investigated, which helps researchers to draw conclusions about the importance of teachers as key interaction figures for peer relationships. Therefore, future researchers are encouraged to adopt cross-lagged designs when studying risk and protective factors of peer victimization across different time points in childhood and adolescence.

Interestingly, we found bidirectional longitudinal associations between teacher-student closeness and conflict. Specifically, more closeness consistently predicted less conflict across the school year and more conflict predicted less closeness over time. The cross-lagged findings are in line with results from De Laet et al. (2016) in grades 7-9, showing that teacher-student affiliation and teacher-student dissatisfaction were reciprocally and negatively related across three annual waves. Also within time points, both constructs were highly and negatively associated. These associations were higher than those of other studies, which found only small to moderate correlations (Engels et al., 2016; Reavis et al., 2010). One potential explanation for this difference could be that Engels et al. (2016) used peers and Reavis et al. (2010) used teachers as informants of teacher-student relationships, who may each have different

perspectives on the affective relationship quality than students themselves. Future studies could benefit from a multidimensional approach, in order to investigate how positive and negative teacher-student relationship dimensions uniquely relate to each other and to other student outcomes.

Practical implications

The present findings have several implications for prevention and intervention efforts to reduce peer victimization in schools. First, teacher-student relationships and peer victimization were relatively stable across the school year. For teacher-student relationships, this indicates the importance of investing in reducing negativity at the beginning of the school year and promoting positive relationships. Focusing on building positive dyadic relationships with individual students has shown to have benefits across the rest of the school year (Vancraeyveldt et al., 2015). For peer victimization, these findings highlight a need to focus on signals of bullying and set the tone for a supportive classroom atmosphere from the first days of the school year. Introductory activities such getting to know each other and establishing clear rules with the class group about bullying can help to build a positive group atmosphere (Kincade et al., 2020), and thereby aid to minimize peer victimization during the remainder of the school year. Second, beyond the high stability of constructs, unique and additive links of closeness and conflict with self-reported peer victimization were found at the beginning of the school year. Moreover, results revealed correlated change in the variables: when closeness increased towards the middle of the school year, self-reported peer victimization decreased. Meanwhile, positive changes in conflict were related to increased peer victimization towards the middle and the end of the school year. Hence, in prevention and intervention efforts, both dimensions deserve attention. Especially avoidance of teacher-student conflict seems worthwhile, as consistent positive links with self-reported peer victimization were found across the whole school year. These findings are in accordance with previous work demonstrating stronger links between students' externalizing behavior problems and indicators of negative teacher-student relationships than indicators of positive teacher-student relationships (Lei et al., 2016). Since teachers still need to reprimand misbehaving students, they can attempt to reduce conflict by letting compliments outweigh corrections, clarifying the reason for punishment, or by emphasizing disapproval of the student's behavior instead of the student as a person. Third, results demonstrated that closeness and conflict negatively predict each other across the

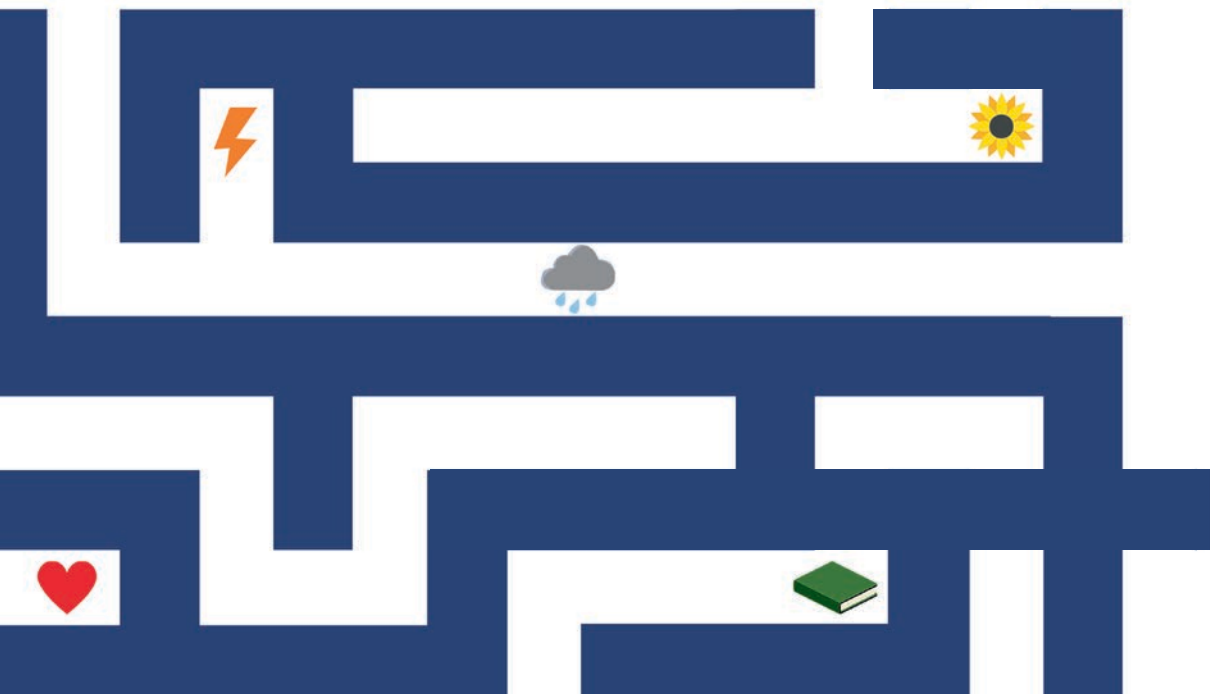
school year. This indicates two ways in which a positive classroom atmosphere can be promoted: by decreasing conflict and by promoting closeness between teachers and individual students. Several interventions targeted at improving teacher-student relationship quality have already shown to enhance closeness and reduce conflict between teachers and students (Duong et al., 2019; Spilt, Koomen, Thijs, et al., 2012; Vancraeyveldt et al., 2015).

Strengths and limitations

Strengths of this study include the large sample of early adolescents that was examined at three time points within one school year. Additionally, a multidimensional approach was adopted by including positive and negative teacher-student relationships (i.e., closeness and conflict) and two measures of peer victimization (i.e., self-report and peer-report). Furthermore, cross-lagged analyses allowed to assess reciprocal associations between teacher-student relationships and peer victimization while controlling for concurrent and previous levels of all variables. Nevertheless, the current results must be considered in light of several limitations. First, regarding the sample, this study made use of convenience sampling. Schools who actively try to tackle bullying may have been more willing to participate in the study and continue participation as compared to schools who do not view this as a priority. Relatedly, students who missed questionnaire data on at least two time points were not included in the analyses. Meanwhile, those students were older and experienced less teacher-student conflict than the rest of the students. Hence, retention of the drop-out group may have resulted in slightly different findings. Second, we relied only on student reported measures of the teacher-student relationship. Therefore, the question remains whether students' own interpretations of their relationship with teachers align with the perspectives of teachers and peers. Peer and teacher reports of dyadic teacher-student relationships could provide interesting insights into the role of teachers as social referents. Third, regarding teacher-student relationships, only the dimensions closeness and conflict were taken into account. Dependency (i.e., age-inappropriate overreliance of students on their teacher) was not included in the models (Pianta, 2001). To improve our insight into this understudied dimension (Verschueren & Koomen, 2020), it would be interesting to consider the relative impact of all three dimensions in future research.

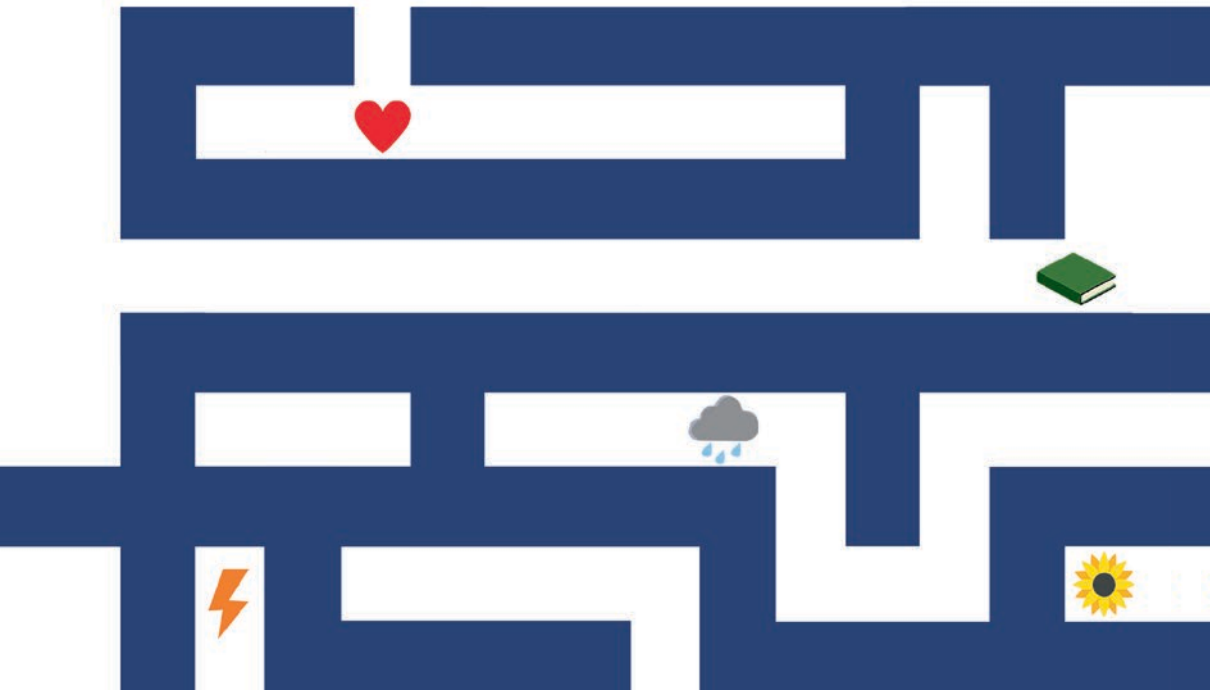
Conclusion

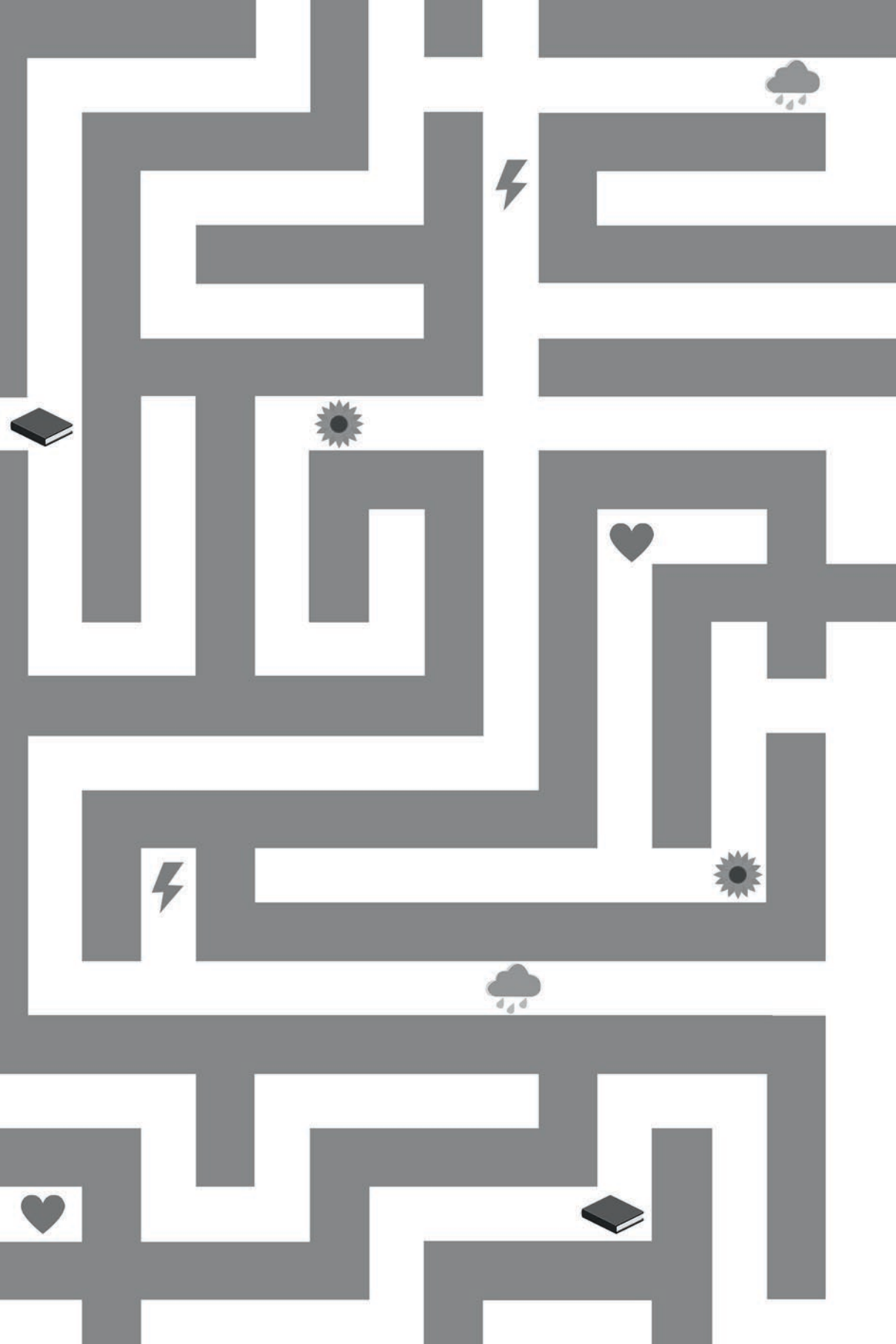
Peer victimization can have numerous detrimental consequences for victimized students that can persist into adulthood (Arsenault, 2018), making it vital to investigate risk and protective factors associated with peer victimization. The current study aimed to improve our understanding of peer victimization in schools by focusing on the teacher, a key interaction partner whose affective relationships with students can shape peer dynamics. Although teachers are key adults in the prevention and reduction of peer victimization at school (Yoon et al., 2020), no studies so far have assessed reciprocal links between positive and negative teacher-student relationships and peer victimization. The current three-wave longitudinal study used a multi-dimensional (i.e., positive and negative teacher-student relationships) and multi-informant (i.e., self and peer) approach to assess cross-lagged associations in a large sample of upper elementary school students. This study showed that teacher-student closeness and conflict were uniquely and independently associated with self-reported peer victimization and change in variables was correlated at most time points. However, no evidence was found for cross-lagged associations relating teacher-student relationships to later peer victimization or vice versa. Teacher-student closeness and conflict did show reciprocal and negative links over time. As all constructs were relatively stable over time, the current findings highlight the need for early prevention and intervention efforts to tackle peer victimization, build positive teacher-student relationships and especially reduce negative teacher-student relationships. In sum, the present study underscores that upper elementary school is a unique transition period to target teacher-student relationships and prevent peer victimization from stabilizing into adolescence.



PART II

TEACHER RESPONSES TOWARDS BULLYING





CHAPTER 4

SPEAK UP OR STAY SILENT: CAN TEACHER RESPONSES TOWARDS BULLYING PREDICT VICTIMIZED STUDENTS' DISCLOSURE OF VICTIMIZATION?

This chapter is based on:

ten Bokkel, I. M., Stoltz, S. E. M. J., van den Berg, Y. H. M., Orobio de Castro, B., & Colpin, H. (2021). Speak up or stay silent: Can teacher responses towards bullying predict victimized students' disclosure of victimization? *European Journal of Developmental Psychology,* 1-17. https://doi.org/10.1080/17405629.2020.1863211

ABSTRACT

Many children who are victimized by their peers do not tell their teacher. Subsequently, teacher intervention and support are not likely to take place. To investigate the role teachers can play to promote disclosure of victimized students, we examined (1) the prevalence of disclosure to teachers, and (2) the extent to which teachers' responses towards bullying longitudinally predict victimized students' disclosure to their teacher. Participants were 874 Dutch elementary school students (grades 4-6) who reported being victimized, and their teachers. Of the victimized students, 76.8% reported that they disclosed to someone and 58.3% of them told their teacher. Multilevel binary logistic regression among all victimized students and a subsample of persistently victimized students (*n* = 316) revealed that neither teacher-reported active intervention nor passive intervention at T1 predicted victimized students' likelihood to disclose to their teacher at T2. Implications for future research and for educational practice are discussed.

Introduction

One in ten students reports to have been repeatedly bullied at school during the past months (Inchley et al., 2020). Being bullied can be a highly distressing experience for children and adolescents, with potential long-lasting negative consequences for social relationships, physical and mental health (e.g., McDougall & Vaillancourt, 2015). Given this dramatic impact, it is alarming that many victimized students do not share their experiences with others. From 20% to 33% of victimized early adolescents does not tell anyone (e.g., Blomqvist et al., 2020). Moreover, bystanders witnessing a bullying situation at school are often hesitant to tell teachers (Oliver & Candappa, 2007) and bullying frequently takes place outside of the teachers' view (Fekkes et al., 2005). Because awareness of a bullying incident is a prerequisite for intervention and support, reports by victimized students are often teachers' only source of information.

Schools often encourage students to contact adults in case of problems (Bjereld, 2018). Because of their close proximity to all students and their responsibility to create a safe classroom climate (Brendgen & Troop-Gordon, 2015), teachers are unique persons for victimized students to turn to. This is especially important because teachers often struggle to identify victimized students (Oldenburg et al., 2016). However, victimized students tell parents and friends more often than teachers (e.g., Blomqvist et al., 2020). Feeling confident to tell teachers is crucial though, as teachers appear to be more successful than parents and classmates in stopping bullying (Fekkes et al., 2005) and in some countries even have a legal obligation to do so.

For victimized students, the decision to disclose to a teacher is a complex trade-off between potential costs and benefits. First, they may be anxious that their situation will worsen when they tell their teacher (e.g., T. Shaw et al., 2019). Further, students may be ashamed, convinced they will not be taken seriously or even will be blamed by teachers for provoking or not standing up to victimization (Bjereld, 2018). In turn, teachers may misinterpret non-disclosure by a victimized student as the absence of need for support, while the student might actually have that need. This begs the question to what extent teachers can facilitate disclosure.

To improve our understanding and (preventive) intervention to promote victimized students' disclosure, we urgently need more prevalence studies and longitudinal research investigating whether teachers can influence victimized students' disclosure. Therefore, this

study aims to (1) outline the prevalence of victimized students' disclosure to teachers, and (2) investigate whether teachers' responses towards bullying predict victimized students' disclosure to their teacher. Once we know under which conditions victimized students are more likely to approach their teacher for help and support, we can adequately train teachers to create a safe environment in which victimized students feel confident to speak up.

Teachers' role and responses towards bullying

Attachment theory has often been used as a framework to explain teachers' role in students' adjustment (Bowlby, 1982; Verschueren & Koomen, 2012). According to this theory, teachers can serve as a safe haven for their students and as a secure base to explore their environment from. Although teachers do not have the exclusive and long-lasting bond that parents and children have, they are around for one or multiple years and can serve as "ad hoc" attachment figures to whom students can turn for help and comfort in times of distress. Research already showed that a warm teacher-student relationship can buffer against negative consequences of victimization (Troop-Gordon & Kuntz, 2013). Based on this framework, it can be assumed that teachers can promote victimized students' disclosure to them by creating a safe environment.

This study focused on teacher responses towards bullying as potential incentives for victimized students' to disclose. When teachers see or hear about bullying situations in school, their subsequent response and its effectiveness are viewed by students. When teachers display active responses towards bullying incidents (e.g., by separating students involved), they may convey a message to victimized students that they are there to stop bullying and re-install security once they discover it. Accordingly, Cortes and Kochenderfer-Ladd (2014) found that students who believed that their teacher would actively intervene reported more willingness to disclose to their teacher. Conversely, little or passive teacher intervention (e.g., promoting avoidance of bullies) may be perceived by students as if a teacher does not care or cannot protect them against bullying (e.g., Yoon & Kerber, 2003). Accordingly, this signal may not create the safe environment that the victimized students need and, in turn, make them more likely to remain silent. However, most studies so far used hypothetical bullying scenarios. As such, the effect of teachers' self-reported responses in real bullying situations on victimized students' disclosure has not been examined to date.

The current study

In sum, the purpose of this study is to unravel teachers' role in facilitating victimized students' disclosure to their teacher. First, we aim to outline how many victimized students disclose to their teacher using an exploratory approach. Second, we aim to examine whether active or passive teacher interventions predict the likelihood of victimized students' disclosure to their teacher in a nationwide sample. Both aims are first investigated among all students who are victimized at one time point and subsequently among a subsample of these students who were also victimized at a previous time point (i.e., persistently victimized students). Based on conceptualizations of previous studies (e.g., Cortes & Kochenderfer-Ladd, 2014) and in line with an attachment perspective (Verschueren & Koomen, 2012), we hypothesize that more active teacher responses (involving clear action, i.e., reprimand bullies, contact parents, separate students) promote victimized students' feelings of safety, and thereby increase the likelihood to disclose. We expect that displaying passive teacher responses (involving little action, i.e., suggest avoidance, assertion or independent coping) signals an unsafe environment for disclosure, and subsequently predicts a decreased likelihood to disclose.

This study addresses several limitations of previous research. First, it adds to the scarce longitudinal research on teachers' role in victimization processes. Second, it measures actual disclosure by actual victimized students, whereas most studies so far assessed intentions to disclose in hypothetical situations (e.g., Cortes & Kochenderfer-Ladd, 2014). It is also the first study investigating disclosure among persistently victimized students, as this group is most at-risk for negative long-term consequences (Arsenault, 2018). Moreover, using teacher and student reports grasps the complexity of victimization and disclosure from the angles of central informants. Lastly, this study meets a call for more culturally diverse studies on disclosure by Blomqvist et al. (2020) by investigating prevalence rates in Dutch elementary schools.

Method

Recruitment and procedure

Data came from a longitudinal, nationwide investigation of the effectiveness of anti-bullying programs in the Netherlands (Orobio de Castro et al., 2018). Schools interested in implementing one of the programs were recruited. After the schools' consent to participate, this study conducted seven cluster randomized and quasi-experimental trials with two waves

of data collected within one school year (T1 = September/October 2016, T2 = June/July 2017) among students (Grade 4–6) and their teachers. In each trial, schools chose universal anti-bullying programs and implemented them either after T1 (intervention condition) or after T2 (waiting list condition). A quasi-experimental design was used in which most participating schools were randomly assigned to the intervention or waiting list condition, whereas some other schools chose the start date of program implementation themselves. A two-tailed independent samples *t*-test showed that students' victimization status at T2 did not significantly differ between the intervention condition (N = 2711, M = 1.66, SD = 1.16) and the waiting list condition (N = 2939, M = 1.62, SD = 1.15), $t(5648) = -1.343$, $p = .18$). Moreover, data inspection revealed no statistically significant effect of intervention status on victimized students' T2 disclosure, $\beta = -.095$, $SE = .136$, $R^2 = .001$, $OR = .909$, 95% CI [0.70, 1.19], $p = .484$. Therefore, we pooled together all students (i.e., waiting list and intervention condition) in subsequent analyses. Nevertheless, intervention status was controlled for in the analyses when predicting disclosure.

Ethics approval was obtained from the Institutional Review Board of the Radboud University in Nijmegen. Active informed consent was obtained from schools and teachers, and passive consent from parents/guardians. Parents/guardians of 71 students objected to participation. At both waves, students completed online self-report questionnaires with individual identification codes during regular school hours for approximately 45 min. Videos informed students about the study aims and set-up, and about the definition of bullying. Confidentiality of students' responses was assured and students' answers were matched across time points using their identification codes. Teachers' self-report questionnaires were administered online at T1 and completion took roughly 10 min. Our hypotheses, sampling procedure and main analyses were preregistered at the Open Science Framework (https://osf.io/9fjzx). Based on the scope of the special issue in which the paper was included, this study focused on teacher responses towards bullying. Obtaining prevalence information about disclosure was added as a descriptive research question.

Participants

Participants were drawn from the total sample of 5,651 students who answered the questionnaire at T2, located in 277 classrooms in 70 elementary schools. Participants were a subsample of students who indicated being victimized at least two or three times in the months

prior to T2 (cf. Solberg & Olweus, 2003). The subsample comprised 874 students (46.3% girls; M_{age} = 10.23; SD_{age} = 1.13), located in 243 classrooms in 70 schools. Of these students, 445 were located in the waiting list and 429 in the intervention condition. Most students (93.5%) were born in the Netherlands. Three hundred and sixteen students (26.2%) indicated they were also victimized at least twice in the months preceding T1 (i.e., persistently victimized students). We also administered questionnaires to their teachers (*N*=238; 70.1% female; 18.8% male; 11.1% missing). In case two teachers were working part-time in the same class, we assessed the teacher who spent most hours in class with the students during the week. Namely, students have most opportunity to view this teacher's bullying responses and to tell them about their victimization.

Measures

Peer victimization. Peer victimization was measured with a widely used item from the *Revised Olweus Bully/Victim Questionnaire* (Solberg & Olweus, 2003), as we were interested in a broad range of victimization experiences. First, students watched a video explaining Olweus' (1993) definition of bullying, emphasizing the key features of intentionality, repetition, and power imbalance. Next, students reported how often they were victimized at school in the past few months on a five-point scale (1 = *I have not been victimized in the past couple of months*, 5 = *Several times a week*).

Disclosure of victimization to teacher. Students who indicated being victimized were asked whether they told someone about it. When they indicated they did, they could mention multiple people, i.e., (1) father/mother/caretaker, (2) brother/sister, (3) friend, (4) teacher, and/or (5) somebody else. Students who indicated that they disclosed to the teacher were labelled as *1*, those who did not as *0*.

Teacher responses towards bullying. A Dutch translation and short version of the *Classroom Management Policies Questionnaire* (CMPQ; Troop-Gordon & Ladd, 2015) was used to measure teacher responses towards bullying. Teachers indicated how often they used the following strategies for managing bullying in their classroom: contact parents (e.g., '*I try to involve the parents of the bully in solving the problem*'), separate students (e.g., '*I send away the bully from the place where it happened*'), reprimand aggressors (e.g., '*I punish students when they bully others*'), suggest avoidance (e.g., '*I ask the victim to stay away from the bully*'), suggest assertion (e.g., *'I ask the victim stand up more for him-/herself'*), and independent

coping (e.g., '*I tell the victim to deal with it by him-/herself*'). Items (n = 15) were answered on a 5-point Likert scale (0 = *never*, 4 = *always*). Whereas the original CMPQ included all questions twice (for boys and girls separately), our questions were not specified per gender because of high correlations between boy and girl subscales ($rs \geq .81$) in the original questionnaire (Troop-Gordon & Ladd, 2015).

The psychometric properties for the revised and shortened CMPQ were assessed using exploratory and confirmatory factor analyses (CFAs) among the entire teacher sample that answered the questionnaire (N = 335). First, principal-axis factor analysis with Oblimin rotation was conducted as we expected the factors to correlate. Based on the scree plot, eigenvalues and theoretical considerations, a two-factor structure appeared optimal. Next, CFAs were conducted while non-normality was handled using the Maximum Likelihood with Robust standard errors (MLR) estimator. Models with mono- and multiple factor structures were compared and model fit was evaluated using the chi-square statistic (χ^2), comparative fit index (CFI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA; Kline, 2011). Following their cut-off scores (Hu & Bentler, 1999; Steiger, 2007), a two-factor model distinguishing between more active and more passive teacher interventions fit the data most adequately, $\chi^2(52) = 146.94$, $p < .001$, CFI = 0.897, RMSEA = 0.079, SRMR = 0.059.

Based on the modification indices, three items were removed due to low loading on the factors (<.20) and one item ('I place the victim and the bully away from each other in the classroom or on the playground') was moved from the active to the passive response factor. Specifically, placing victimized and bullying students away from each other does not involve actively addressing the bully or the class group and might therefore still make victimized students feel like they are on their own in dealing with bullying situations. The two final factors were reliable: the active response factor contained four (α = .66) and the passive response factor eight items (α = .82). Factor scores were created for active and passive teacher responses separately and used in subsequent analyses. Taking this approach, the relative weight of items was taken into account and noise that would have been created when using latent variables was removed.

Control variables. First, we controlled for intervention status by labelling students in waiting list schools as *0* and students in intervention schools as *1*. Students' age and gender were included as control variables. Lastly, in analyses focusing on the subgroup of persistently

victimized students at both waves (*n* = 316), this study additional controlled for students' disclosure to their teacher at T1. Persistently victimized students are most at-risk for negative long-term consequences resulting from bullying (Arsenault, 2018) but, to our knowledge, no study investigating disclosure has controlled for previous disclosure.

Statistical analysis

Statistical analyses were conducted in software program R, using the 'lme4' package for mixed effects modelling (Bates et al., 2015). In our regression models, T2 disclosure to the teacher was the binary outcome variable and a random intercept for classroom was included to account for the nested nature of our data. The bobyqa (Bound Optimization by Quadratic Approximation) optimizer was specified to achieve model convergence. Since 18 students (2% of the sample) were missing teacher ratings and one student did not respond to the T2 disclosure item, they were removed from the analyses.

Results

Descriptive statistics and correlations

Table 4.1 presents bivariate correlations among the study variables. In the total sample of T2 victimized students, a significant, positive and small correlation between age and disclosure (r = .11) was found (Cohen, 1988). Hence, older students disclosed to teachers more often. Moreover, a significant, positive correlation was found between active and passive teacher responses (r = .38). This moderate association demonstrates that teachers who reported to display more active responses, also reported displaying more passive responses towards bullying. Overall, teachers used slightly more active (M = 3.43, SD = 0.64) than passive response strategies (M = 3.00, SD = 0.62). In addition, a significant, positive and small correlation between passive teacher responses and study condition was found (r = .27). Thus, teachers reported more passive responses when being located in the intervention condition as compared to the control condition. No significant correlations were found between teacher responses and T2 disclosure. In the subsample of persistently victimized students, a significant, positive and small correlation between T1 and T2 disclosure (r = .20) was found. Disclosing to the teacher at T1 was related to telling them again at T2. Hence, disclosing to the teacher remained relatively stable across the school year. Lastly, gender correlated significantly and

positively with T1 disclosure (r = .12). This small association indicates that persistently victimized boys disclosed to teachers at T1 more often than girls. Table 4.2 presents an overview of the frequencies of victimized students' disclosure to others at T1 and T2. At both time points, victimized students disclosed to a parent or caretaker most often (75.0% and 80.6%, respectively). Disclosure of victimization to the teacher was approximately equally common at T1 (58.8%) and at T2 (58.3%).

Table 4.1

Correlations Between Study Variables (n = 874)

	1	2	3	4	5	6	7
1. T2 disclosure to teacher	-						
2. Active teacher responses	-.02	-					
3. Passive teacher responses	.04	.38[a]***	-				
4. Study condition	-.02	.08[a]	.27[a]***	-			
5. Age	.11**	-.06	-.01	-.02	-		
6. Gender	-.02	.04	-.01	-.02	-.03	-	
7. T1 disclosure to teacher[b]	.20***	-.01	-.07	.06	.07	.12*	-

[a] n = 234; [b] n = 316 (persistently victimized students)

*p <.05. **p < .01. *** = p <.001

Table 4.2

Frequencies of Disclosure of Victimization at T1 and T2

	T1 disclosers (n = 216)		T2 disclosers (n = 671)	
	n	%	*n*	%
To father/mother/caretaker	162	75.0	541	80.6
To friend	134	62.0	401	59.8
To teacher	127	58.8	391	58.3
To brother/sister	69	31.9	183	27.3
To someone else	58	26.9	139	20.7

Note. $n_{\text{T1 victimized students}}$ = 316, $n_{\text{T2 victimized students}}$ = 874.

Table 4.3

Multilevel Binary Logistic Regression Parameter Estimates of Disclosure to Teacher

	All T2 victimized students (*n* = 855)		Persistently victimized students (*n* = 316)	
Independent variables	*B (SE)*	Odds Ratio (95% CI)	*B (SE)*	Odds Ratio (95% CI)
Active teacher responses	-0.17 (0.20)	0.84 [0.57, 1.24]	-0.47 (0.31)	0.62 [0.33, 1.17]
Passive teacher responses	0.29 (0.19)	1.33 [0.91, 1.96]	0.45 (0.33)	1.57 [0.82, 3.03]
Study condition	-0.13 (0.16)	0.88 [0.64, 1.20]	-0.03 (0.25)	0.97 [0.59, 1.61]
Age	0.21* (0.07)	1.23 [1.08, 1.40]	0.34* (0.11)	1.41 [1.14, 1.78]
Gender	-0.04 (0.15)	0.96 [0.73, 1.28]	0.11 (0.25)	1.11 [0.69, 1.82]
T1 disclosure	-	-	0.82* (0.25)	2.26 [1.40, 3.74]

Note. CI = confidence interval, Study condition (0 = *control*), Gender (0 = *girl*)

*= p <.001.

Likelihood to disclose

To assess the effect of teacher responses on victimized students' subsequent disclosure (Aim 2), we first examined whether T1 teacher responses predicted the likelihood of T2 disclosure to the teacher. After checking assumptions and model diagnostics, analyses were executed among all students victimized at T2 (n = 855; complete cases) while controlling for gender, age and study condition. Table 4.3 displays that being older slightly increased the likelihood for victimized students to disclose to their teacher at T2 (*OR* = 1.23, 95% CI [1.08, 1.40]). Teacher responses did not significantly predict disclosure (OR_{active} = 0.84, 95% CI [0.57, 1.24], $OR_{passive}$ = 1.33, 95% CI [0.91, 1.96]). The model explained 6.5% of the variance in the likelihood of T2 disclosure to the teacher.

Next, we examined whether teacher responses predicted the likelihood of T2 disclosure in the subsample of persistently victimized students (n = 316), additionally controlling for T1 disclosure. Table 4.3 shows similar patterns as the previous model in terms of statistical significance of age (*OR* = 1.41, 95% CI [1.14, 1.78]) and teacher responses (OR_{active} = 0.62, 95% CI [0.33, 1.17], $OR_{passive}$ = 1.57, 95% CI [0.82, 3.03]). Moreover, T1 disclosure was predictive of the likelihood of T2 disclosure (*OR* = 2.26, 95% CI [1.40, 3.74]). When victimized students told their teacher at T1, they were more than twice as likely to disclose at T2 as well. This model

explained 12.1% of the variance in T2 disclosure to the teacher. As a robustness check, we conducted additional analyses using only students in the waiting list condition. This yielded mainly similar results. Therefore, results from the larger and more representative sample combining both study conditions are reported.

Discussion

Although teachers are key adults in tackling bullying, the question to what extent their responses towards bullying might facilitate victimized students' disclosure was largely unexplored. Knowing about bullying is the first step for teachers to intervene and offer support. Therefore, this study investigated (1) the prevalence of disclosure to teachers, and (2) whether teacher responses towards bullying predict victimized students' later disclosure to the teacher in a large sample of victimized early adolescents.

Prevalence of disclosure

Results indicated that 76.8% of victimized students told someone, which is equal to or higher than rates reported in previous studies (e.g., Blomqvist et al., 2020). This may be related to a growing consciousness of negative consequences and disapproval of bullying in our society. Nonetheless, one in four victimized students still remains silent. Although disclosure might worsen the situation for some students (e.g., T. Shaw et al., 2019), at least the attention of the environment is directed at the bullying. When staying silent, victimized students suffer without even the possibility for others to intervene and offer essential support.

The finding that 58.3% of T2 disclosers told their teacher indicates that a majority views the teacher as a safe haven for help and comfort when experiencing distress. However, four in ten disclosers do not, which shows that teachers cannot solely rely on information received from victimized students for tackling bullying. Active monitoring (e.g., targeted observations, inquiries about classroom peer relationships) remains an important additional step for teachers to identify victimized students. Based on our findings, teachers are urged to be more open to signs of bullying in their classroom and on the playground and clarify to students under which circumstances someone is considered a "tattletale".

Teacher responses

Persistently victimized students' tendency to disclose was relatively stable across the school year, irrespective of what teachers said they did. The finding that more active teacher responses did not predict victimized students' likelihood to disclose could be explained by the nature of the items in the scale, which all reflected actions directed at the bullying students. Previous studies demonstrate that punishing bullies can be associated with less likelihood to report to a teacher (Cortes & Kochenderfer-Ladd, 2014), for instance out of fear of retaliation (Bauman et al., 2016). More passive teacher responses were not predictive of disclosure either. Although these responses are directed at victimized students (e.g. by asking them to avoid bullies), they might still have missed an essential element of emotional support. Importantly, 'feeling listened to' was the adult response most often perceived by victimized students to improve their situation (Bauman et al., 2016). Therefore, future studies are encouraged to focus on the development of a valid and reliable teacher measure of a range of their recalled responses to actual bullying events. A more nuanced teacher report with components such as victim support (e.g.,Wachs et al., 2019) might be more relevant to relate to disclosure than the instrument we opted for in our study.

In sum, our study found no effects of teacher responses on victimized students' subsequent disclosure to their teacher. With regard to explanations at the teacher level, teachers' indicated responses towards victimized students *in general* were assessed. Perhaps teachers did not apply the reported strategies towards the victimized students in our sample, but to others. Hence, the victimized students in our sample may not have experienced these signals of (un)safe environments. Asking victimized students about their perception of teachers' responses would help solve this issue. Alternatively, there might be important third variables that were not assessed in our study, such as teacher availability, ability to assist, and confidentiality (Yablon, 2017). Investigating the interplay between teacher responses and other factors when predicting disclosure is recommended. Lastly, as inadequate teacher responses might signal to victimized students that disclosure will not be helpful, more research into predictors of teacher responses towards bullying is warranted. Whereas teachers cannot intervene if they are ignorant of students being victimized (Oldenburg et al., 2016), some teachers may believe that bullying is part of growing up, lack the confidence to intervene or put little effort in reducing bullying (Veenstra et al., 2014). Countering teacher misperceptions and training them about appropriate response strategies is crucial.

Interestingly, the positive relationship between teachers' active and passive response strategies highlights the complexity of responding to bullying. Apparently, some teachers respond to bullying in multiple ways (i.e., both active and passive) whereas others mostly use one strategy or do not respond at all. Different bullying situations might require different and sometimes combined teacher responses (e.g., Burger et al., 2015). For example, research has shown that teachers were more likely to discipline bullies in physical as compared to verbal or relational hypothetical bullying situations (Yoon et al., 2016). Future studies should be undertaken to investigate which response styles are more likely to occur in which situations. Research questions that could be asked include whether teachers using combined responses elicit more disclosure than those using mostly one type of response.

To develop a full picture of teachers' responses and disclosure, specific focus could be directed towards measuring teacher responses *after disclosure* as compared to other ways of discovering bullying (e.g., by witnessing it). Teacher responses following disclosure might require a delicate approach, for instance by ensuring confidentiality and offering emotional support. It is pivotal for teachers to prevent victimized students' disclosure from backfiring as 'snitching' and making the situation worse. A recent study by T. Shaw et al. (2019), for example, examined victimization and internalizing problems one year after disclosure and found that telling a teacher can be detrimental for some victimized students.

Alternatively, our null findings regarding teacher responses could be due to factors at the student level. Whether students disclose being victimized or not may be a fairly stable decision that could be less affected by teachers than we expected. Differently put, even if teachers respond properly, other obstacles may withhold victimized students from disclosing. On an individual level, these obstacles could include shame, denial and anxiety to get the 'victim' label (Bjereld, 2018). Distrust of adult intervention, fear of retaliation by bullies, and classroom pro-bullying norms are only a few potential obstacles on an environmental level (Bjereld, 2018). This explanation would also make sense from a participant role perspective (Salmivalli et al., 1996), emphasizing the role of classmates in bullying dynamics. It also suggests a potential gap between students' intentions to disclose and the complex trade-off of costs and benefits connected to *actual* disclosure.

Regarding our control variables, persistently victimized students who told their teacher about bullying before were more likely to disclose later on than those who did not disclose previously. On the one hand this may indicate that victimized students with positive sharing

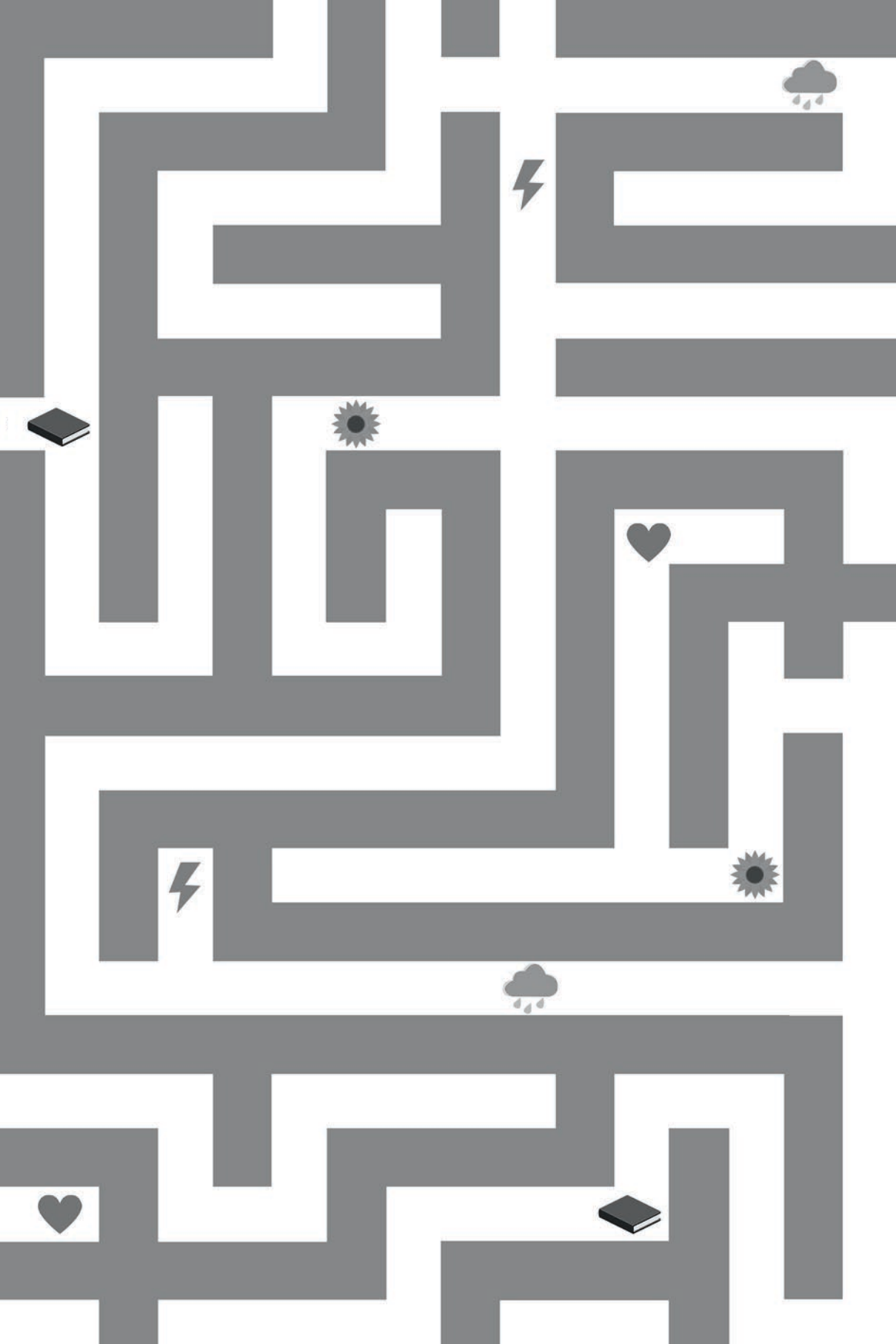
experiences might feel confident to continue disclosing to their teacher (Bjereld, 2018). However, these students were still being victimized *despite* telling their teacher before. They may disclose again as a cry for help because their situation remained unchanged. Those who were victimized at T1 but remained silent towards their teacher, might be a group of downhearted students who believe telling a teacher will not improve their situation. More studies into disclosure trajectories of persistently victimized students are encouraged. Moreover, older students were more likely to disclose to teachers. This is in contrast with previous studies (e.g., Bauman et al., 2016), but may be due to older students' increased understanding of negative consequences of remaining silent.

Strengths and limitations

The current nationwide study investigated the influence of teacher responses towards bullying on victimized students' actual disclosure to their teacher, using multiple informants. It followed a large sample of victimized students throughout one school year and its longitudinal design allowed us to investigate the temporal sequence of variables. By measuring actual disclosure among victimized students, we also captured this construct in the most ecologically valid way. Moreover, this study improved our understanding of disclosure by persistently victimized students and provided disclosure prevalence rates among victimized early adolescents in the Netherlands. However, this study also has some limitations. First, teacher responses towards bullying were measured with teacher reports. Although teachers know best which strategies they apply, it is uncertain whether teacher perceptions transfer to similar student perceptions. Moreover, a limited and non-exhaustive amount of response strategies was assessed. Other strategies (e.g. with a victim support component) could be relevant to relate to victimized students' disclosure too. Besides, teachers' responses towards bullying in general were measured whereas teachers may respond differently to different subtypes of bullying (Bauman & Del Rio, 2006). Different subtypes of bulling have also been linked to different coping mechanisms of victimized students (Aceves et al., 2010). In addition, teachers might have responded to the items in a socially desirable way. Lastly, the small positive correlation between study condition and passive teacher responses may be indicative of a selection bias for study condition. For instance, schools who chose to be in the intervention condition may have had less knowledge of how to effectively tackle bullying and a higher need for fast intervention. Therefore, future studies with completely random designs are desirable.

Conclusion

In conclusion, this study contributed to the literature on teachers' role in victimization processes. It shed light on victimized students' disclosure to their teacher and on whether teacher responses towards bullying predict subsequent disclosure by victimized students. First, we found that one in four victimized students still remains silent to everyone. Almost 60% of disclosing students told their teacher, underscoring teachers' position as confidant but also showing the need for teachers to stay alert themselves. The way in which teachers indicated to respond to bulling did not predict the likelihood for victimized students' disclosure later in the school year. These results stress a need for more studies on victimized students' disclosure using different conceptualizations of teacher responses, targeting persistently victimized students and assessing additional variables that might foster or hamper disclosure. Besides teaching teachers how to create a safe environment for victimized students to disclose, teacher trainings and anti-bullying interventions are urged to support teachers how to respond appropriately after students speak up.



CHAPTER 5

GENERAL DISCUSSION

Peer victimization can have many devastating short- and long-term consequences for victimized students (Arsenault, 2018), making it crucial to examine risk and protective factors associated with peer victimization. Although teachers are considered key adults in the prevention and reduction of peer victimization at school (Yoon et al., 2020), research focusing on their role in peer victimization processes has only recently received attention (Brendgen & Troop-Gordon, 2015). Therefore, in line with an attachment theory perspective (Bowlby, 1982; Verschueren & Koomen, 2012) and developmental systems models (Bronfenbrenner & Morris, 2006), the main goal of this dissertation was to gain more insight into the role of teacher-student interactions in peer victimization. Specifically, the first aim was to clarify the role of affective teacher-student relationships in peer victimization (Part I). The second aim was to investigate the importance of teachers' responses towards bullying for tackling peer victimization (Part II). These aims were addressed by means of meta-analytic and longitudinal studies.

This concluding chapter summarizes the key findings of the current dissertation and integrates them in their theoretical and practical context. In the first section, we present an overview of the main findings of the three empirical chapters and we discuss these findings in light of existing literature. Next, we reflect on several strengths and limitations of this dissertation and suggest possible directions for future research. Lastly, we focus on implications which can aid educational practice to prevent and reduce peer victimization in schools, before providing several final remarks.

Main findings

Teacher-student relationships

The first aim of this dissertation, investigating the role of affective teacher-student relationships in peer victimization, was addressed using two research methods: a meta-analysis (Chapter 2, Study 1) and a three-wave longitudinal study (Chapter 3, Study 2). Study 1 was executed to draw conclusions about the association between teacher-student relationships and peer victimization with more certainty, as results of existing studies on this topic are non-conclusive. This study covered students from preschool to high school across 30 countries. It provided an estimated mean effect size of the association between teacher-student relationships on the one hand, and bullying perpetration and peer victimization on the other.

Moreover, several moderators were assessed to test whether mean effect sizes depended on characteristics of the students in the sample (i.e., gender, ethnicity, socio-economic status, educational level) and the study methodology (i.e., indicator of teacher-student relationship, measurement level of teacher-student relationship, informant, study design). Different instruments and informants were included to measure the constructs. Analyses were performed using three-level meta-analytic models. Additionally, in a subset of longitudinal effect sizes, we assessed the association between teacher-student relationships and peer victimization at a later time point, controlling for the stability of peer victimization and concurrent associations. Results of Study 1 showed small to medium negative overall correlations between teacher-student relationship quality and bullying perpetration, and between teacher-student relationship quality and peer victimization. In other words, higher teacher-student relationship quality was related to less bullying perpetration and less peer victimization. In the subsample of longitudinal effect sizes, higher teacher-student relationship quality was also related to less subsequent peer victimization. Moderation analyses demonstrated stronger links between teacher-student relationship quality and bullying perpetration for ethnic minority students, and when the same informant reported about the two constructs. Associations between teacher-student relationship quality and peer victimization were stronger for negative teacher-student relationship indicators (e.g., conflict) than for positive indicators (e.g., closeness), and when the same informant was used to measure both constructs. However, the strength of the overall associations did not vary depending on students' gender, socio-economic status, educational level (elementary vs. high school), teacher-student relationship level (dyadic vs. classroom), and time between the measures of the constructs.

Study 2 aimed to address several gaps in the literature. So far, the scarce longitudinal studies examining teacher-student relationships and peer victimization have predominantly focused on positive teacher-student relationship dimensions (e.g., Demol, Leflot, et al., 2020; Leadbeater et al., 2015) or only examined the pathway from teacher-student relationships to peer victimization and not the reverse pathway (e.g., Runions & Shaw, 2013; Troop-Gordon & Kopp, 2011). To address these limitations, we investigated reciprocal links between two dimensions of the teacher-student relationship (i.e., closeness and conflict) and peer victimization over time. Participants were students from grades 4 to 6 in the Flemish community of Belgium who completed questionnaires at three time points within one school

year. Dyadic teacher-student relationship quality was measured with a self-report questionnaire, while peer victimization was measured with a self-report questionnaire and a peer nomination item. Cross-lagged modeling with two separate models (one for each measure of peer victimization) was used to analyze transactional associations between the constructs across the school year. Results of Study 2 revealed unique, negative within-time associations between closeness and self-reported peer victimization at the beginning of the school year. Moreover, changes in both variables were negatively correlated towards the middle of the school year. With regard to conflict, we found positive within-time associations with self-reported peer victimization at the beginning of the school year. Changes in the variables were positively correlated during the rest of the school year. Within-time associations were not found when examining links between teacher-student relationships and peer-reported (instead of self-reported) peer victimization. Contrary to the longitudinal findings of Study 1, Study 2 did not provide support for cross-lagged effects of teacher-student relationship quality on subsequent peer victimization or vice versa. Closeness and conflict, however, were concurrently and longitudinally related. Specifically, more closeness consistently predicted less conflict across the school year, while more conflict forecasted less closeness over time. Importantly, our results were obtained using strict analyses that controlled for the nested nature of the data (i.e., students within classrooms), gender, grade level, and concurrent and previous levels of the three variables.

The two studies provided interesting similarities, differences, and novel findings, of which five will be highlighted below. First, we can conclude from both studies that higher-quality teacher-student relationships are associated with lower levels of peer victimization at the same time point. This is in line with the theorized role of the teacher as an ad hoc attachment figure, as we expected from an attachment perspective on teacher-student relationships (Verschueren & Koomen, 2012). Interestingly, Study 1 and Study 2 indicate that peer victimization may be particularly linked with negative teacher-student relationships. Study 1 found stronger negative associations between peer victimization and indicators of negative teacher-student relationships as compared to indicators of positive teacher-student relationships. Study 2 demonstrated that within-time associations with self-reported peer victimization were more consistent across the school year with regard to conflict as compared to closeness. Both studies are in line with a meta-analysis demonstrating that negative indicators of teacher-student relationships were more strongly associated with students'

externalizing behavior problems than positive indicators (Lei et al., 2016). Thus, our findings and previous research point towards the importance of especially minimizing negative teacher-student relationships in an attempt to tackle peer victimization in schools (see section 'Practical implications', p. 121). As the amount of studies including both positive and negative dimensions of the teacher-student relationship is scarce, it is worthwhile to further investigate their unique impact in peer victimization processes.

Second, findings regarding the longitudinal link between teacher-student relationships and peer victimization are less consistent across this dissertation. Although Study 1 showed a small and negative association between teacher-student relationships and subsequent peer victimization, Study 2 only demonstrated correlated change among the variables across the school year. Study 2 showed no evidence that peer victimization was predicted by prior levels of teacher-student relationships. One explanation for this discrepancy could be the short time-span between the three measurements across the school year (i.e., approximately 10 weeks) in Study 2. Consequently, this could have left little room to detect changes in teacher-student relationships and peer victimization. Study 1, on the other hand, contained time intervals up to 72 months between the measures of teacher-student relationships and peer victimization. Furthermore, the difference in measures and informants may have played a role. In Study 1, several instruments (e.g., questionnaires, sociometry, observations) and informants (e.g., teacher, parent, observation) were included to assess the constructs, whereas Study 2 only included measures of self-reported dyadic teacher-student relationships and self- and peer-reports of peer victimization. Further investigation of the moderating role of the reporter and measure (e.g., self- versus teacher-report) could further clarify this discrepancy. Alternatively, no evidence for longitudinal effects in Study 2 may suggest that peer relationships (and therefore peer victimization) could already be relatively established in upper elementary school, leaving less room for effects of teacher-student relationships. This was evidenced by the high stability of peer victimization across the school year and the similar null findings for self- and peer-reported victimization. Another explanation concerns the skills associated with teacher-student closeness. Warmth, obedience, and politeness might not be suitable characteristics to protect students from being victimized (Troop-Gordon & Kopp, 2011). As the aforementioned findings differ from our expectations based on attachment literature (Verschueren & Koomen, 2012) and developmental systems models (Bronfenbrenner & Morris,

2006), exploration of mediating mechanisms (e.g., peer (dis)liking) could provide further valuable insights in the importance of teacher-student relationships for later peer victimization.

Third, both studies underscore that the informant reporting about the constructs under investigation matters. In Study 1, negative links between teacher-student relationships and peer victimization were stronger when the same informant (e.g., twice self-report) was used to measure the constructs as opposed to different informants (e.g., once self- and once peer-report). Importantly, negative overall associations between teacher-student relationships and peer victimization were still present in a subsample of effect sizes that only included reports by different informants. Our findings are in line with a meta-analysis demonstrating larger overall effect sizes between teacher-student relationships and students' engagement when the same informant was used (Roorda et al., 2011). In addition, Study 2 revealed associations in the model with self-reported measures of teacher-student relationships and peer victimization, but these associations were not replicated in the model with self-reported teacher-student relationships and peer-reported peer victimization. Using the same informant may have inflated the association between teacher-student relationships and peer victimization, possibly because these constructs are relatively perceptual (see section 'Limitations and future directions', p. 114 - 115). Since many researchers use only one informant in their study, our findings highlight the relevance of assessing multiple informants in order to prevent a single-source bias and get a more complete overview of classroom processes. Alternatively, using a single source of information should be accompanied by a justification of this choice and validity and reliability of the chosen instrument (George & Pandey, 2017).

Fourth, Study 1 revealed that higher-quality teacher-student relationships were not only negatively associated with peer victimization, but also with bullying perpetration. The informant (i.e., same versus different) and ethnic background of the students in the sample affected the strength of this overall association. Although investigating this link was not the primary aim of the current dissertation, our findings indicate that higher-quality teacher-student relationships are related to less bullying behavior towards peers. Interestingly, Study 1 found far less studies linking teacher-student relationships to bullying perpetration than to peer victimization and most existing studies were cross-sectional. Shedding more light on the role of teachers regarding the perpetration side of bullying is important, as prevention and reduction of bullying perpetration is likely to result in less peer victimization as well. Moreover, a recent meta-analysis demonstrated that bullying perpetration in childhood and adolescence was

positively associated with later substance use (Vrijen et al., 2021). Hence, the role of teacher-student interactions in tackling bullying perpetration across childhood and adolescence warrants further exploration.

Fifth, Study 2 found negative reciprocal links between positive and negative dimensions of the teacher-student relationship over time. More closeness predicted less conflict, while more conflict predicted less closeness across the three time points. Most existing studies on the role of teacher-student relationships in victimization only focused on positive teacher-student relationships (e.g., Demol, Leflot, et al., 2020; Leadbeater et al., 2015) and only few studies have examined transactional associations between both dimensions in the same model (De Laet et al., 2016). Meanwhile, the findings of Study 2 indicate two promising ways to foster high-quality teacher-student relationships: by promoting positive teacher-student relationships and by reducing negative teacher-student relationships. Therefore, it is relevant to combine both dimensions in future studies and test their unique contribution in relation to other student outcomes.

Teacher responses towards bullying

The second aim of this dissertation was to investigate the importance of teachers' responses towards bullying for tackling peer victimization. We addressed this aim using a longitudinal study (Study 3, Chapter 4), in which we examined the prevalence of victimized students' disclosure to teachers and the extent to which teachers' responses towards bullying longitudinally predicted victimized students' likelihood to disclose to their teacher. To this end, Dutch elementary school students in fourth to sixth grade responded to questionnaires at the beginning and at the end of the school year. At each time point, a question informed about whether students were victimized by peers at school at least two or three times in the past months. Victimized students were asked whether they told anyone about it, and if so, to whom they disclosed. Moreover, at the beginning of the school year, teachers were asked which strategies they used to address bullying. These teacher responses were divided into more active (involving clear action, i.e., reprimand bullies, contact parents, separate students) and more passive (involving little action, i.e., suggest avoidance, assertion or independent coping). First, we examined the prevalence of disclosure to teachers at the end of the school year in an exploratory manner. Second, we executed multilevel, binary logistic regressions to investigate whether teacher responses towards bullying at the beginning of the school year predicted

victimized students' disclosure to their teacher at the end of the school year. Results indicated that 76.8% of victimized students told someone about their victimization and 58.3% of these disclosers told their teacher. Unexpectedly, teacher responses did not predict victimized students' likelihood to disclose to their teacher. This finding held for the entire sample of victimized students at the end of the school year and for a subsample of students who were victimized at the beginning of the school year too.

Below, we will discuss four findings of Study 3 in more detail. First, we found that three out of four victimized early adolescents in the Netherlands told someone about their victimization. This disclosure rate was equal to or higher than rates in previous studies reporting about other countries (Blomqvist et al., 2020; Hunter et al., 2004; Smith & Shu, 2000; Unnever & Cornell, 2004). Our promising finding could be due to an increased consciousness of negative consequences of bullying and more disapproval of bullying in society over the past years. Yet, one in four victimized students did not tell anyone. This ineffective coping strategy could let victimized students remain under the radar and, consequently, essential intervention and emotional support are not likely to take place. Meanwhile, bullying behavior can continue and victimized students may suffer from persisting negative consequences (Arsenault, 2018). Based on the disclosure rates provided in Study 3, one general recommendation for future researchers would be to give more recognition to descriptive research. Although this information does not include advanced models or manipulation of variables, descriptive statistics grasp a small yet relevant part of the complex reality (Yarkoni, 2019). For example, our finding clearly showed the current state of disclosure among victimized early adolescents and was easily understood by non-scientists (e.g., during presentations, in blogs). Moreover, providing descriptive information in studies is vital to perform meta-analyses. In Study 1, 24 reports could not be included because of missing correlations between our key variables. In addition, descriptive information is insightful when comparing the prevalence of peer victimization (processes) across countries (e.g., Inchley et al., 2020). Countries with low prevalence rates might serve as an inspiration for countries in which peer victimization is more frequent.

Second, 58.3% of the students who disclosed that they were victimized at the end of the school year told this to their teacher. This percentage partially supports the idea of the teacher as a safe haven for help and comfort when students experience distress (Verschueren & Koomen, 2012), as proposed in the beginning of this dissertation. Nevertheless, 41.7% of the

students who disclosed did not tell their teacher, underscoring that teachers cannot assume that victimized students will come forward. Hence, we recommend researchers and practitioners to pay attention to detecting direct and indirect signs of peer victimization (e.g., dropping grades, crying, sudden withdrawn behavior). Identification of locations in which bullying often occurs and increasing teacher supervision in these areas (i.e., "hot-spot" supervision) could also be an effective means to improve teachers' detection of bullying episodes (Gaffney et al., 2021). Furthermore, our results stress the need to create a deeper understanding of reasons why students withhold to disclose victimization to others, specifically to teachers. Bjereld (2018) revealed that victimized students may remain silent because they believe they will be blamed for the situation, are convinced the teacher will not take them seriously, or think that the teacher will only make the situation worse. More studies regarding the reasons behind (non-)disclosure, for instance using qualitative research methods, can help reveal the trade-off of victimized students before they decide to disclosure or not. Findings could help to pinpoint which barriers teachers can remove to foster disclosure, such as providing anonymous options to disclose victimization. Specific attention should also be paid to which responses teachers can best apply once victimized students have confided in them, in order for students to continue to disclose their victimization (Bjereld, 2018). For example, it might help when teachers ensure that they will not take further action (e.g., talking to the bully) without the permission of the victimized student.

Third, Study 3 showed that victimized students disclosed to parents more often (80.6%) than to teachers. To a lesser extent, victimized students also disclosed to friends, their siblings, or someone else. In line with the effectiveness of a whole-school approach to tackle bullying (Gaffney et al., 2021), this points towards the importance of involving the broader social context instead of making only teachers or victimized students responsible for disclosure. For instance, talking with students' family and including them in anti-bullying policies at school seems warranted to help identify victimized students. Moreover, friends or other peers could act as a defender by standing up for the victimized student and disclosing to the teacher instead (Salmivalli et al., 1996). Therefore, teachers are encouraged to create a classroom climate in which anti-bullying attitudes and according behavior are the norm. For example, using an experimental vignette design, upper elementary school students showed more willingness to report bullying, more defending behavior, less pro-bullying behavior, and less expectations of

victimization in the classroom when the hypothetical teacher actively responded to a bullying incident (Demol, Verschueren, et al., 2020).

Fourth, our results revealed that teacher responses towards bullying at the beginning of the school year did not predict victimized students' disclosure later on. One plausible explanation for this null finding regards the nature of the items we used to measure teacher responses. The active strategies mostly reflected actions towards the perpetrators, while the passive strategies did not include emotional support towards victimized students. Meanwhile, research showed that this component might make a difference for disclosure. Specifically, Bauman et al. (2016) showed that victimized students most often reported that their situation improved when adults listened to them, suggesting that they felt heard and taken seriously. As outlined in Chapter 1, a variety of different ways can be used to conceptualize and measure teachers' responses (Bauman et al., 2008; Burger et al., 2015; Campaert et al., 2017; Wachs et al., 2019). A measure including support to victimized students (e.g., Wachs et al., 2019) might be more suitable to investigate in relation to disclosure.

Limitations and future directions

In the current dissertation, we investigated the role of teacher-student interactions in peer victimization using three different studies. As with all studies, our studies possessed several strengths and limitations. Strengths include the different and large samples used in all three studies, which allowed us to perform advanced analyses. Moreover, all studies included data collected across multiple time points, enabling us to indicate a temporal sequence of variables. We also added to existing literature by using multiple informants (e.g., students, peers, teachers) in each of our studies and by assessing both positive and negative dimensions of the teacher-student relationship in Study 1 and 2. Lastly, Study 1 and 3 were preregistered at the Open Science Framework. Despite these strengths, this dissertation had several limitations. Below, we distinguish between limitations related to the participants, concepts, measures, designs, and analyses. Each limitation is linked to potentially interesting directions for future research.

Participants

Regarding students' age, two of our studies focused on early adolescents. Whereas Study 1 covered students from preschool to high school, the students included in in Study 2 and Study 3 were in fourth to sixth grade. This allowed us to compare the importance of teacher-student interactions for peer victimization across the same age group. Upper elementary school is an interesting transition period where students usually have one teacher that may still fulfill the role of an ad hoc attachment figure (Verschueren & Koomen, 2012), but relationships with peers could become increasingly important for guiding interactions with teachers (e.g., De Laet et al., 2014; Weyns et al., 2018). Moreover, peer victimization is more frequent in early adolescence than among younger or older children (Tokunaga, 2010). Nevertheless, focusing on other age groups might have been interesting as well. For instance, further examination of teacher-student interactions and peer victimization among younger children could help to prevent peer victimization from stabilizing across elementary school. Moreover, bullying research focusing on high school is relatively scarce. However, overall associations between teacher-student relationships on the one hand, and bullying perpetration and peer victimization on the other, were shown to be equally strong in elementary and high school (Study 1). Accordingly, it would be relevant to further investigate the importance of teacher-student interactions for peer victimization in this educational context.

In addition, Study 2 and Study 3 made use of convenience sampling. For many reports included in Study 1, this was also the case. For example, in Study 2, we approached schools by calling and visiting them. Once school principals and teachers agreed to participate, folders were used to inform parents/guardians and ask for active consent for participation of their children. In Study 3, schools were recruited when they were interested in implementing an anti-bullying program. Active informed consent was obtained from the schools and teachers, and passive consent from parents. In both studies, schools with less interest in tackling bullying may have withheld from participation. Moreover, at the individual level, parents of victimized students could have refused consent to protect their child from recalling the bullying episodes. Although the response rates in both studies were still relatively high, this may have made our samples less representative than we would have desired. Therefore, studies using more representative samples are needed. For instance, this can be achieved by emphasizing the importance of participation in research to expose and tackle bullying in schools, by organizing an information session for parents to clarify the aim and procedure of the study, or by

explaining the way in which students' responses are matched over time to ensure confidentiality.

Furthermore, this dissertation examined teacher-student interactions and peer victimization in mainstream educational settings. Doing so, we did not distinguish between students with and without special educational needs. It would be interesting to investigate whether the role of teacher-student interactions in peer victimization is different for this subgroup of students. Namely, countries worldwide are increasingly focusing on inclusion in society. In 2006, the United Nations signed a convention to promote the rights of persons with disabilities (United Nations, 2006). Subsequently, in 2014, the Flemish government supported a legislation to endorse inclusive education and reduce segregated schools systems (Flemish Ministry of Education and Training, 2014). This legislation placed an increasing amount of students with special educational needs (e.g., mental, physical, or sensory impairments) in mainstream education classrooms. While teachers play a key role to implement inclusive education, they experience challenges to adjust their teaching to the needs of all students (Van Mieghem et al., 2020). Moreover, as students with special educational needs usually deviate from peers in terms of their behavior or physical appearance, they are at risk of becoming victimized (Erling & Hwang, 2004; Teräsahjo & Salmivalli, 2003). Investigation of the role of teachers in peer victimization for these students may support teachers to interact effectively with students with and without special educational needs alike.

Concepts and measures

In Study 1, the majority of included studies did not report that a definition of bullying or peer victimization was provided to participants. Different or absent definitions could have created heterogeneity between study results. This limitation was evidenced by the significant between-study variance reported in Study 1. In general, the definition of bullying is a continuous topic of discussion among bullying researchers. The most commonly used definition, as introduced by Olweus (1993), contains three main characteristics: repetition, intentionality, and an imbalance in power between perpetrator and victim. Yet, one action (e.g., spreading an embarrassing picture of someone online) could already have devastating and long-lasting negative consequences. Moreover, a remark might be intended as a joke by the perpetrator but could come across as deliberate from the angle of the victim. Regarding the power imbalance, some researchers argue that this characteristic most clearly distinguishes

bullying from other subtypes of aggression (Volk et al., 2017). Specifically, bullying could help perpetrators to increase their social status, receive reinforcement, or get assistance from peers to continue their behavior without expecting retaliation from the victimized student (e.g., Pouwels, Lansu, et al., 2016; Salmivalli, 2010). Therefore, researchers proposed the following new definition (Volk et al., 2014, pp. 328): "*Bullying is aggressive goal-directed behavior that harms another individual within the context of a power imbalance*". Generally, when doing bullying research, we advise researchers to select a definition, report it in the study method section, and let participants keep this definition in mind during administration. For example, in Study 2, we provided a copy of an elaboration on Olweus' (1993) definition to all students and teachers. We read the definition out loud at the beginning of each wave of data collection and participants could read the definition again at any time. In Study 3, a video was shown to all participants in which the definition of bullying was explained. Such practices can help researchers to assure that bullying and peer victimization are assessed as these concepts are intended, making students' responses more reliable and study findings more comparable.

Next, it is vital that the operationalization of the construct aligns with the instrument(s) and informant(s) used to measure it (Yarkoni, 2019). Regarding peer victimization, we used several measures and informants. In Study 1, all types of measures and informants were allowed as long as they reported about peer victimization at school. We used self- and peer-reports of peer victimization in Study 2 and self-reports in Study 3. Although this is a valuable strategy to grasp classroom processes from different angles, a diversity of measurements and informants can also be a possible source of heterogeneity between studies. In general, broader measurements create higher prevalence estimates (Bjereld et al., 2020). For instance, it depends on whether instruments assess peer victimization at school or in general, and whether the reference time frame is short or long (e.g., a few weeks or a year). The most commonly used instrument to measure peer victimization is a self-report questionnaire. Some researchers highly promote the use of this measure and informant (Olweus, 2013). Self-report questionnaires can either directly assess the construct (e.g., asking how often someone is bullied) or gather information about different behaviors that add up to peer victimization (e.g., asking whether someone is kicked, called names). However, direct measures may cause an overestimation of the prevalence when students easily perceive acts as bullying. Next to self-report questionnaires, sociometric nomination methods have increased in popularity to measure students' peer relationships, including bullying (Cillessen, 2009). Peers can be valuable

informants to create a comprehensive picture of classroom social dynamics involved in bullying. However, calculation of victimization levels from peer nominations occurs differently than from self-report measures. While peer nominations measure the frequency of nominations of certain (extreme) students, self-reports measure the experienced frequency or seriousness of peer victimization (Olweus, 2013). Moreover, some forms of bullying are very subtle and difficult to spot by others, making it nearly impossible for peers to grasp its complexity. This could potentially explain why no links between self-reported teacher-student relationships and peer-reported peer victimization were found in Study 2. Likewise, teachers and parents might not detect all bullying episodes (Stassen Berger, 2007). Their reports can still be useful among, for example, young students or students who cannot express themselves optimally. In addition, observations can be a valuable means to assess peer victimization. Although this method can measure constructs in a systematic, goal-directed and objective manner, observations may not form a reflection of the complex daily situation in the classroom. Furthermore, qualitative instruments such as interviews can provide an interesting and holistic perspective on peer victimization (e.g., Erling & Hwang, 2004). Though, this method can be time-consuming and is often difficult to replicate. In sum, instruments and informants differ across studies, each method has its pros and cons, and can impact the reported prevalence and severity of peer victimization. Therefore, when possible, we would recommend future researchers to combine multiple informants in studies to report on the same phenomenon in order to create a broad overview of victimization processes. As mentioned earlier in this chapter, Study 2 highlighted differences in the link between teacher-student relationships and peer victimization depending on the reporter. Importantly, although different informants and instruments make it difficult to capture who is "truly" victimized, we believe it is always worrisome when students themselves report to be victimized. When students experience peer victimization (regardless of whether others share this perspective), they can suffer from its negative consequences (e.g., Moore et al., 2017).

Relatedly, this dissertation focused on measures of general peer victimization and did not differentiate between subtypes of peer victimization. Possibly, teacher-student interactions depend on the subtype of bullying. For instance, Yoon et al. (2016) found that teachers were more likely to discipline bullies and teach victimized students social skills in video vignettes depicting physical as compared to relational or verbal bullying incidents. In contrast, Demol, Leflot, et al. (2020) showed similar cross-lagged associations between teacher support

and different forms of peer victimization (i.e., physical, relational). Therefore, more research is needed to clarify the role of teacher-student interactions for subtypes of bullying. As one example, further investigation of cyberbullying is warranted for several reasons (Hinduja & Patchin, 2014). First, cyberbullying does not stop at the school gate but can continue all day long. Second, acts of perpetrators can spread to large groups of people rapidly and can have a long-lasting impact. Third, cyberbullying can occur relatively anonymous. Hence, perpetrators are difficult to address and possibly feel more confident to act than in real life (Hinduja & Patchin, 2014). Teachers' role in cyberbullying has received increased attention from researchers. For example, Nappa et al. (2020) recently showed that non-intervention by teachers in offline bullying episodes was associated with higher involvement in cyberbullying. Moreover, a negative link between teacher-student bonding and cyberbullying perpetration has been found (Pabian & Vandebosch, 2016). Yet, many questions about the role of teacher-student interactions in cybervictimization remain unanswered. For instance, is cybervictimization less frequent in classrooms where teachers show anti-bullying attitudes? What strategies do teachers use to detect cyberbullying? Further investigation of the role of teacher-student interactions in subtypes of bullying could provide new insights for targeted prevention and intervention.

Regarding teacher-student interactions, the variables in Study 2 and Study 3 were measured with one informant and instrument. Other ways to measure teacher-student interactions could have shed light on these phenomena from a different angle. Specifically, to grasp the role of teachers as a social referent for peer relationships in Study 2, complementing our self-reports with peer-reports of the teacher-student relationships would have been highly valuable. In Study 3, self-reports of teachers' responses towards bullying next to teacher reports could have helped to identify whether teachers' responses were noticed by the victimized students in our sample. Therefore, as with peer victimization, we would recommend the use of reports by multiple informants to reduce a single-source bias and provide a more comprehensive picture of teacher-student interactions. Alternatively, opting for a single informant is encouraged to be justified and accompanied by the use of a valid and reliable instrument (cf. supra, George & Pandey, 2017).

Lastly, when measuring teacher-student relationships in Study 1 and Study 2, we focused on positive and negative dimensions. However, we did not include measures of teacher-student dependency. Attachment literature has conceptualized teacher-student

dependency as a negative relationship dimension indicating a lack of secure-base use of the teacher (Verschueren & Koomen, 2012). Specifically, children scoring high on dependency show clinginess toward the teacher, hindering their exploration of their social and learning environment (Sabol & Pianta, 2012; Verschueren & Koomen, 2020). In general, far less research has been devoted to dependency than to the dimensions closeness and conflict. This is in large part due to measurement issues, such as low internal reliability of teacher ratings (Koomen et al., 2012) and low convergence between student and teacher perspectives on dependency (Doumen et al., 2009; Vervoort et al., 2015). Nevertheless, a recent meta-analysis demonstrated negative associations between dependency and engagement, achievement and prosocial behavior, and positive associations with internalizing and externalizing behavior problems (Roorda et al., 2020). Moreover, in scarce research focusing on dependency and peer victimization, Troop-Gordon and Kopp (2011) revealed that more dependency predicted increased levels of peer victimization across the school year. Therefore, further investigation of the validation, antecedents, and consequences of this understudied dimension is needed (Verschueren & Koomen, 2020).

Designs and analyses

In relation to our research designs, we conducted a meta-analysis and two longitudinal studies. Though, none of the studies manipulated teacher-student interactions or peer victimization. Experimental vignette designs would have been an interesting addition to our studies. Experimental vignette designs are able to alter aspects of teacher and/or student behavior that are difficult or unethical to modify in real life, allowing to test theorized models or underlying processes. For example, using experimental vignettes among students in fourth to sixth grade, Demol, Verschueren, et al. (2020) differentiated between four types of teacher responses towards a hypothetical bullying situation. Findings showed that students expected less peer victimization in their classroom when the hypothetical teacher actively responded towards bullying (e.g., correcting the bully, supporting the victim) as opposed to non-intervention (Demol, Verschueren, et al., 2020). Furthermore, more intervention studies are desirable to draw causal conclusions about the role of teachers in reducing peer victimization. For example, Saarento et al. (2015) demonstrated that teachers' attitudes towards bullying mediated the effects of the KiVa antibullying program on bullying perpetration. Students in KiVa

schools perceived their teacher as increasingly disapproving of bullying, which in turn predicted later reductions in bullying perpetration (Saarento et al., 2015).

Moreover, this dissertation focused on correlates and consequences of teacher-student interactions in relation to peer victimization. To grasp the dynamic and transactional nature of teacher-student interactions accurately (cf. Chapter 1; Bronfenbrenner & Morris, 2006), investigating precursors of teacher-student interactions would be an interesting avenue for further research. Regarding teacher-student relationships, Study 1 and Study 2 found cross-sectional evidence and mixed longitudinal evidence for its link with peer victimization. Research into factors shaping teacher-student relationship quality are highly valuable for (preventive) intervention efforts to foster high-quality and meaningful teacher-student relationships. Getting more insight into antecedents may also provide more information to build an integrative conceptual model for teacher-student relationships and peer victimization. To date, studies investigating factors that shape teacher-student relationships are limited. Examples of characteristics that are linked to later teacher-student relationships are teachers' negative emotions towards specific students (Koenen et al., 2019), students' externalizing and internalizing behavior in class (Buyse et al., 2008), parental support and stimulation (O'Connor, 2010), and teachers' and students' gender (Spilt, Koomen, & Jak, 2012). Regarding teacher responses towards bullying, Study 3 did not provide evidence for teacher responses as predictors of victimized students' subsequent disclosure. Precursors of their responses were not considered in this study, although insights in processes guiding teacher responses can help to effectively target teachers in anti-bullying programs (van Verseveld et al., 2019). In line with the theory of planned behavior (Ajzen, 1991), the choice of whether or not to respond to bullying and the nature of these responses is influenced by teachers' intentions, which are directed by various attitudes, subjective norms, and the behavioral control (e.g., moral disengagement, victimization-related beliefs, previous bullying involvement, self-efficacy) of the teacher (e.g., Strohmeier & Gradinger, 2021; Troop-Gordon & Ladd, 2015; Veenstra et al., 2014; Yoon et al., 2016). The larger context in which the teacher is embedded (e.g., school guidelines against bullying, school climate) could also play a role (Strohmeier & Gradinger, 2021; Yoon et al., 2016). Although research into antecedents of teacher responses to bullying is less scarce, knowing more about what stimulates teachers' responses could further support teachers in their intervention efforts. Investigating the entire cycle (i.e., antecedents, teacher-student interactions, and peer victimization) in one study would be interesting as well.

Relatedly, the scope of this dissertation included the understudied role of teachers in peer victimization. Although our studies focused on a relatively new line of research, dynamic systems models emphasize that children's development is influenced by reciprocal interactions between them and others embedded in their environment (Bronfenbrenner & Morris, 2006). To provide a more complete picture of these dynamic influences, the interplay of factors at the level of the child, teacher, and their environment (e.g., peer network, school, parents) should be further investigated. Importantly, as highlighted previously in this chapter, a whole-school approach is a key ingredient to successfully reduce peer victimization (Gaffney et al., 2021) For example, Nappa et al. (2020) examined the role of parents' and teachers' interventions in offline bullying situations and showed that their intervention strategies were each associated with students' cyberbullying involvement. Further investigation of the interplay between students and their environment could help to pinpoint which aspects of students' social context can diminish or amplify the impact of individual factors on peer victimization (Menesini, 2019).

Lastly, in relation to our chosen analyses, we only used variable-centered techniques to answer our research questions. For example, the cross-lagged analyses of Study 2 examined the relative contribution of teacher-student relationships to peer victimization by describing their reciprocal associations over time. Yet, it remains unclear for which specific students the teacher can make a difference. Person-centered approaches could allow for exploration and identification of subgroups of students who share certain characteristics (Laursen & Hoff, 2006). With regard to the aims of this dissertation, person-centered analyses would be able to identify the development of groups of students with different levels of teacher-student interactions (e.g., high- vs. low-quality teacher-student relationship) or a different victimization status (e.g., non-victimized vs. temporary vs. stable). More studies adopting person-centered analytical techniques are encouraged to complement variable-centered analyses, in an attempt to create a more comprehensive understanding of peer victimization processes.

Practical implications

Following from our study findings and the aforementioned reflections, this dissertation can provide several suggestions to support educational practice. As was highlighted throughout the dissertation, bullying may have many devastating consequences for victimized students in the short and long run (Arsenault, 2018; McDougall & Vaillancourt, 2015; Moore et al., 2017).

Translating our study findings into implications for practice can aid the reduction of peer victimization and its negative consequences. Although practical implications are mentioned in each empirical chapter separately, the following three overarching topics could function as an inspiration for teachers, policymakers, and developers of anti-bullying interventions.

Does a little help from the teacher make a difference?

Albeit not entirely consistently, the present dissertation demonstrated that higher-quality teacher-student relationships were related to lower levels of peer victimization (Study 1 and Study 2). Although Study 3 did not reveal a link between teachers' responses towards bullying and victimized students' subsequent disclosure to their teacher, the teacher appeared a frequent confidant for victimized students to turn to. In general, together with other research findings, our results highlight the benefit of involving and targeting teachers in anti-bullying programs (Saarento et al., 2015; van Verseveld et al., 2019). As it is unlikely that bullying will completely disappear from schools, it is critical to optimally support teachers in their efforts to prevent and reduce peer victimization. Following from the outcome that one out of four victimized students remained silent to everyone (Study 3), teachers are encouraged to be more attentive to signs of bullying in their classroom. This can be achieved by strategies such as regularly checking in with individual students throughout the day (Kincade et al., 2020), frequently talking to others in students' network (e.g., parents, friends) about the wellbeing of individual students (Oldenburg et al., 2016), providing anonymous options to disclose victimization or other problems (e.g., by creating a box in which students can put notes for the teacher), or using network diagnostics to identify bullying perpetration and victimization (Kaufman et al., 2020). Notably, prior research showed that teachers with little teaching experiences reported more difficulties to tackle bullying than colleagues with more experience (van Verseveld et al., 2021). Meanwhile, teacher education programs pay far more attention to subject knowledge and didactic skills than to relational and emotional skills. Therefore, teachers-in-training might especially benefit from improving their knowledge and attitudes regarding bullying (e.g., its negative consequences) and teacher-student interactions (e.g., teachers' role as a social referent), and their skills (e.g., sensitivity towards students' needs) in order to address peer victimization and create a positive learning environment.

Importantly, the non-conclusive results of this dissertation also suggest that the role of teachers has limits. A high-quality affective relationship with students or an accurate response

towards bullying might not always be sufficient to tackle peer victimization. Teachers can make a big difference for some students, whereas for others more is needed to address peer victimization (e.g., a social skills training). Especially when students move towards adolescence, teachers' influence on peer dynamics may be limited (e.g., Engels et al., 2016). In this dissertation, we have taken first steps to investigate for which students teachers can make a difference. Further investigation of psychosocial moderating variables and underlying mechanisms (e.g., characteristics of the peer network, subtypes of bullying) can help to clarify the possibilities and boundaries of teacher-student interactions to prevent and reduce peer victimization.

Promoting positive and minimizing negative teacher-student relationships

This dissertation confirmed that positive teacher-student relationships are related to less peer victimization and negative teacher-student relationships to more peer victimization. As can be concluded from Study 1, this holds for both dyadic and classroom-level relationships and for students in elementary and in high school. Study 2 revealed that both positive and negative indicators of teacher-student relationships were uniquely associated with peer victimization. Taken together, our findings highlight that both dimensions of the teacher-student relationship are worth considering in prevention and intervention efforts against peer victimization. Kincade et al. (2020) recently provided a meta-analytic overview of best practices schools can implement to enhance positive teacher-student relationships. Mainly direct and proactive practices worked best, such as positive greetings of students every morning, praising students, observation of students, and home visits. Interestingly, Study 1 revealed that overall links with victimization were stronger for indicators of negative teacher-student relationships than for indicators of positive teacher-student relationships. In Study 2, we also found more consistent within-time associations between self-reported peer victimization and conflict as opposed to closeness. It seems especially valuable for teachers to avoid negative, conflictual interactions with students in order to reduce peer victimization. As teachers still need to correct students when they misbehave, this can be achieved by practices such as trying to reinforce students' positive behavior, by clarifying the reason for punishment, by showing disapproval of students' negative behavior instead of disapproval of this student as a person, or by correcting students privately as opposed to in front of the entire class group (Hendrickx et al., 2016). When these general practices do not create the desired outcome, targeted interventions can aid to

promote positive teacher-student relationships or improve difficult relationships with students (e.g., Duong et al., 2019; Spilt, Koomen, Thijs, et al., 2012; Vancraeyveldt et al., 2015).

Well begun is half done

According to a large-scale international study, one in ten students aged 11-15 has been victimized by peers at school in the past months (Inchley et al., 2020). Spread across the 45 countries and regions that participated in the survey, this concerns more than 22,000 students. Because negative consequences of peer victimization can persist into adulthood (Arsenault, 2018), it is essential to prevent peer victimization from stabilizing over time. Hence, the quote at the beginning of this dissertation ('It is easier to build strong children than to repair broken men') grasps the essence of the third general implication of this dissertation. In Study 1, higher-quality teacher-student relationships predicted less subsequent peer victimization and peer victimization was relatively stable across time points. In Study 2, we demonstrated that teacher-student relationships and peer victimization were also relatively stable across the school year. Moreover, more teacher-student closeness predicted less teacher-student conflict at a later time point and vice versa. Therefore, we urge teachers to try prevent bullying and promote warm relationships with and among peers from the first day of the school year. For example, such introductory actions could include giving students more compliments than reprimands, making common group goals regarding bullying and writing them down, and performing activities to build a positive group atmosphere (Kincade et al., 2020). In line with Farmer et al. (2011), first interactions between the teacher and the class group can set the tone for how students should interact with each other during the rest of the school year. Interventions or external initiatives implemented by the school (e.g., Week Against Bullying) can support teachers to create a positive classroom atmosphere from which the class group can benefit during the rest of the school year.

Reflection on COVID-19

This dissertation was partially written in an extraordinary context. Starting in China in late 2019, the coronavirus disease (COVID-19) has gradually spread across the globe. In March 2020, the World Health organization characterized COVID-19 as a pandemic. Many countries went into a lockdown, restricting people's abilities for social contact. This social isolation

created a large psychological impact on society, yielding more anxiety, frustration, and boredom (Brooks et al., 2020). Schools closed and students were forced to receive their education online from home. Although the virus is still among us and we have to wait for findings of longitudinal research to fully capture the pandemic's impact on children's development, preliminary evidence points towards an impact of COVID-19 on (subtypes of) bullying and peer victimization. For example, there are indications that cyberbullying increased in times of lockdown (Armitage, 2021). Dutch youth helpdesk De Kindertelefoon reported more conversations about cyberbullying, from 11.2% in May 2020 as compared to 3.7% one year earlier (Kindertelefoon, 2020). During the closure of schools, millions of children and adolescents followed classes from home and spent more time in front of digital devices. As a result, cyberbullying might have replaced (offline) bullying at school. As highlighted previously in this chapter, cyberbullying is potentially more difficult to detect and tackle than offline bullying due to its continuity, potential larger audience and anonymity of the perpetrator (Hinduja & Patchin, 2014). Also, students might be especially reluctant to disclose cyberbullying to their teacher during COVID-19 because of less opportunities for one-on-one contact.

As soon as schools (temporarily) reopened, teachers faced the challenge of reducing inequality between students' educational outcomes as a result of home schooling (Bol, 2020). In addition, teachers had to adhere to rapidly changing safety measures (e.g., social distancing) and take care of students' welfare after a period of social isolation. Although the attainment of academic and vocational goals is evaluated by means of tests, the impact of the COVID-19 on students' social-emotional wellbeing is unclear to date. Already before the pandemic, researchers affirmed the crucial role of being valued and respected at school for students' wellbeing (Graham et al., 2016). It became even more clear in 2020 and 2021 that schools are not merely a setting for knowledge acquisition, but also a structured practice ground for students to develop important social-emotional skills such as respect, responsibility, and establishing friendships (Colao et al., 2020). As mentioned in Chapter 1, more emphasis on social-emotional in addition to academic learning could work as a prevention mechanism, leaving less room and need for peer victimization while also improving students' academic achievement (Kochenderfer-Ladd & Ladd, 2016). Hopefully, the current dissertation can further emphasize the importance of this dual focus to policymakers.

Concluding remarks

Taken together, the current dissertation provided a deeper understanding of the role of teacher-student interactions in peer victimization at school. Throughout the three empirical chapters included in this dissertation, we addressed two main objectives: (1) investigating the role of affective teacher-student relationships in peer victimization, and (2) examining the importance of teachers' responses towards bullying for peer victimization processes. The first two chapters of this dissertation provided further evidence that higher-quality teacher-student relationships are related to lower levels of peer victimization. Moreover, both studies suggest that peer victimization is more strongly related with negative as compared to positive teacher-student relationships. Findings regarding the longitudinal link between teacher-student relationships and peer victimization were mixed. Although Study 1 showed that higher-quality teacher-student relationships were related to less subsequent peer victimization, no evidence was found for cross-lagged associations between teacher-student relationships (i.e., closeness and conflict) and peer victimization in Study 2. Addressing the second objective, Study 3 indicated that three out of four victimized students told someone that they were victimized and 58.3% of these disclosing students told their teacher. However, teachers' responses towards bullying did not predict victimized students' likelihood to disclose to the teacher at a later time point. In addition to presenting our study outcomes, this dissertation provided critical reflections and highlighted multiple directions for future research. Finally, we outlined practical implications for the prevention of peer victimization by emphasizing (1) possibilities and limitations of teachers to tackle peer victimization, (2) the importance of stimulating positive and (especially) reducing negative teacher-student relationships, and (3) the benefit of addressing bullying and optimizing the classroom atmosphere from the beginning of the school year. Taken together, the findings of this dissertation add to existing support for the link between teacher-student interactions and peer victimization. Overall, we hope to have contributed to the body of literature on this research topic, inspire educational practice in prevention and intervention efforts against peer victimization, and ultimately help children to have a bright future ahead of them.

REFERENCES

References marked with an asterisk indicate studies included in the meta-analysis (Chapter 2; Study 1).

Aceves, M. J., Hinshaw, S. P., Mendoza-Denton, R., & Page-Gould, E. (2010). Seek help from teachers or fight back? Student perceptions of teachers' actions during conflicts and responses to peer victimization. *Journal of Youth and Adolescence, 39*(6), 658-669. https://doi.org/10.1007/s10964-009-9441-9

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-t

*Akanni, O. O., Olashore, A. A., Osasona, S. O., & Uwadiae, E. (2020). Predictors of bullying reported by perpetrators in a sample of senior school students in Benin City, Nigeria. *South African Journal of Psychiatry, 26*(1), 1-8. https://doi.org/https://doi.org/10.4102/sajpsychiatry.v26i0.1359

*Aldridge, J. M., McChesney, K., & Afari, E. (2018, Jul). Relationships between school climate, bullying and delinquent behaviours. *Learning Environments Research, 21*(2), 153-172. https://doi.org/http://dx.doi.org/10.1007/s10984-017-9249-6

*Archambault, I., Kurdi, V., Olivier, E., & Goulet, M. (2016). The joint effect of peer victimization and conflict with teachers on student engagement at the end of elementary school. *Merrill-Palmer Quarterly, 62*(2), 207-232. https://doi.org/http://dx.doi.org/10.13110/merrpalmquar1982.62.2.0207

Armitage, R. (2021). Bullying during COVID-19: The impact on child and adolescent health. *British Journal of General Practice, 71*(704), 122-122. https://doi.org/https://doi.org/10.3399/bjgp21X715073

Arsenault, L. (2018). The persistent and pervasive impact of being bullied in childhood and adolescence: Implications for policy and practice. *Journal of Child Psychology and Psychiatry, 59*(4), 405-421. https://doi.org/10.1111/jcpp.12841

Assink, M., & Wibbelink, C. J. (2016). Fitting three-level meta-analytic models in R: A step-by-step tutorial. *The Quantitative Methods for Psychology, 12*(3), 154-174. https://doi.org/10.20982/tqmp.12.3.p154

*Ates, B., Kaya, A., & Tunc, E. (2018). The investigation of predictors of cyberbullying and cybervictimization in adolescents. *International Journal of Progressive Education, 14*(5), 103-118. https://doi.org/10.29329/ijpe.2018.157.9

*Attar-Schwartz, S., Mishna, F., & Khoury-Kassabri, M. (2019). The role of classmates' social support,peer victimization and gender in externalizing and internalizing behaviors among Canadian youth. *Journal of Child and Family Studies, 28*(9), 2335-2346. https://doi.org/http://dx.doi.org/10.1007/s10826-017-0852-z

*Averdijk, M., Eisner, M., & Ribeaud, D. (2014). Do social relationships protect victimized children against internalizing problems? *Journal of School Violence, 13*(1), 80-99. https://doi.org/10.1080/15388220.2013.842175

*Bae, H.-o., Choo, H., & Lim, C. (2019). Bullying experience of racial and ethnic minority youth in South Korea. *Journal of Early Adolescence, 39*(4), 561-575. https://doi.org/10.1177/0272431618776121

*Banzon-Librojo, L. A., Garabiles, M. R., & Alampay, L. P. (2017). Relations between harsh discipline from teachers, perceived teacher support, and bullying victimization among high school students. *Journal of Adolescence, 57*(4), 18-22. https://doi.org/http://dx.doi.org/10.1016/j.adolescence.2017.03.001

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting Linear Mixed-Effects Models Using lme4. *Journal of Statistical Software, 67*(1), 1-48. https://doi.org/10.18637/jss.v067.i01

Bauman, S., & Del Rio, A. (2006). Preservice teachers' responses to bullying scenarios: Comparing physical, verbal, and relational bullying. *Journal of Educational Psychology, 98*(1), 219-231. https://doi.org/http://dx.doi.org/10.1037/0022-0663.98.1.219

Bauman, S., Meter, D. J., Nixon, C., & Davis, S. (2016). Targets of peer mistreatment: Do they tell adults? What happens when they do? *Teaching and Teacher Education, 57*(5), 118-124. https://doi.org/10.1016/j.tate.2016.03.013

Bauman, S., Rigby, K., & Hoppa, K. (2008). US teachers' and school counsellors' strategies for handling school bullying incidents. *Educational Psychology, 28*(7), 837-856. https://doi.org/10.1080/01443410802379085

Bayram Özdemir, S., Özdemir, M., & Elzinga, A. E. (2021). Psychological adjustment of ethnically victimized adolescents: Do teachers' responses to ethnic victimization incidents matter? *European Journal of Developmental Psychology*, 1-17. https://doi.org/ https://doi.org/10.1080/17405629.2021.1877131

*Behrhorst, K. L., Sullivan, T. N., & Sutherland, K. S. (2020). The impact of classroom climate on aggression and victimization in early adolescence. *Journal of Early Adolescence, 40*(5), 689-711. https://doi.org/10.1177/0272431619870616

Bergin, C., & Bergin, D. (2009). Attachment in the classroom. *Educational Psychology Review, 21*(2), 141-170. https://doi.org/10.1007/s10648-009-9104-0

*Berkowitz, R., & Benbenishty, R. (2012). Perceptions of teachers' support, safety, and absence from school because of fear among victims, bullies, and bully-victims. *American Journal of Orthopsychiatry, 82*(1), 67-74. https://doi.org/http://dx.doi.org/10.1111/j.1939-0025.2011.01132.x

*Bilodeau, F., Brendgen, M., Vitaro, F., Côté, S. M., Tremblay, R. E., Petit, D., Montplaisir, J., & Boivin, M. (2020). Association between peer victimization and parasomnias in children: Searching for relational moderators. *Child Psychiatry & Human Development, 51*(2), 268–280. https://doi.org/http://dx.doi.org/10.1007/s10578-019-00928-y

Bjereld, Y. (2018). The challenging process of disclosing bullying victimization: A grounded theory study from the victim's point of view. *Journal of Health Psychology, 23*(8), 1110-1118. https://doi.org/10.1177/1359105316644973

Bjereld, Y., Augustine, L., & Thornberg, R. (2020). Measuring the prevalence of peer bullying victimization: Review of studies from Sweden during 1993-2017. *Children and Youth Services Review*, 105528. https://doi.org/10.1016/j.childyouth.2020.105528

Blomqvist, K., Saarento-Zaprudin, S., & Salmivalli, C. (2020). Telling adults about one's plight as a victim of bullying: Student-and context-related factors predicting disclosure.

Scandinavian Journal of Psychology, 1(61), 151-159. https://doi.org/10.1111/sjop.12521

Bol, T. (2020). *Inequality in homeschooling during the Corona crisis in the Netherlands. First results from the LISS Panel*. https://osf.io/preprints/socarxiv/hf32q

*Boulton, M., Woodmansey, H., Williams, E., Spells, R., Nicholas, B., Laxton, E., Holman, G., & Duke, E. (2012). Associations between peer bullying and classroom concentration: Evidence for mediation by perceived personal safety and relationship with teacher. *Educational Psychology, 32*(3), 277-294. https://doi.org/10.1080/01443410.2011.648903

Bowlby, J. (1982). Attachment and loss: Retrospect and prospect. *American Journal of Orthopsychiatry, 52*(4), 664-678. https://doi.org/10.1111/j.1939-0025.1982.tb01456.x

*Boyesen, M., & Bru, E. (1999). Small school classes, small problems? A study of peer harassment, emotional problems and student perception of social support at school in small and large classes. *School Psychology International, 20*(4), 338-351. https://doi.org/http://dx.doi.org/10.1177/0143034399204002

Brendgen, M., & Troop-Gordon, W. (2015). School-related factors in the development of bullying perpetration and victimization: Introduction to the special section. *Journal of Abnormal Child Psychology, 43*(1), 1-4. https://doi.org/10.1007/s10802-014-9939-9

Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. L. W. Damon (Ed.), *Handbook of child psychology* (6 ed., Vol. 1, pp. 793-828). Wiley.

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet, 395*(10227), 912-920. https://doi.org/10.1016/S0140-6736(20)30460-8

*Brunstein Klomek, A., Kopelman-Rubin, D., Al-Yagon, M., Berkowitz, R., Apter, A., & Mikulincer, M. (2016). Victimization by bullying and attachment to parents and teachers among student who report Learning Disorders and/or Attention Deficit

Hyperactivity Disorder. *Learning Disability Quarterly, 39*(3), 182-190. https://doi.org/http://dx.doi.org/10.1177/0731948715616377

Burger, C., Strohmeier, D., Spröber, N., Bauman, S., & Rigby, K. (2015). How teachers respond to school bullying: An examination of self-reported intervention strategy use, moderator effects, and concurrent use of multiple strategies. *Teaching and Teacher Education, 51*(7), 191-202. https://doi.org/10.1016/j.tate.2015.07.004

Buyse, E., Verschueren, K., Doumen, S., Van Damme, J., & Maes, F. (2008). Classroom problem behavior and teacher-child relationships in kindergarten: The moderating role of classroom climate. *Journal of School Psychology, 46*(4), 367-391. https://doi.org/10.1016/j.jsp.2007.06.009

*Camodeca, M., & Coppola, G. (2019). Participant roles in preschool bullying: The impact of emotion regulation, social preference, and quality of the teacher-child relationship. *Social Development, 28*(1), 3-21. https://doi.org/10.1111/sode.12320

Campaert, K., Nocentini, A., & Menesini, E. (2017). The efficacy of teachers' responses to incidents of bullying and victimization: The mediational role of moral disengagement for bullying. *Aggressive Behavior, 43*, 483-492. https://doi.org/10.1002/ab.21706

Card, N. A. (2012). *Applied meta-analysis for social science research*. Guilford Press.

*Chester, K. L., Magnusson, J., Klemera, E., Spencer, N. H., & Brooks, F. (2019). The mitigating role of ecological health assets in adolescent cyberbullying victimization. *Youth & Society, 51*(3), 291-317. https://doi.org/10.1177/0044118x16673281

Cheung, M. W.-L. (2014). Modeling dependent effect sizes with three-level meta-analyses: A structural equation modeling approach. *Psychological Methods, 19*(2), 211-229. https://doi.org/10.1037/a0032968

Cillessen, A. H. N. (2009). Sociometric methods. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 82-99). Guilford Press.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.

Colao, A., Piscitelli, P., Pulimeno, M., Colazzo, S., Miani, A., & Giannini, S. (2020). Rethinking the role of the school after COVID-19. *The Lancet, 5*(7), 370. https://doi.org/10.1016/S2468-2667(20)30124-9

Cortes, K. I., & Kochenderfer-Ladd, B. (2014). To tell or not to tell: What influences children's decisions to report bullying to their teachers? *School Psychology Quarterly, 29*(3), 336–348. https://doi.org/10.1037/spq0000078

Crick, N. R., & Grotpeter, J. K. (1998). Children's treatment by peers: Victims of relational and overt aggression. In M. E. Hertzig & E. A. Farber (Eds.), *Annual progress in child psychiatry and child development 1997* (pp. 79–92). Brunner/Mazel.

De Laet, S., Colpin, H., Van Leeuwen, K., Van den Noortgate, W., Claes, S., Janssens, A., Goossens, L., & Verschueren, K. (2016). Transactional links between teacher–student relationships and adolescent rule-breaking behavior and behavioral school engagement: Moderating role of a dopaminergic genetic profile score. *Journal of Youth and Adolescence, 45*(6), 1226-1244. https://doi.org/10.1007/s10964-016-0466-6

De Laet, S., Doumen, S., Vervoort, E., Colpin, H., Van Leeuwen, K., Goossens, L., & Verschueren, K. (2014). Transactional links between teacher–child relationship quality and perceived versus sociometric popularity: A three-wave longitudinal study. *Child Development, 85*(4), 1647-1662. https://doi.org/10.1111/cdev.12216

Demol, K., Leflot, G., Verschueren, K., & Colpin, H. (2020). Revealing the transactional associations among teacher-child relationships, peer rejection and peer victimization in early adolescence. *Journal of Youth and Adolescence, 49*(11), 2311-2326. https://doi.org/10.1007/s10964-020-01269-z

Demol, K., Verschueren, K., Jame, M., Lazard, C., & Colpin, H. (2021). Student attitudes and perceptions of teacher responses to bullying: An experimental vignette study. *European Journal of Developmental Psychology*, 1-17. https://doi.org/ https://doi.org/10.1080/17405629.2021.1896492

Demol, K., Verschueren, K., Salmivalli, C., & Colpin, H. (2020). Perceived teacher responses to bullying influence students' social cognitions. *Frontiers in Psychology, 11*, 3363. https://doi.org/10.3389/fpsyg.2020.592582

*Diaz-Aguado Jalon, M. J., & Arias, R. M. (2013). Peer bullying and disruption-coercion escalations in student-teacher relationship. *Psicothema, 25*(2), 206-213. https://doi.org/10.7334/psicothema2012.312

*Donat, M., Knigge, M., & Dalbert, C. (2018). Being a good or a just teacher: Which experiences of teachers' behavior can be more predictive of school bullying? *Aggressive Behavior, 44*(1), 29-39. https://doi.org/http://dx.doi.org/10.1002/ab.21721

Doumen, S., Verschueren, K., Buyse, E., De Munter, S., Max, K., & Moens, L. (2009). Further examination of the convergent and discriminant validity of the student–teacher relationship scale. *Infant and Child Development, 18*, 502-520. https://doi.org/10.1002/icd.635

Duong, M. T., Pullmann, M. D., Buntain-Ricklefs, J., Lee, K., Benjamin, K. S., Nguyen, L., & Cook, C. R. (2019). Brief teacher training improves student behavior and student–teacher relationships in middle school. *School Psychology, 34*(2), 212. https://doi.org/10.1037/spq0000296

*Elledge, L. C., Elledge, A. R., Newgent, R. A., & Cavell, T. A. (2016). Social risk and peer victimization in elementary school children: The protective role of teacher-student relationships. *Journal of Abnormal Child Psychology, 44*(4), 691-703. https://doi.org/10.1007/s10802-015-0074-z

Engels, M. C., Colpin, H., Van Leeuwen, K., Bijttebier, P., Van Den Noortgate, W., Claes, S., Goossens, L., & Verschueren, K. (2016). Behavioral engagement, peer status, and teacher–student relationships in adolescence: A longitudinal study on reciprocal influences. *Journal of Youth and Adolescence, 45*(6), 1192-1207. https://doi.org/10.1007/s10964-016-0414-5

Erling, A., & Hwang, C. P. (2004). Swedish 10-year-old children's perceptions and experiences of bullying. *Journal of School Violence, 3*(1), 33-43. https://doi.org/https://doi.org/10.1300/J202v03n01_04

*Espelage, D. L., Sung Hong, J., Rao, M. A., & Thornberg, R. (2015). Understanding ecological factors associated with bullying across the elementary to middle school transition in the United States. *Violence and Victims, 30*(3), 470-487. https://doi.org/http://dx.doi.org/10.1891/0886-6708.VV-D-14-00046

Ettekal, I., Kochenderfer-Ladd, B., & Ladd, G. W. (2015). A synthesis of person-and relational-level factors that influence bullying and bystanding behaviors: Toward an integrative framework. *Aggression and Violent Behavior, 23*, 75-86. https://doi.org/10.1016/j.avb.2015.05.011

Ewing, A. R., & Taylor, A. R. (2009). The role of child gender and ethnicity in teacher–child relationship quality and children's behavioral adjustment in preschool. *Early Childhood Research Quarterly, 24*(1), 92-105. https://doi.org/10.1016/j.ecresq.2008.09.002

Farmer, T. W., Lines, M. M., & Hamm, J. V. (2011, Sep-Oct). Revealing the invisible hand: The role of teachers in children's peer experiences. *Journal of Applied Developmental Psychology, 32*(5), 247-256. https://doi.org/10.1016/j.appdev.2011.04.006

Fekkes, M., Pijpers, F. I. M., & Verloove-Vanhorick, S. P. (2005). Bullying: Who does what, when and where? Involvement of children, teachers and parents in bullying behavior. *Health Education Research, 20*(1), 81–91. https://doi.org/10.1093/her/cyg100

Fernández-Castilla, B., Constantin, M. A., Giletta, M., & Maes, M. (2020). *Cross-Lagged Effects and Corresponding Sampling Variances*. https://doi.org/10.17605/OSF.IO/XFWN5

*Flaspohler, P. D., Elfstrom, J. L., Vanderzee, K. L., Sink, H. E., & Birchmeier, Z. (2009). Stand by me: The effects of peer and teacher support in mitigating the impact of bullying on quality of life. *Psychology in the Schools, 46*(7), 636-649. https://doi.org/http://dx.doi.org/10.1002/pits.20404

Flemish Ministry of Education and Training. (2014). *Grote lijnen van het M-Decreet [General measures for children with special educational needs]*. Retrieved April 30 from https://onderwijs.vlaanderen.be/nl/grote-lijnen-van-het-m-decreet

Gaffney, H., Ttofi, M. M., & Farrington, D. P. (2021). What works in anti-bullying programs? Analysis of effective intervention components. *Journal of School Psychology, 85*, 37-56. https://doi.org/https://doi.org/10.1016/j.jsp.2020.12.002

*Garner, P. W., Mahatmya, D., Moses, L. K., & Bolt, E. N. (2014). Associations of preschool type and teacher-child relational quality with young children's social-emotional competence. *Early Education and Development, 25*(3), 399-420. https://doi.org/http://dx.doi.org/10.1080/10409289.2013.801706

George, B., & Pandey, S. K. (2017). We know the Yin—But where is the Yang? Toward a balanced approach on common source bias in public administration scholarship. *Review of Public Personnel Administration, 37*(2), 245-270. https://doi.org/10.1177/0734371X17698189

Gest, S. D., & Rodkin, P. C. (2011). Teaching practices and elementary classroom peer ecologies. *Journal of Applied Developmental Psychology, 32*(5), 288–296. https://doi.org/10.1016/j.appdev.2011.02.004

Graham, A., Powell, M. A., & Truscott, J. (2016). Facilitating student well-being: relationships do matter. *Educational Research, 58*(4), 366-383. https://doi.org/https://doi.org/10.1080/00131881.2016.1228841

Gregoriadis, A., Grammatikopoulos, V., Tsigilis, N., & Verschueren, K. (2020). Teachers' and children's perceptions about their relationships: examining the construct of dependency in the Greek sociocultural context. *Attachment & Human Development*, 1-16. https://doi.org/10.1080/14616734.2020.1751990

Gregory, A., Ruzek, E., Hafen, C., Mikami, A. Y., Allen, J., & Pianta, R. (2017). My Teaching Partner-Secondary: A video-based coaching model. *Theory Into Practice, 56*(1), 38-45. https://doi.org/https://doi.org/10.1080/00405841.2016.1260402

*Gutt, T. A., & Randa, R. (2016). The influence of an empathetic adult on the relationship between bullying victimization and fear at school. *Journal of Crime & Justice, 39*(2), 282-302. https://doi.org/10.1080/0735648x.2014.956328

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. https://doi.org/10.1111/1467-8624.00301

Hamre, B. K., Pianta, R. C., Downer, J. T., DeCoster, J., Mashburn, A. J., Jones, S. M., Brown, J. L., Cappella, E., Atkins, M., & Rivers, S. E. (2013). Teaching through interactions:

Testing a developmental framework of teacher effectiveness in over 4,000 classrooms. *The Elementary School Journal, 113*(4), 461-487. https://doi.org/https://doi.org/10.1086/669616

*Hanif, R., & Zaheer, S. (2018). School culture as a determinant of bullying: Exploring the participant roles. In *School bullying and mental health: Risks, intervention and prevention* (pp. 154-166). Routledge.

*Hanish, L. D., Kochenderfer-Ladd, B., Fabes, R. A., Martin, C. L., & Denning, D. (2004). Bullying among young children: The influence of peers and teachers. In *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 141-159). Lawrence Erlbaum Associates.

*Harks, M., & Hannover, B. (2020). Feeling socially embedded and engaging at school: The impact of peer status, victimization experiences, and teacher awareness of peer relations in class. *European Journal of Psychology of Education, 35*(4), 795–818. https://doi.org/http://dx.doi.org/10.1007/s10212-019-00455-3

Harrer, M., Cuijpers, P., Furukawa, T. A., & Ebert, D. D. (2019). *Doing meta-analysis in R: A hands-on guide*. https://bookdown.org/MathiasHarrer/Doing_Meta_Analysis_in_R/

*Havik, T. (2017). Bullying victims' perceptions of classroom interaction. *School Effectiveness and School Improvement, 28*(3), 350-373. https://doi.org/http://dx.doi.org/10.1080/09243453.2017.1294609

*He, G. H., Strodl, E., Chen, W. Q., Liu, F., Hayixibayi, A., & Hou, X. Y. (2019). Interpersonal conflict, school connectedness and depressive symptoms in Chinese adolescents: Moderation effect of gender and grade level. *International Journal of Environmental Research and Public Health, 16*(12), 2182. https://doi.org/10.3390/ijerph16122182

Hendrickx, M. M., Mainhard, M. T., Boor-Klip, H. J., Cillessen, A. H. N., & Brekelmans, M. (2016). Social dynamics in the classroom: Teacher support and conflict and the peer ecology. *Teaching and Teacher Education, 53*, 30-40. https://doi.org/10.1016/j.tate.2015.10.004

Hendrickx, M. M. H. G., Mainhard, T., Boor-Klip, H. J., & Brekelmans, M. (2017). Teacher liking as an affective filter for the association between student behavior and peer status.

Contemporary Educational Psychology, 49, 250-262. https://doi.org/10.1016/j.cedpsych.2017.03.004

Hendrickx, M. M. H. G., Mainhard, T., Oudman, S., Boor-Klip, H. J., & Brekelmans, M. (2017). Teacher behavior and peer liking and disliking: The teacher as a social referent for peer status. *Journal of Educational Psychology, 109*(4), 546-558. https://doi.org/10.1037/edu0000157

*Herrero, J., Estévez, E., & Musitu, G. (2006). The relationships of adolescent school-related deviant behaviour and victimization with psychological distress: Testing a general model of the mediational role of parents and teachers across groups of gender and age. *Journal of Adolescence, 29*(5), 671-690. https://doi.org/http://dx.doi.org/10.1016/j.adolescence.2005.08.015

Hinduja, S., & Patchin, J. W. (2014). *Bullying beyond the schoolyard: Preventing and responding to cyberbullying*. Corwin Press.

Hong, J. S., & Espelage, D. L. (2012). A review of research on bullying and peer victimization in school: An ecological system analysis. *Aggression and Violent Behavior, 17*(4), 311-322. https://doi.org/10.1016/j.avb.2012.03.003

*Hong, J. S., Song, E., Llorent, V. J., Patel, S., & Voisin, D. R. (2020). Can adult care diminish the effects of friends' assaultive behaviors on bullying perpetration among African American youth? *Journal of Aggression, Maltreatment & Trauma, 29*(2), 242-258. https://doi.org/http://dx.doi.org/10.1080/10926771.2018.1552223

Hox, J. J. (2010). *Multilevel Analysis: Techniques and applications* (Second ed.). Lawrence Erlbaum Associates.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

*Hui, E. K. P., & Sun, R. C. F. (2010). Chinese children's perceived school satisfaction: The role of contextual and intrapersonal factors. *Educational Psychology, 30*(2), 155-172. https://doi.org/http://dx.doi.org/10.1080/01443410903494452

*Humphrey, N., & Symes, W. (2010). Perceptions of social support and experience of bullying among pupils with autistic spectrum disorders in mainstream secondary schools. *European Journal of Special Needs Education, 25*(1), 77-91. https://doi.org/http://dx.doi.org/10.1080/08856250903450855

Hunter, S. C., Boyle, J. M., & Warden, D. (2004). Help seeking amongst child and adolescent victims of peer-aggression and bullying: The influence of school-stage, gender, victimisation, appraisal, and emotion. *British Journal of Educational Psychology, 74*(3), 375-390. https://doi.org/ https://doi.org/10.1348/0007099041552378

*Idsoe, T., Solli, E., & Cosmovici, E. M. (2008). Social psychological processes in family and school: More evidence on their relative etiological significance for bullying behavior. *Aggressive Behavior, 34*(5), 460-474. https://doi.org/10.1002/ab.20259

Inchley, J., Currie, D., Budisavljevic, S., Torsheim, T., Jåstad, A., Cosma, A., Kelly, C., & Arnarsson, Á. M. (2020). *Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada.* https://apps.who.int/iris/bitstream/handle/10665/332091/9789289055000-eng.pdf

*Jia, J., Li, D., Li, X., Zhou, Y., Wang, Y., Sun, W., & Zhao, L. (2018). Peer victimization and adolescent Internet addiction: The mediating role of psychological security and the moderating role of teacher-student relationships. *Computers in Human Behavior, 85*(1), 116-124. https://doi.org/http://dx.doi.org/10.1016/j.chb.2018.03.042

Jöreskog, K. G. (1970). A general method for analysis of covariance structures. *Biometrika, 57*(2), 239-251. https://doi.org/10.1093/biomet/57.2.239

Kaufman, T. M., Huitsing, G., Bloemberg, R., & Veenstra, R. (2020). The systematic application of network diagnostics to monitor and tackle bullying and victimization in schools. *International Journal of Bullying Prevention*, 1-13. https://doi.org/10.1007/s42380-020-00064-5

Kincade, L., Cook, C., & Goerdt, A. (2020). Meta-analysis and common practice elements of universal approaches to improving student-teacher relationships. *Review of Educational Research, 90*(5), 710-748. https://doi.org/10.3102/0034654320946836

Kindertelefoon. (2020). *Stijging gesprekken digitaal pesten bij De Kindertelefoon* https://www.kindertelefoon.nl/persbericht-pesten

Klimstra, T. A., Bleidorn, W., Asendorpf, J. B., Van Aken, M. A., & Denissen, J. J. (2013). Correlated change of Big Five personality traits across the lifespan: A search for determinants. *Journal of Research in Personality, 47*(6), 768-777. https://doi.org/10.1016/j.jrp.2013.08.004

Kochenderfer-Ladd, B., & Ladd, G. W. (2016). Integrating academic and social-emotional learning in classroom interactions. In K. R. Wentzel & G. B. Ramani (Eds.), *Handbook of social influences in school contexts: Social-emotional, motivation and cognitive outcomes* (pp. 349-366). Routledge.

Koenen, A.-K., Vervoort, E., Kelchtermans, G., Verschueren, K., & Spilt, J. L. (2019). Teachers' daily negative emotions in interactions with individual students in special education. *Journal of Emotional and Behavioral Disorders, 27*(1), 37-51. https://doi.org/https://doi.org/10.1177/1063426617739579

*Konishi, C., & Hymel, S. (2009). Bullying and stress in early adolescence: The role of coping and social support. *Journal of Early Adolescence, 29*(3), 333-356. https://doi.org/http://dx.doi.org/10.1177/0272431608320126

*Konishi, C., Hymel, S., Zumbo, B. D., & Li, Z. (2010). Do school bullying and student-teacher relationships matter for academic achievement? A multilevel analysis. *Canadian Journal of School Psychology, 25*(1), 19-39. https://doi.org/http://dx.doi.org/10.1177/0829573509357550

Koomen, H. M. Y., Verschueren, K., van Schooten, E., Jak, S., & Pianta, R. C. (2012). Validating the Student-Teacher Relationship Scale: Testing factor structure and measurement invariance across child gender and age in a Dutch sample. *Journal of School Psychology, 50*(2), 215-234. https://doi.org/10.1016/j.jsp.2011.09.001

*Košir, K., Klasinc, L., Špes, T., Pivec, T., Cankar, G., & Horvat, M. (2020). Predictors of self-reported and peer-reported victimization and bullying behavior in early adolescents: The role of school, classroom, and individual factors. *European Journal of Psychology of Education, 35*(2), 381–402. https://doi.org/10.1007/s10212-019-00430-y

*Lam, S.-f., Law, W., Chan, C.-K., Zhang, X., & Wong, B. P. H. (2018). Will victims become aggressors or vice versa? A cross-lagged analysis of school aggression. *Journal of Abnormal Child Psychology, 46*(3), 529–541. https://doi.org/10.1007/s10802-017-0298-1

Laursen, B., & Hoff, E. (2006). Person-centered and variable-centered approaches to longitudinal data. *Merrill-Palmer Quarterly,* 52(3), 377-389. https://doi.org/10.1353/mpq.2006.0029

Leadbeater, B. J., & Hoglund, W. L. (2009). The effects of peer victimization and physical aggression on changes in internalizing from first to third grade. *Child Development, 80*(3), 843-859. https://doi.org/10.1111/j.1467-8624.2009.01301.x

*Leadbeater, B. J., Sukhawathanakul, P., Smith, D., & Bowen, F. (2015). Reciprocal associations between interpersonal and values dimensions of school climate and peer victimization in elementary school children. *Journal of Clinical Child & Adolescent Psychology, 44*(3), 480-493. https://doi.org/10.1080/15374416.2013.873985

Leflot, G., van Lier, P. A. C., Onghena, P., & Colpin, H. (2010). The role of teacher behavior management in the development of disruptive behaviors: An intervention study with the good behavior game. *Journal of Abnormal Child Psychology, 38*(6), 869-882. https://doi.org/10.1007/s10802-010-9411-4

*Legkauskas, V., Magelinskaite-Legkauskiene, S., & Kepalaite, A. (2017). The role of student-teacher relationship in the link between social competence and involvement in bullying in the 1st grade. *Social Welfare Interdisciplinary Approach, 7*(1), 8-18. https://doi.org/10.21277/sw.v1i7.292

Lei, H., Cui, Y., & Chiu, M. M. (2016). Affective teacher-student relationships and students' externalizing behavior problems: A meta-analysis. *Frontiers in Psychology, 7*, 1311. https://doi.org/10.3389/fpsyg.2016.01311

Lei, H., Cui, Y., & Chiu, M. M. (2018). The relationship between teacher support and students' academic emotions: A meta-analysis. *Frontiers in Psychology, 8*, 2288. https://doi.org/10.3389/fpsyg.2017.02288

Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. SAGE publications.

*Lohbeck, A., & Petermann, F. (2018). Cybervictimization, self-esteem, and social relationships among German secondary school students. *Journal of School Violence, 17*(4), 472-486. https://doi.org/10.1080/15388220.2018.1428194

Maes, M., Nelemans, S. A., Danneel, S., Fernández-Castilla, B., Van den Noortgate, W., Goossens, L., & Vanhalst, J. (2019). Loneliness and social anxiety across childhood and adolescence: Multilevel meta-analyses of cross-sectional and longitudinal associations. *Developmental Psychology, 55*(7), 1548-1565. https://doi.org/http://dx.doi.org/10.1037/dev0000719

Marengo, D., Jungert, T., Iotti, N. O., Settanni, M., Thornberg, R., & Longobardi, C. (2018). Conflictual student–teacher relationship, emotional and behavioral problems, prosocial behavior, and their associations with bullies, victims, and bullies/victims. *Educational Psychology, 38*, 1201-1217. https://doi.org/10.1080/01443410.2018.1481199

*Marengo, D., Settanni, M., Prino, L. E., Parada, R. H., & Longobardi, C. (2019). Exploring the dimensional structure of bullying victimization among primary and lower-secondary school students: Is one factor enough, or do we need more? *Frontiers in Psychology, 10*, 770. https://doi.org/10.3389/fpsyg.2019.00770

Marks, P. E. L., Babcock, B., Cillessen, A. H. N., & Crick, N. R. (2013). The effects of participation rate on the internal reliability of peer nomination measures. *Social Development, 22*(3), 609-622. https://doi.org/10.1111/j.1467-9507.2012.00661.x

McDougall, P., & Vaillancourt, T. (2015). Long-term adult outcomes of peer victimization in childhood and adolescence: Pathways to adjustment and maladjustment. *American Psychologist, 70*(4), 300-310. https://doi.org/10.1037/a0039174

McGrath, K. F., & Van Bergen, P. (2015). Who, when, why and to what end? Students at risk of negative student–teacher relationships and their outcomes. *Educational Research Review, 14*, 1-17. https://doi.org/10.1016/j.edurev.2014.12.001

*Meland, E., Rydning, J. H., Lobben, S., Breidablik, H.-J., & Ekeland, T.-J. (2010). Emotional, self-conceptual, and relational characteristics of bullies and the bullied. *Scandinavian*

Journal of Public Health, 38(4), 359-367. https://doi.org/http://dx.doi.org/10.1177/1403494810364563

Menesini, E. (2019). Translating knowledge into interventions: An 'individual by context'approach to bullying. *European Journal of Developmental Psychology, 16*, 1-23. https://doi.org/10.1080/17405629.2018.1564273

Monks, C. P., & Smith, P. K. (2006). Definitions of bullying: Age differences in understanding of the term, and the role of experience. *British Journal of Developmental Psychology, 24*(4), 801-821. https://doi.org/10.1348/026151005X82352

Moore, S. E., Norman, R. E., Suetani, S., Thomas, H. J., Sly, P. D., & Scott, J. G. (2017). Consequences of bullying victimization in childhood and adolescence: A systematic review and meta-analysis. *World Journal of Psychiatry, 7*, 60-76. https://doi.org/10.5498/wjp.v7.i1.60

*Morin, H. K., Bradshaw, C. P., & Berg, J. K. (2015). Examining the link between peer victimization and adjustment problems in adolescents: The role of connectedness and parent engagement. *Psychology of Violence, 5*(4), 422-432. https://doi.org/http://dx.doi.org/10.1037/a0039798

Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus User's Guide* (8th ed.).

Nappa, M. R., Palladino, B. E., Nocentini, A., & Menesini, E. (2020). Do the face-to-face actions of adults have an online impact? The effects of parent and teacher responses on cyberbullying among students. *European Journal of Developmental Psychology*, 1-16. https://doi.org/https://doi.org/10.1080/17405629.2020.1860746

*Natvig, G. K., Albrektsen, G., & Qvarnstrøm, U. (2001). School-related stress experience as a risk factor for bullying behavior. *Journal of Youth and Adolescence, 30*(5), 561-575. https://doi.org/http://dx.doi.org/10.1023/A:1010448604838

Newman, D. A. (2014). Missing data: Five practical guidelines. *Organizational Research Methods, 17*(4), 372-411. https://doi.org/10.1177/1094428114548590

O'Connor, E. (2010). Teacher–child relationships as dynamic systems. *Journal of School Psychology, 48*(3), 187-218. https://doi.org/10.1016/j.jsp.2010.01.001

Oldenburg, B., Bosman, R., & Veenstra, R. (2016). Are elementary school teachers prepared to tackle bullying? A pilot study. *School Psychology International, 37*(1), 64-72. https://doi.org/10.1177/0143034315623324

Oliver, C., & Candappa, M. (2007). Bullying and the politics of 'telling'. *Oxford Review of Education, 33*(1), 71-86. https://doi.org/10.1080/03054980601094594

Olweus, D. (1993). *Bullying at school: What we know and what we can do.* Blackwell Publishing Ltd.

Olweus, D. (2013). School bullying: Development and some important challenges. *Annual Review of Clinical Psychology, 9*(1), 751-780. https://doi.org/10.1146/annurev-clinpsy-050212-185516

Olweus, D., & Limber, S. P. (2018). Some problems with cyberbullying research. *Current Opinion in Psychology, 19*(1), 139-143. https://doi.org/10.1016/j.copsyc.2017.04.012

Orobio de Castro, B., Mulder, S., van der Ploeg, R., Onrust, S., van den Berg, Y. H. M., Stoltz, S., Buil, M., de Wit, I., Buitenhuis, L., Cillessen, A. H. N., Veenstra, R., van Lier, P. A. C., Deković, M., & Scholte, R. H. J. (2018). *Wat werkt tegen pesten?* https://www.nro.nl/wp-content/uploads/2018/05/wat-werkt-tegen-pesten-eindrapport.pdf

Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan - a web and mobile app for systematic reviews. *Systematic Reviews, 5*, 210. https://doi.org/10.1186/s13643-016-0384-4

*Pabian, S., & Vandebosch, H. (2016). Short-term longitudinal relationships between adolescents' (cyber)bullying perpetration and bonding to school and teachers. *International Journal of Behavioral Development, 40*(2), 162-172. https://doi.org/http://dx.doi.org/10.1177/0165025415573639

*Palsdottir, A., Asgeirsdottir, B. B., & Sigfusdottir, I. D. (2012). Gender difference in wellbeing during school lessons among 10-12-year-old children: The importance of school subjects and student-teacher relationships. *Scandinavian Journal of Public Health, 40*(7), 605-613. https://doi.org/http://dx.doi.org/10.1177/1403494812458846

Pellegrini, A. D., & Bartini, M. (2000). An empirical comparison of methods of sampling aggression and victimization in school settings. *Journal of Educational Psychology, 92*(2), 360-366. https://doi.org/10.1037/0022-0663.92.2.360

Peugh, J. L. (2010). A practical guide to multilevel modeling. *Journal of School Psychology, 48*(1), 85-112. https://doi.org/10.1016/j.jsp.2009.09.002

Pianta, R. C. (1999). *Enhancing relationships between children and teachers*. American Psychological Association.

Pianta, R. C. (2001). *Student-teacher relationship scale: Professional manual*. Psychological Assessment Resources.

Pianta, R. C., Hamre, B., & Stuhlman, M. (2003). Relationships between teachers and children. In W. M. Reynolds & G. E. Miller (Eds.), *Handbook of psychology (Vol. 7) Educational psychology* (pp. 199-234). John Wiley & Sons. https://doi.org/10.1002/0471264385.wei0710

Pianta, R. C., & Steinberg, M. (1992). Relationships between children and kindergarten teachers from the teachers' perspective. In R. C. Pianta (Ed.), *Beyond the parent: The role of other adults in children's lives* (pp. 61-80). Jossey-Bass.

Pössel, P., Rudasill, K. M., Sawyer, M. G., Spence, S. H., & Bjerg, A. C. (2013). Associations between teacher emotional support and depressive symptoms in Australian adolescents: a 5-year longitudinal study. *Developmental Psychology, 49*, 2135-2146. https://doi.org/10.1037/a0031767

Pouwels, J. L., Lansu, T. A., & Cillessen, A. H. (2016). Participant roles of bullying in adolescence: Status characteristics, social behavior, and assignment criteria. *Aggressive Behavior, 42*, 239-253. https://doi.org/10.1002/ab.21614

Pouwels, J. L., Souren, P. M., Lansu, T. A. M., & Cillessen, A. H. N. (2016). Stability of peer victimization: A meta-analysis of longitudinal research. *Developmental Review, 40*(2), 1-24. https://doi.org/10.1016/j.dr.2016.01.001

Pöyhönen, V., Juvonen, J., & Salmivalli, C. (2010). What does it take to stand up for the victim of bullying? The interplay between personal and social factors. *Merrill-Palmer Quarterly, 56*, 143-163. https://doi.org/10.1353/mpq.0.0046

*Raskauskas, J. L., Gregory, J., Harvey, S. T., Rifshana, F., & Evans, I. M. (2010). Bullying among primary school children in New Zealand: Relationships with prosocial behaviour and classroom climate. *Educational Research, 52*(1), 1-13. https://doi.org/10.1080/00131881003588097

*Reavis, R. D., Keane, S. P., & Calkins, S. D. (2010). Trajectories of peer victimization: The role of multiple relationships. *Merrill-Palmer Quarterly, 56*(3), 303-332. https://doi.org/10.1353/mpq.0.0055

*Richard, J. F., Schneider, B. H., & Mallet, P. (2012). Revisiting the whole-school approach to bullying: Really looking at the whole school. *School Psychology International, 33*(3), 263-284. https://doi.org/http://dx.doi.org/10.1177/0143034311415906

Rigby, K. (2014). How teachers address cases of bullying in schools: a comparison of five reactive approaches. *Educational Psychology in Practice, 30*(4), 409-419. https://doi.org/10.1080/02667363.2014.949629

Roorda, D. L., Jak, S., Zee, M., Oort, F. J., & Koomen, H. M. (2017). Affective teacher–student relationships and students' engagement and achievement: A meta-analytic update and test of the mediating role of engagement. *School Psychology Review, 46*(3), 239-261. https://doi.org/10.17105/SPR-2017-0035.V46-3

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. https://doi.org/10.3102/0034654311421793

Roorda, D. L., Zee, M., & Koomen, H. M. Y. (2020). Don't forget student-teacher dependency! A meta-analysis on associations with students' school adjustment and the moderating role of student and teacher characteristics. *Attachment & Human Development*, 1-14. https://doi.org/10.1080/14616734.2020.1751987

*Runions, K. C., & Shaw, T. (2013). Teacher–child relationship, child withdrawal and aggression in the development of peer victimization. *Journal of Applied Developmental Psychology, 34*(6), 319-327. https://doi.org/10.1016/j.appdev.2013.09.002

Rupinski, M. T., & Dunlap, W. P. (1996). Approximating Pearson product-moment correlations from Kendall's tau and Spearman's rho. *Educational and Psychological Measurement, 56*(3), 419-429. https://doi.org/https://doi.org/10.1177/0013164496056003004

Saarento, S., Boulton, A. J., & Salmivalli, C. (2015). Reducing bullying and victimization: Student-and classroom-level mechanisms of change. *Journal of Abnormal Child Psychology, 43*(1), 61-76. https://doi.org/10.1007/s10802-013-9841-x

Saarento, S., Kärnä, A., Hodges, E. V., & Salmivalli, C. (2013). Student-, classroom-, and school-level risk factors for victimization. *Journal of School Psychology, 51*, 421-434. https://doi.org/10.1016/j.jsp.2013.02.002

Sabol, T. J., & Pianta, R. C. (2012). Recent trends in research on teacher–child relationships. *Attachment & Human Development, 14*(3), 213-231. https://doi.org/10.1080/14616734.2012.672262

Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior, 15*(2), 112-120. https://doi.org/10.1016/j.avb.2009.08.007

Salmivalli, C., Lagerspetz, K., 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), 1-15. https://doi.org/10.1002/(SICI)1098-2337(1996)22:1<1::AID-AB1>3.0.CO;2-T

Sameroff, A. (2009). The transactional model. In A. Sameroff (Ed.), *The transactional model of development: How children and contexts shape each other* (pp. 3–21). American Psychological Association. https://doi.org/10.1037/11877-001

Satorra, A., & Bentler, P. M. (2010). Ensuring positiveness of the scaled difference chi-square test statistic. *Psychometrika, 75*(2), 243–248. https://doi.org/10.1007/s11336-009-9135-y

Schoeler, T., Duncan, L., Cecil, C. M., Ploubidis, G. B., & Pingault, J.-B. (2018). Quasi-experimental evidence on short-and long-term consequences of bullying victimization: A meta-analysis. *Psychological Bulletin, 144*(12), 1229-1246. https://doi.org/http://dx.doi.org/10.1037/bul0000171

Scholte, R. H., Engels, R. C., Overbeek, G., De Kemp, R. A., & Haselager, G. J. (2007). Stability in bullying and victimization and its association with social adjustment in childhood and adolescence. *Journal of Abnormal Child Psychology, 35*(2), 217-228. https://doi.org/10.1007/s10802-006-9074-3

*Serdiouk, M., Berry, D., & Gest, S. D. (2016). Teacher-child relationships and friendships and peer victimization across the school year. *Journal of Applied Developmental Psychology, 46*, 63-72. https://doi.org/10.1016/j.appdev.2016.08.001

*Shaw, R. J., Currie, D. B., Smith, G. S., Brown, J., Smith, D. J., & Inchley, J. C. (2019). Do social support and eating family meals together play a role in promoting resilience to bullying and cyberbullying in Scottish school children? *SSM - Population Health, 9*(1), 1-9. https://doi.org/10.1016/j.ssmph.2019.100485

Shaw, T., Campbell, M. A., Eastham, J., Runions, K. C., Salmivalli, C., & Cross, D. (2019). Telling an adult at school about bullying: Subsequent victimization and internalizing problems. *Journal of Child and Family Studies, 28*(9), 1-12. https://doi.org/10.1007/s10826-019-01507-4

*Shin, Y., & Kim, H. Y. (2008). Peer victimization in Korean preschool children: The effects of child characteristics, parenting behaviours and teacher-child relationships. *School Psychology International, 29*(5), 590-605. https://doi.org/10.1177/0143034308099203

Sijtsema, J. J., Veenstra, R., Lindenberg, S., & Salmivalli, C. (2009). Empirical test of bullies' status goals: Assessing direct goals, aggression, and prestige. *Aggressive Behavior, 35*(1), 57-67. https://doi.org/10.1002/ab.20282

Smith, P. K. (2017). School-wide interventions for bullying: What works? In P. Sturmey (Ed.), *The Wiley handbook of violence and aggression (Vol. III)* (pp. 1297-1309). Wiley.

Smith, P. K., del Barrio, C., & Tokunaga, R. S. (2012). Definitions of Bullying and Cyberbullying: How Useful Are the Terms? In S. Bauman, D. Cross, & J. Walker (Eds.), *Principles of Cyberbullying Research* (pp. 54-68). Routledge.

Smith, P. K., & Shu, S. (2000). What good schools can do about bullying: Findings from a survey in English schools after a decade of research and action. *Childhood, 7*(2), 193-212. https://doi.org/10.1177/0907568200007002005

Solberg, M. E., & Olweus, D. (2003). Prevalence estimation of school bullying with the Olweus Bully/Victim Questionnaire. *Aggressive Behavior, 29*(3), 239-268. https://doi.org/10.1002/ab.10047

Spilt, J. L., Koomen, H. M., & Jak, S. (2012). Are boys better off with male and girls with female teachers? A multilevel investigation of measurement invariance and gender match in teacher–student relationship quality. *Journal of School Psychology, 50*(3), 363-378. https://doi.org/10.1016/j.jsp.2011.12.002

Spilt, J. L., Koomen, H. M., Thijs, J. T., & Van der Leij, A. (2012). Supporting teachers' relationships with disruptive children: The potential of relationship-focused reflection. *Attachment & Human Development, 14*(3), 305-318. https://doi.org/10.1080/14616734.2012.672286

Spilt, J. L., Leflot, G., & Colpin, H. (2019). Teacher involvement prevents increases in children's depressive symptoms: Bidirectional associations in Elementary School. *Journal of Abnormal Child Psychology, 47*, 359-367. https://doi.org/10.1007/s10802-018-0441-7

Stassen Berger, K. (2007). Update on bullying at school: Science forgotten? *Developmental Review, 27*(1), 90-126. https://doi.org/10.1016/j.dr.2006.08.002

Steiger, J. H. (2007). Understanding the limitations of global fit assessment in structural equation modeling. *Personality and Individual Differences, 42*(5), 893-898. https://doi.org/10.1016/j.paid.2006.09.017

Strohmeier, D., & Gradinger, P. (2021). Teachers' knowledge and intervention strategies to handle hate-postings. *European Journal of Developmental Psychology*, 1-15. https://doi.org/10.1080/17405629.2021.1877130

Strohmeier, D., Kärnä, A., & Salmivalli, C. (2011). Intrapersonal and interpersonal risk factors for peer victimization in immigrant youth in Finland. *Developmental Psychology, 47*(1), 248-258. https://doi.org/10.1037/a0020785

*Sumter, S. R., & Baumgartner, S. E. (2017). Psychosomatic complaints in adolescence: Untangling the relationship between offline and online peer victimization, psychosomatic complaints and social support. *European Journal of Developmental Psychology, 14*(4), 399-415. https://doi.org/http://dx.doi.org/10.1080/17405629.2016.1215980

*Swanson, J., Valiente, C., & Lemery-Chalfant, K. (2012). Predicting academic achievement from cumulative home risk: The mediating roles of effortful control, academic relationships, and school avoidance. *Merrill-Palmer Quarterly, 58*(3), 375-408. https://doi.org/10.1353/mpq.2012.0014

ten Bokkel, I. M., Stoltz, S. E. M. J., van den Berg, Y. H. M., Orobio de Castro, B., & Colpin, H. (2021). Speak up or stay silent: Can teacher responses towards bullying predict victimized students' disclosure of victimization? *European Journal of Developmental Psychology*, 1-17. https://doi.org/10.1080/17405629.2020.1863211

Teräsahjo, T., & Salmivalli, C. (2003). "She is not actually bullied." The discourse of harassment in student groups. *Aggressive Behavior, 29*(2), 134-154. https://doi.org/https://doi.org/10.1002/ab.10045

Thomas, H. J., Connor, J. P., & Scott, J. G. (2018). Why do children and adolescents bully their peers? A critical review of key theoretical frameworks. *Social Psychiatry and Psychiatric Epidemiology, 53*(5), 437-451. https://doi.org/10.1007/s00127-017-1462-1

*Thornberg, R., Wänström, L., Pozzoli, T., & Gini, G. (2018). Victim prevalence in bullying and its association with teacher–student and student–student relationships and class moral disengagement: A class-level path analysis. *Research Papers in Education, 33*(3), 320-335. https://doi.org/10.1080/02671522.2017.1302499

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior, 26*(3), 277-287. https://doi.org/10.1016/j.chb.2009.11.014

Troop-Gordon, W., Kaeppler, A. K., & Corbitt-Hall, D. J. (2020). Youth's expectations for their teacher's handling of peer victimization and their socioemotional development. *The Journal of Early Adolescence*, 0272431620931192. https://doi.org/https://doi.org/10.1177/0272431620931192

Troop-Gordon, W., & Kuntz, K. J. (2013). The unique and interactive contributions of peer victimization and teacher-child relationships to children's school adjustment. *Journal of Abnormal Child Psychology, 41*(8), 1191-1202. https://doi.org/10.1007/s10802-013-9776-2

Troop-Gordon, W., & Ladd, G. W. (2015). Teachers' victimization-related beliefs and strategies: Associations with students' aggressive behavior and peer victimization. *Journal of Abnormal Child Psychology, 43*(1), 45-60. https://doi.org/10.1007/s10802-013-9840-y

Troop-Gordon, W., & Quenette, A. (2010). Children's perceptions of their teacher's responses to students' peer harassment: Moderators of victimization-adjustment linkages. *Merrill-Palmer Quarterly, 56*, 333-360. https://doi.org/10.1353/mpq.0.0056

*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. https://doi.org/10.1111/j.1467-9507.2011.00604.x

United Nations (2006). *Convention on the rights of persons with disabilities and optional protocol. Resolution adopted by the general assembly*. Retrieved May 24, 2021 from http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf

Unnever, J. D., & Cornell, D. G. (2004). Middle school victims of bullying: Who reports being bullied? *Aggressive Behavior, 30*, 373– 388. https://doi.org/10.1002/ab.20030

Vaiciunas, T., & Šmigelskas, K. (2019). The role of school-related well-being for adolescent subjective health complaints. *International Journal of Environmental Research and Public Health, 16*(9), 1557-1570. https://doi.org/10.3390/ijerph16091577

Vaish, A., Grossmann, T., & Woodward, A. (2008). Not all emotions are created equal: The negativity bias in social-emotional development. *Psychological Bulletin, 134*(3), 383-403. https://doi.org/10.1037/0033-2909.134.3.383

*Valle, J. E., Stelko-Pereira, A. C., Peixoto, E. M., & Williams, L. C. A. (2018). Influence of bullying and teacher-student relationship on school engagement: Analysis of an explanatory model. *Estudos de Psicologia, 35*(4), 411-420. https://doi.org/http://dx.doi.org/10.1590/19820275201800040008

Van Mieghem, A., Verschueren, K., Petry, K., & Struyf, E. (2020). An analysis of research on inclusive education: a systematic search and meta review. *International Journal of Inclusive Education, 24*(6), 675-689. https://doi.org/https://doi.org/10.1080/13603116.2018.1482012

van Verseveld, M. D., Fekkes, M., Fukkink, R. G., & Oostdam, R. J. (2021). Teachers' experiences with difficult bullying situations in the school: An explorative study. *The Journal of Early Adolescence, 41*(1), 43-69. https://doi.org/10.1177/0272431620939193

van Verseveld, M. D. A., Fukkink, R. G., Fekkes, M., & Oostdam, R. J. (2019). Effects of antibullying programs on teachers' interventions in bullying situations. A meta-analysis. *Psychology in the Schools, 56*(9), 1522-1539. https://doi.org/10.1002/pits.22283

Vancraeyveldt, C., Verschueren, K., Wouters, S., Van Craeyevelt, S., Van den Noortgate, W., & Colpin, H. (2015). Improving teacher-child relationship quality and teacher-rated behavioral adjustment amongst externalizing preschoolers: Effects of a two-component intervention. *Journal of Abnormal Child Psychology, 43*, 243-257. https://doi.org/10.1007/s10802-014-9892-7

Vandenbroucke, L., Spilt, J., Verschueren, K., Piccinin, C., & Baeyens, D. (2018). The classroom as a developmental context for cognitive development: A meta-analysis on the importance of teacher–student interactions for children's executive functions. *Review of Educational Research, 88*(1), 125-164. https://doi.org/10.3102/0034654317743200

*Varela, J. J., Zimmerman, M. A., Ryan, A. M., & Stoddard, S. A. (2018). Cyberbullying among Chilean students and the protective effects of positive school communities. *Journal of School Violence, 17*(4), 430-442. https://doi.org/10.1080/15388220.2017.1358640

Veenstra, R., Lindenberg, S., Huitsing, G., Sainio, M., & Salmivalli, C. (2014). The role of teachers in bullying: The relation between antibullying attitudes, efficacy, and efforts to reduce bullying. *Journal of Educational Psychology, 106*(4), 1135-1143. https://doi.org/10.1037/a0036110

Verschueren, K., & Koomen, H. (2020). Dependency in teacher–child relationships: Deepening our understanding of the construct. *Attachment & Human Development*, 1-9. https://doi.org/10.1080/14616734.2020.1751986

Verschueren, K., & Koomen, H. M. Y. (2012). Teacher–child relationships from an attachment perspective. *Attachment & Human Development, 14*(3), 205-211. https://doi.org/10.1080/14616734.2012.672260

Vervoort, E., Doumen, S., & Verschueren, K. (2015). Children's appraisal of their relationship with the teacher: Preliminary evidence for construct validity. *European Journal of Developmental Psychology, 12*(2), 243-260. https://doi.org/10.1080/17405629.2014.989984

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software, 36*(3), 1-48. https://www.jstatsoft.org/v36/i03/

*Vitaro, F., Boivin, M., Brendgen, M., Girard, A., & Dionne, G. (2012). Social experiences in kindergarten and academic achievement in grade 1: A monozygotic twin difference study. *Journal of Educational Psychology, 104*(2), 366-380. https://doi.org/http://dx.doi.org/10.1037/a0026879

Vitoroulis, I., & Vaillancourt, T. (2015). Meta-analytic results of ethnic group differences in peer victimization. *Aggressive Behavior, 41*(2), 149-170. https://doi.org/https://doi.org/10.1002/ab.21564

Volk, A. A., Dane, A. V., & Marini, Z. A. (2014). What is bullying? A theoretical redefinition. *Developmental Review, 34*(4), 327-343. https://doi.org/http://dx.doi.org/10.1016/j.dr.2014.09.001

Volk, A. A., Veenstra, R., & Espelage, D. L. (2017). So you want to study bullying? Recommendations to enhance the validity, transparency, and compatibility of bullying research. *Aggression and Violent Behavior, 36*, 34-43. https://doi.org/10.1016/j.avb.2017.07.003

Vrijen, C., Wiertsema, M., Ackermans, M. A., van der Ploeg, R., & Kretschmer, T. (2021). Childhood and adolescent bullying perpetration and later substance use: A meta-analysis. *Pediatrics*. https://doi.org/10.1542/peds.2020-034751

Wachs, S., Bilz, L., Niproschke, S., & Schubarth, W. (2019). Bullying intervention in schools: A multilevel analysis of teachers' success in handling bullying from the students' perspective. *The Journal of Early Adolescence, 39*(5), 642-668. https://doi.org/10.1177/0272431618780423

Walden, T. A., & Ogan, T. A. (1988). The development of social referencing. *Child Development, 59*(5), 1230-1240. https://doi.org/10.2307/1130486

*Wang, F., Leary, K. A., Taylor, L. C., & Derosier, M. E. (2016). Peer and teacher preference, student-teacher relationships, student ethnicity, and peer victimization in elementary school. *Psychology in the Schools, 53*(5), 488-501. https://doi.org/http://dx.doi.org/10.1002/pits.21922

*Wang, M. S., Hong, J. S., Wei, H.-S., & Hwang, Y.-T. (2019). Multiple level factors associated with bullying victimization in Taiwanese middle school students. *Journal of School Violence, 18*(3), 375-387. https://doi.org/http://dx.doi.org/10.1080/15388220.2018.1506927

Weyns, T., Colpin, H., De Laet, S., Engels, M., & Verschueren, K. (2018). Teacher support, peer acceptance, and engagement in the classroom: A three-wave longitudinal study in late childhood. *Journal of Youth and Adolescence, 47*(6), 1139-1150. https://doi.org/10.1007/s10964-017-0774-5

Weyns, T., Colpin, H., Engels, M. C., Doumen, S., & Verschueren, K. (2019). The relative contribution of peer acceptance and individual and class-level teacher–child interactions to kindergartners' behavioral development. *Early Childhood Research Quarterly, 47*, 259-270. https://doi.org/https://doi.org/10.1016/j.ecresq.2018.12.009

Wolke, D., Woods, S., Stanford, K., & Schulz, H. (2001). Bullying and victimization of primary school children in England and Germany: Prevalence and school factors. *British Journal of Psychology, 92*(4), 673-696. https://doi.org/10.1348/000712601162419

Yablon, Y. B. (2010). Student–teacher relationships and students' willingness to seek help for school violence. *Journal of Social and Personal Relationships, 27*(8), 1110-1123. https://doi.org/10.1177/0265407510381255

Yablon, Y. B. (2017). Students' reports of severe violence in school as a tool for early detection and prevention. *Child Development, 88*(1), 55-67. https://doi.org/10.1111/cdev.12679

Yarkoni, T. (2019). The generalizability crisis. *Behavioral and Brain Sciences [Preprint]*. https://doi.org/https://doi.org/10.31234/osf.io/jqw35

Yoon, J., Bauman, S., & Corcoran, C. (2020). Role of adults in prevention and intervention of peer victimization. In L. H. Rosen, S. R. Scott, & S. Y. Kim (Eds.), *Bullies, victims, and bystanders: Understanding child and adult participant vantage points* (pp. 179-212). Springer International Publishing.

Yoon, J. S., & Kerber, K. (2003). Bullying: Elementary teachers' attitudes and intervention strategies. *Research in Education, 69*(1), 27-35. https://doi.org/10.7227/RIE.69.3

Yoon, J. S., Sulkowski, M. L., & Bauman, S. A. (2016). Teachers' responses to bullying incidents: Effects of teacher characteristics and contexts. *Journal of School Violence, 15*(1), 91-113. https://doi.org/10.1080/15388220.2014.963592

Zajac, K., & Kobak, R. (2006). Attachment. In G. G. Bear & K. M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 379–389). National Association of School Psychologists.

APPENDIX

Appendix 1

Supplementary Material Chapter 2 - Descriptive Information and Effect Sizes of Studies Included in the Meta-Analysis

Authors	Year	Students (*N*)	Educ. Level	Months	Girl	Low SES	Ethn. min.	Peer problem	Concept	TSR Indicator	TSR Level	Same informant	*r*
Akanni et al.	2020	465	H	0	0.45	-	-	Bullying	General	Positive	Dyadic	Yes	-.22[a]
Aldridge et al.	2018	6,120	H	0	0.54	-	0.20	Victimization	General	Positive	Dyadic	Yes	-.22
Archambault et al.	2016	333	E	0	0.53	-	-	Victimization	General	Negative	Dyadic	Yes	.37
Ates et al.	2018	774	H	0	0.46	-	-	Victimization	Cyber	Positive	Dyadic	Yes	-.41
	2018	774	H	0	0.46	-	-	Bullying	Cyber	Positive	Dyadic	Yes	-.38
Attar-Schwartz et al.	2019	243	H	0	0.60	0.15	-	Victimization	General	Positive	Dyadic	Yes	-.14
Averdijk et al.	2014	1,178	E	0	0.48	-	0.11	Victimization	General	Positive	Dyadic	No	-.03
Bae et al.	2019	313	H	0	0.51	0.50	0.47	Victimization	Relational	Positive	Classroom	Yes	-.28[a]
	2019	313	H	0	0.51	0.50	0.47	Victimization	Verbal	Positive	Classroom	Yes	-.31[a]
	2019	313	H	0	0.51	0.50	0.47	Victimization	Physical	Positive	Classroom	Yes	-.30[a]
	2019	313	H	0	0.51	0.50	0.47	Bullying	Relational	Positive	Classroom	Yes	-.23[a]
	2019	313	H	0	0.51	0.50	0.47	Bullying	Verbal	Positive	Classroom	Yes	-.22[a]
	2019	313	H	0	0.51	0.50	0.47	Bullying	Physical	Positive	Classroom	Yes	-.23[a]
Banzon-Librojo et al.	2017	401	H	0	0.48	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.03
	2017	401	H	0	0.48	-	-	Victimization	Verbal	Positive	Dyadic	Yes	-.05
Behrhorst et al.	2019	265	H	0	0.50	0.88	0.93	Victimization	General	Positive	Classroom	Yes	-.02

Appendix 1 (continued)

Behrhorst et al.	2019	265	H	0	0.50	0.88	0.93	Victimization	General	Positive	Classroom	No	-.08
	2019	265	H	0	0.50	0.88	0.93	Victimization	General	Positive	Classroom	Yes	.09
	2019	265	H	0	0.50	0.88	0.93	Victimization	General	Positive	Classroom	No	-.11
	2019	265	H	6	0.50	0.88	0.93	Victimization	General	Positive	Classroom	Yes	-.03
	2019	265	H	6	0.50	0.88	0.93	Victimization	General	Positive	Classroom	No	-.20
Berkowitz & Benbenishty	2012	13,262	H	0	0.49	-	0.46	Victimization	General	Positive	Both	Yes	-.15[a]
	2012	13,262	H	0	0.49	-	0.46	Bullying	General	Positive	Both	Yes	-.20[a]
Bilodeau et al.	2020	1,150	E	0	0.52	0.10	0.09	Victimization	General	Positive	Dyadic	No	-.01
Boulton et al.	2012	364	E	0	0.47	-	-	Victimization	General	Positive	Dyadic	No	-.14
Boyesen & Bru	1999	345	H	0	-	-	-	Victimization	General	Positive	Dyadic	Yes	.01
	1999	345	H	0	-	-	-	Bullying	General	Positive	Dyadic	Yes	-.10
Brunstein Klomek et al.	2016	1,079	H	0	0.55	-	-	Victimization	General	Positive	Dyadic	Yes	-.09[b]
	2016	1,079	H	0	0.55	-	-	Victimization	General	Negative	Dyadic	Yes	.08[b]
Camodeca & Coppola	2019	321	E	0	0.48	-	-	Victimization	General	Positive	Dyadic	No	.00
	2019	321	E	0	0.48	-	-	Victimization	General	Negative	Dyadic	No	-.04
	2019	321	E	0	0.48	-	-	Bullying	General	Positive	Dyadic	No	.00
	2019	321	E	0	0.48	-	-	Bullying	General	Negative	Dyadic	No	.17
Chester et al.	2019	4,946	H	0	-	-	-	Victimization	Cyber	Positive	Dyadic	Yes	-.18[a]
Diaz-Aguado Jalon & Martínez Arias	2013	22,114	H	0	0.50	-	0.09	Victimization	Cyber	Negative	Dyadic	Yes	.18[c]
	2013	22,114	H	0	0.50	-	0.09	Bullying	Cyber	Negative	Dyadic	Yes	.19[c]

Appendix 1 (continued)

Donat et al.	2018	1,273	H	0	0.47	-	-	Bullying	General	Positive	Dyadic	Yes	-.08
	2018	1,658	H	0	0.51	-	-	Bullying	General	Positive	Dyadic	Yes	-.09
Elledge et al.	2016	361	E	0	0.54	-	0.39	Victimization	General	Positive	Dyadic	No	-.11
	2016	361	E	6	0.54	-	0.39	Victimization	General	Positive	Dyadic	No	-.12
	2016	361	E	0	0.54	-	0.39	Victimization	General	Positive	Dyadic	Yes	-.22
	2016	361	E	6	0.54	-	0.39	Victimization	General	Positive	Dyadic	Yes	-.25
	2016	361	E	0	0.54	-	0.39	Victimization	General	Positive	Dyadic	No	-.33
	2016	361	E	6	0.54	-	0.39	Victimization	General	Positive	Dyadic	No	-.25
Espelage et al.	2015	300	E	0	0.47	0.32	0.51	Victimization	General	Positive	Dyadic	Yes	-.16
	2015	300	E	0	0.47	0.32	0.51	Victimization	General	Negative	Dyadic	Yes	.16
	2015	237	E	0	0.47	0.32	0.51	Victimization	General	Positive	Dyadic	Yes	-.02
	2015	237	E	0	0.47	0.32	0.51	Victimization	General	Negative	Dyadic	Yes	.10
	2015	300	E	0	0.47	0.32	0.51	Bullying	General	Positive	Dyadic	Yes	-.25
	2015	300	E	0	0.47	0.32	0.51	Bullying	General	Negative	Dyadic	Yes	.13
	2015	237	E	0	0.47	0.32	0.51	Bullying	General	Positive	Dyadic	Yes	-.38
	2015	237	E	0	0.47	0.32	0.51	Bullying	General	Negative	Dyadic	Yes	.32
Flaspohler et al.	2009	4,331	H	0	0.49	-	-	Victimization	General	Positive	Dyadic	Yes	-.12[a]
	2009	4,331	H	0	0.49	-	-	Bullying	General	Positive	Dyadic	Yes	-.22[a]
Garner et al.	2014	145	E	0	0.49	0.76	0.71	Victimization	Relational	Positive	Dyadic	Yes	.06
	2014	145	E	0	0.49	0.76	0.71	Victimization	Physical	Positive	Dyadic	Yes	-.07
	2014	145	E	0	0.49	0.76	0.71	Victimization	Relational	Negative	Dyadic	Yes	-.11
	2014	145	E	0	0.49	0.76	0.71	Victimization	Physical	Negative	Dyadic	Yes	-.05
Gutt & Randa	2016	5,666	H	0	0.50	-	0.18	Victimization	General	Positive	Classroom	Yes	-.12
Hanif & Zaheer	2017	423	H	0	0.42	-	-	Victimization	General	Positive	Classroom	Yes	-.40[a]
	2017	423	H	0	0.42	-	-	Bullying	General	Positive	Classroom	Yes	-.62[a]

Appendix 1 (continued)

Hanish et al.	2004	167	E	0	0.48	-	0.33	Victimization	General	Positive	Dyadic	No	-.35
	2004	167	E	0	0.48	-	0.33	Victimization	General	Negative	Dyadic	No	.20
Harks & Hannover	2019	860	-	0	0.53	-	-	Victimization	General	Positive	Dyadic	Yes	-.06
Havik	2017	1,571	H	0	0.51	-	-	Victimization	General	Positive	Dyadic	Yes	-.19
He et al.	2019	6,576	H	0	0.42	-	-	Victimization	Other	Negative	Dyadic	Yes	.12[a]
	2019	6,576	H	0	0.42	-	-	Victimization	Other	Negative	Dyadic	Yes	.26[a]
Herrero et al.	2006	973	H	0	0.53	-	-	Victimization	General	Positive	Dyadic	No	-.04
	2006	973	H	0	0.53	-	-	Victimization	General	Negative	Dyadic	No	.08
Hong et al.	2020	483	H	0	0.54	-	-	Bullying	General	Positive	Both	Yes	-.31
Hui & Sun	2010	760	E	0	0.50	-	-	Victimization	General	Positive	Dyadic	Yes	-.22
Humphrey & Symes	2010	39	H	0	0.10	-	-	Victimization	General	Positive	Dyadic	Yes	-.24[a]
Idsoe et al.	2008	2,083	H	0	0.52	-	-	Bullying	General	Positive	Dyadic	Yes	-.30
Jia et al.	2018	747	H	0	0.49	0.38	-	Victimization	General	Positive	Dyadic	Yes	-.22
Konishi & Hymel	2009	312	E	0	0.53	-	-	Bullying	General	Positive	Dyadic	Yes	-.01
	2009	312	E	0	0.53	-	-	Bullying	General	Positive	Dyadic	No	-.01
Konishi et al.	2010	27,217	H	0	-	-	-	Bullying	General	Positive	Dyadic	No	-.08
Košir et al.	2019	1,905	E	0	0.50	-	-	Victimization	General	Positive	Dyadic	Yes	-.16[a]
	2019	1,905	E	0	0.50	-	-	Victimization	General	Positive	Dyadic	No	-.09[a]
	2019	1,905	E	0	0.50	-	-	Bullying	General	Positive	Dyadic	Yes	-.25[a]
	2019	1,905	E	0	0.50	-	-	Bullying	General	Positive	Dyadic	No	-.17[a]
Lam et al.	2018	497	H	0	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.18
	2018	497	H	0	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.25
	2018	497	H	0	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.10
	2018	497	H	0	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.09
	2018	497	H	0	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.12

Appendix 1 (continued)

Lam et al.	2018	497	H	0	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.10
	2018	497	H	0	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.14
	2018	497	H	0	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.15
	2018	497	H	0	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.21
	2018	497	H	0	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.21
	2018	497	H	6	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.18
	2018	497	H	6	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.15
	2018	497	H	12	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.07
	2018	497	H	12	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.04
	2018	497	H	18	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.12
	2018	497	H	18	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.12
	2018	497	H	24	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.09
	2018	497	H	24	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.10
	2018	497	H	6	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.06
	2018	497	H	6	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.05
	2018	497	H	12	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.10
	2018	497	H	12	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.08
	2018	497	H	18	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.11
	2018	497	H	18	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.14
	2018	497	H	6	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.11
	2018	497	H	6	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.10
	2018	497	H	12	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.15
	2018	497	H	12	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.19
	2018	497	H	6	0.49	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.16
	2018	497	H	6	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.15
Leadbeater et al.	2015	800	E	0	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	Yes	-.27
	2015	1,217	E	0	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	Yes	-.31

Appendix 1 (continued)

Leadbeater et al.	2015	1,208	E	0	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	Yes	-.38
	2015	800	E	12	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	Yes	-.24
	2015	800	E	18	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	Yes	-.21
	2015	1,208	E	6	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	Yes	-.29
	2015	800	E	0	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	No	-.11
	2015	1,217	E	0	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	No	-.08
	2015	1,208	E	0	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	No	-.16
	2015	800	E	12	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	No	-.06
	2015	800	E	18	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	No	-.09
	2015	1,208	E	6	0.51	0.28	0.05	Victimization	General	Positive	Dyadic	No	-.08
Legkauskas et al.	2017	408	E	0	0.55	-	-	Victimization	General	Positive	Dyadic	No	-.02
	2017	408	E	0	0.55	-	-	Victimization	General	Negative	Dyadic	No	.20
	2017	408	E	0	0.55	-	-	Bullying	General	Positive	Dyadic	No	.01
	2017	408	E	0	0.55	-	-	Bullying	General	Negative	Dyadic	No	.14
Lohbeck & Petermann	2018	332	H	0	0.54	-	-	Victimization	Other	Positive	Dyadic	Yes	-.22
	2018	332	H	0	0.54	-	-	Victimization	Other	Positive	Dyadic	Yes	-.10
	2018	332	H	0	0.54	-	-	Victimization	Other	Positive	Dyadic	Yes	-.02
	2018	332	H	0	0.54	-	-	Victimization	Other	Positive	Dyadic	Yes	-.22
	2018	332	H	0	0.54	-	-	Victimization	Other	Positive	Dyadic	Yes	-.06
Marengo et al.	2019	1,311	E	0	0.47	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.02
	2019	1,311	E	0	0.47	-	-	Victimization	Physical	Negative	Dyadic	Yes	.34
	2019	1,311	E	0	0.47	-	-	Victimization	Verbal	Positive	Dyadic	Yes	-.02
	2019	1,311	E	0	0.47	-	-	Victimization	Verbal	Negative	Dyadic	Yes	.27
	2019	1,311	E	0	0.47	-	-	Victimization	Relational	Positive	Dyadic	Yes	-.04

Appendix 1 (continued)

Marengo et al.	2019	1,311	E	0	0.47	-	-	Victimization	Relational	Negative	Dyadic	Yes	.24
Meland et al.	2010	1,215	H	0	0.51	-	-	Victimization	General	Positive	Dyadic	Yes	-.04[a]
	2010	1,214	H	0	0.51	-	-	Bullying	General	Positive	Dyadic	Yes	-.17[a]
Morin et al.	2015	27,297	H	0	0.51	-	0.40	Victimization	Physical	Positive	Dyadic	Yes	-.04
	2015	27,297	H	0	0.51	-	0.40	Victimization	Relational	Positive	Dyadic	Yes	-.16
Natvig et al.	2001	737	H	0	0.50	-	-	Bullying	General	Positive	Both	Yes	-.18[b]
Pabian & Vandebosch	2016	2,128	H	0	0.50	-	0.05	Victimization	Cyber	Positive	Classroom	Yes	-.02
	2016	2,128	H	0	0.50	-	0.05	Victimization	General	Positive	Classroom	Yes	.07
	2016	2,128	H	0	0.50	-	0.05	Victimization	Cyber	Positive	Classroom	Yes	-.01
	2016	2,128	H	0	0.50	-	0.05	Victimization	General	Positive	Classroom	Yes	.08
	2016	2,128	H	6	0.50	-	0.05	Victimization	Cyber	Positive	Classroom	Yes	.02
	2016	2,128	H	6	0.50	-	0.05	Victimization	General	Positive	Classroom	Yes	.10
	2016	2,128	H	0	0.50	-	0.05	Bullying	Cyber	Positive	Classroom	Yes	-.13
	2016	2,128	H	0	0.50	-	0.05	Bullying	General	Positive	Classroom	Yes	-.07
	2016	2,128	H	0	0.50	-	0.05	Bullying	Cyber	Positive	Classroom	Yes	-.10
	2016	2,128	H	0	0.50	-	0.05	Bullying	General	Positive	Classroom	Yes	-.08
	2016	2,128	H	6	0.50	-	0.05	Bullying	Cyber	Positive	Classroom	Yes	-.14
	2016	2,128	H	6	0.50	-	0.05	Bullying	General	Positive	Classroom	Yes	-.06
Palsdottir et al.	2012	11,387	E	0	0.49	-	-	Victimization	General	Positive	Dyadic	Yes	-.12[c]
	2012	11,387	E	0	0.49	-	-	Victimization	General	Positive	Dyadic	Yes	-.07[c]
Raskauskas et al.	2010	1,168	E	0	0.52	-	0.30	Victimization	General	Positive	Dyadic	Yes	-.03
	2010	1,168	E	0	0.52	-	0.30	Bullying	General	Positive	Dyadic	Yes	-.20
Reavis et al.	2010	218	E	0	0.56	-	0.36	Victimization	General	Positive	Dyadic	No	-.03
	2010	218	E	0	0.56	-	0.36	Victimization	General	Negative	Dyadic	No	.06
	2010	218	E	12	0.56	-	0.36	Victimization	General	Positive	Dyadic	No	-.02

Appendix 1 (continued)

Reavis et al.	2010	218	E	12	0.56	-	0.36	Victimization	General	Negative	Dyadic	No	.20
	2010	218	E	24	0.56	-	0.36	Victimization	General	Positive	Dyadic	No	-.08
	2010	218	E	24	0.56	-	0.36	Victimization	General	Negative	Dyadic	No	.13
	2010	218	E	72	0.56	-	0.36	Victimization	General	Positive	Dyadic	No	.07
	2010	218	E	72	0.56	-	0.36	Victimization	General	Negative	Dyadic	No	.13
Richard et al.	2011	474	H	0	0.52	-	-	Victimization	Physical	Positive	Both	Yes	-.24[a]
	2011	474	H	0	0.52	-	-	Victimization	Other	Positive	Both	Yes	-.16[a]
Runions & Shaw	2013	377	E	0	0.50	-	-	Victimization	General	Positive	Dyadic	No	-.01
	2013	377	E	12	0.50	-	-	Victimization	General	Positive	Dyadic	No	.00
	2013	377	E	24	0.50	-	-	Victimization	General	Positive	Dyadic	No	-.11
	2013	377	E	0	0.50	-	-	Victimization	General	Negative	Dyadic	No	.08
	2013	377	E	12	0.50	-	-	Victimization	General	Negative	Dyadic	No	.14
	2013	377	E	24	0.50	-	-	Victimization	General	Negative	Dyadic	No	.25
Serdiouk et al.	2016	1,634	E	0	0.49	0.40	0.53	Victimization	General	Positive	Dyadic	Yes	-.06
	2016	1,634	E	2	0.49	0.40	0.53	Victimization	General	Positive	Dyadic	Yes	-.03
	2016	1,634	E	6	0.49	0.40	0.53	Victimization	General	Positive	Dyadic	Yes	-.01
	2016	1,634	E	0	0.49	0.40	0.53	Victimization	General	Positive	Dyadic	Yes	-.04
	2016	1,634	E	4	0.49	0.40	0.53	Victimization	General	Positive	Dyadic	Yes	-.05
	2016	1,634	E	0	0.49	0.40	0.53	Victimization	General	Positive	Dyadic	Yes	-.10
Shaw et al.	2019	5,286	H	0	0.44	-	0.12	Victimization	General	Positive	Dyadic	Yes	-.13[a]
	2019	5,286	H	0	0.44	-	0.12	Victimization	Cyber	Positive	Dyadic	Yes	-.14[a]
Shin & Yeon Kim	2008	297	H	0	0.44	0.23	-	Victimization	General	Positive	Dyadic	Yes	-.37
	2008	297	H	0	0.44	0.23	-	Victimization	General	Negative	Dyadic	Yes	.64
Sumter & Baumgartner	2017	897	-	0	0.50	-	0.05	Victimization	Cyber	Positive	Dyadic	Yes	-.06
	2017	897	-	0	0.50	-	0.05	Victimization	General	Positive	Dyadic	Yes	-.06

Appendix 1 (continued)

Swanson et al.	2012	266	E	0	0.54	0.17	0.71	Victimization	General	Negative	Dyadic	Yes	.28
	2012	266	E	0	0.54	0.17	0.71	Victimization	General	Negative	Dyadic	No	.14
	2012	266	E	0	0.54	0.17	0.71	Victimization	General	Negative	Dyadic	No	.14
	2012	266	E	0	0.54	0.17	0.71	Victimization	General	Negative	Dyadic	Yes	.35
Thornberg et al.	2018	43	E	0	0.48	-	0.16	Victimization	General	Positive	Classroom	Yes	-.37
Troop-Gordon & Kopp	2011	410	E	0	0.53	0.06	0.13	Victimization	Relational	Positive	Dyadic	No	-.17
	2011	410	E	0	0.53	0.06	0.13	Victimization	Physical	Positive	Dyadic	No	-.14
	2011	410	E	6	0.53	0.06	0.13	Victimization	Relational	Positive	Dyadic	No	-.13
	2011	410	E	6	0.53	0.06	0.13	Victimization	Physical	Positive	Dyadic	No	-.09
	2011	410	E	0	0.53	0.06	0.13	Victimization	Relational	Negative	Dyadic	No	.19
	2011	410	E	0	0.53	0.06	0.13	Victimization	Physical	Negative	Dyadic	No	.27
	2011	410	E	6	0.53	0.06	0.13	Victimization	Relational	Negative	Dyadic	No	.20
	2011	410	E	6	0.53	0.06	0.13	Victimization	Physical	Negative	Dyadic	No	.21
Vaiciunas & Smigelskas	2019	5,730	H	0	0.49	0.24	-	Victimization	General	Positive	Dyadic	Yes	-.10[a]
	2019	5,730	H	0	0.49	0.24	-	Bullying	General	Positive	Dyadic	Yes	-.13[a]
Valle et al.	2018	426	H	0	0.58	-	-	Victimization	General	Positive	Dyadic	Yes	-.26
	2018	426	H	0	0.58	-	-	Bullying	General	Positive	Dyadic	Yes	-.30
Varela et al.	2018	8,237	E	0	0.49	-	-	Victimization	Cyber	Positive	Dyadic	Yes	-.12[a]
	2018	8,237	E	0	0.49	-	-	Bullying	Cyber	Positive	Dyadic	Yes	-.11[a]
Vitaro et al.	2012	446	E	0	0.52	-	0.16	Victimization	General	Negative	Dyadic	No	.33
	2012	446	E	6	0.52	-	0.16	Victimization	General	Negative	Dyadic	No	.21
	2012	446	E	0	0.52	-	0.16	Victimization	General	Negative	Dyadic	No	.27
Wang et al.	2019	1,262	H	0	0.49	-	-	Victimization	Physical	Positive	Dyadic	Yes	-.08[a]

Appendix 1 (continued)

Wang et al.	2019	1,262	H	0	0.49	-	-	Victimization	Verbal	Positive	Dyadic	Yes	-.11[a]
Wang et al.	2016	1,075	E	0	0.50	-	0.52	Victimization	General	Positive	Dyadic	Yes	-.04

Note. Educ. Level: Educational Level; E = elementary school, H = high school; Months = amount of months between measures of teacher-student relationships (T1) and bullying/victimization (T2); Girl = students' gender (proportion girls); Ethn. Min = proportion ethnic minority students; SES = proportion students with a low socio-economic status; TSR = teacher-student relationship.

[a]Correlation provided by author; [b]Correlation based on mean and standard deviation. [c]Spearman correlation coefficient

PUBLICATIONS

Articles in internationally reviewed academic journals

Accepted

ten Bokkel, I. M., Stoltz, S. E. M. J., van den Berg, Y. H. M., Orobio de Castro, B., & Colpin, H. (2021). Speak up or stay silent: Can teacher responses towards bullying predict victimized students' disclosure of victimization? *European Journal Of Developmental Psychology*, 1-17. https://doi.org/10.1080/17405629.2020.1863211

ten Bokkel, I. M., Verschueren, K., Demol, K., van Gils, F. E., & Colpin, H. (2021). Reciprocal links between teacher-student relationships and peer victimization: A three-wave longitudinal study in early adolescence. *Journal of Youth and Adolescence*, 1-15. https://doi.org/10.1007/s10964-021-01490-4

Karremans, J. C., van Schie, H. T., van Dongen, I., Kappen, G., Mori, G., van As, S., **ten Bokkel, I. M.** & van der Wal, R. C. (2019). Is mindfulness associated with interpersonal forgiveness? *Emotion, 20*(2), 296-310. https://doi.org/10.1037/emo0000552

Wigelsworth, M., Lendrum, A., Oldfield, J., Scott, A., **ten Bokkel, I. M.,** Tate, K., & Emery, C. (2016). The impact of trial stage, developer involvement and international transferability on universal social and emotional learning programme outcomes: A meta-analysis. *Cambridge Journal of Education, 46*(3), 347-376. https://doi.org/10.1080/0305764X.2016.1195791

Submitted

ten Bokkel, I. M., Roorda, D. L., Maes, M., Verschueren, K., & Colpin, H. (under review). The role of affective teacher-student relationships in bullying and peer victimization: A multilevel meta-analysis.

Demol, K., Verschueren, K., **ten Bokkel, I. M.**, van Gils, F. E., & Colpin, H. (under review). Trajectory classes of relational and physical bullying victimization: Links with peer and teacher-student relationships and social-emotional outcomes.

van Gils, F. E., Colpin, H., Verschueren, K., Demol, K., **ten Bokkel, I. M.,** Menesini, E., & Palladino, B. E. (under review). Teachers' Responses to Bullying Questionnaire: A validation study in two educational contexts.

Conference contributions

ten Bokkel, I. M., Colpin, H., & Spilt, J. (2018). Hoping for a safe haven: The moderating role of teacher-student relationships in victimization effects on social-emotional adjustment. Presented at European Association for Research on Adolescence (EARA), Gent, Belgium, 14 September.

ten Bokkel, I. M., Demol, K., van Gils, F. E., Verschueren, K., & Colpin, H. (2020). The role of teachers in school bullying: Results of a longitudinal study in Belgium. Presented at the Vereniging voor Nederlandse Ontwikkelingspsychologie (VNOP) – Child and Adolescent Studies (CAS) Research Days, Online, 20 November.

ten Bokkel, I. M., Roorda, D. L., Maes, M., Verschueren, K., & Colpin, H. (2021). The importance of teacher-student relationships for peer bullying and victimization: A multilevel meta-analysis. Presented at International School Psychology Association (ISPA), Cyprus/Online, 14-16 July.

ten Bokkel, I. M., Roorda, D. L., Maes, M., Verschueren, K., & Colpin, H. (2021). The role of affective teacher-student relationships in bullying and peer victimization: A multilevel meta-analysis. Accepted for presentation at the World Anti-Bullying Forum (WABF), Stockholm/Online, 1-3 November.

ten Bokkel, I. M., Stoltz, S. E. M. J., van den Berg, Y. H. M., Orobio de Castro, B., & Colpin, H. (2020). Speak up or stay silent: Teacher-related factors predicting victims' disclosure of victimization. Accepted for presentation at the Society for Research on Adolescence (SRA) biennial meeting San Diego (CA), USA, 19 March (cancelled due to the COVID-19 pandemic).

ten Bokkel, I. M., Stoltz, S. E. M. J., van den Berg, Y. H. M., Orobio de Castro, B., & Colpin, H. (2020). Teacher responses towards bullying predicting students' disclosure of victimization: A longitudinal study. Presented at the Peer Relations Onderzoek (PRO) Meeting, Tilburg University, the Netherlands, 31 January.

ten Bokkel, I. M., Stoltz, S. E. M. J., van den Berg, Y. H. M., Orobio de Castro, B., & Colpin, H. (2019). Speak up or stay silent: Teacher-related factors predicting victims' disclosure of victimization. Presented at the VNOP-CAS Research Days, Utrecht, the Netherlands, 22 November.

ten Bokkel, I. M., Stoltz, S. E. M. J., van den Berg, Y. H. M., Orobio de Castro, B., & Colpin, H. (2019). Speak up or stay silent: Teacher-related factors predicting victims' disclosure of victimization. Presented at the WABF, Dublin, Ireland, 5 June.

ten Bokkel, I. M., van Veen, P., & Scholte, R. H. J. (2017). Time heals all wounds? How teachers' bullying history affects their current perception of bullying. Presented at the VNOP-ISED-CAS Research Days, Utrecht, the Netherlands, 24 November.

ten Bokkel, I. M., Verschueren, K., Colpin, H., Demol, K., & van Gils, F. E. (2018). Teachers4Victims: A longitudinal study investigating the role of teachers in bullying at school. Presented at the VNOP-CAS Research Days, Utrecht, the Netherlands, 23 November.

Demol, K., Verschueren, K., **ten Bokkel, I. M.**, van Gils, F. E., & Colpin, H. (2021). Joint trajectories of relational and physical bullying victimization: Links with peer social status, affective teacher-student relationships and social-emotional outcomes. Accepted for presentation at the Workshop on Aggression, Turku, 4 November.

van Gils, F. E., Verschueren, K., **ten Bokkel, I. M.,** Demol, K., & Colpin, H. (2021). Predictors of teachers' responses to bullying incidents among students. Accepted for presentation at the World Anti-Bullying Forum (WABF), Stockholm/Online, 1-3 November.

Science outreach

ten Bokkel, I. M. (2021). Pesten en een pandemie: gaat dat samen? EOS Wetenschap. https://www.eoswetenschap.eu/psyche-brein/pesten-en-een-pandemie-gaat-dat-samen

ten Bokkel, I. M. (2020). Praten over pesten: makkelijker gezegd dan gedaan. Week Tegen Pesten. https://www.weektegenpesten.com/blog/praten-pesten-makkelijker-gezegd-dan-gedaan-po

ten Bokkel, I. M. (2018). 8 goed of 2 fout? Positieve psychologie in het onderwijs. EOS Wetenschap. https://www.eoswetenschap.eu/psyche-brein/8-goed-2-fout-positieve-psychologie-het-onderwijs

ten Bokkel, I. M. (2018). Terugdringen van pesten op school: wat kan de leerkracht doen? *Kind en Adolescent, 39*(4), 320-323. https://doi.org/10.1007/s12453-018-00191-3

ten Bokkel, I. M., & Demol, K. (2020). Pesten op school: Zo herken je het en dit kun je als ouder doen (contributor). Libelle Mama. https://mama.libelle.be/kids/pesten-bij-kinderen-ouders/

ten Bokkel, I. M., Demol, K., & van Gils, F. E. (2020). Pesten op school tegengaan: Wat kunnen leerkrachten doen? Presented at Soirée PraxisP, Leuven, Belgium, 11 March.

ten Bokkel, I. M., van Gils, F. E., & Demol, K. (2019). De rol van leerkrachten bij het voorkomen en verminderen van pesten op school. Presented at schools participating in the Teachers4Victims project.

Colpin, H., Demol, K., **ten Bokkel, I. M.,** Van Gils, F. E., & Verschueren, K. (2019). Hoe kunnen leerkrachten pesten op school voorkomen en verminderen? Presented at School <3 Onderzoek, Brussels, Belgium, 14 February.

Demol, K., **ten Bokkel, I. M.,** & van Gils, F. E. (2020). Pesten op school: Wie, wat, waar, waarom en hoe. EOS Wetenschap. https://www.eoswetenschap.eu/psyche-brein/pesten-op-school-wie-wat-waar-waarom-en-hoe

Demol, K., van Gils, F. E., **ten Bokkel, I. M.,** Colpin, H., & Deboutte, G. (2021). Teachers4Victims studiedag, Online, 3 March.

van Gils, F. E., **ten Bokkel, I. M.,** Demol, K., & Colpin, H. (2021). Teachers4Victims: Presentatie onderzoeksresultaten. Presented at the Vlaamse Onderwijsraad (VLOR), overlegplatform welbevinden, Online, 25 May.

van Gils, F. E., Demol, K., **ten Bokkel, I. M.,** & Colpin, H. (2021). Teachers4Victims: Presentatie onderzoeksresultaten. Presented at Vlaams Netwerk Kies Kleur Tegen Pesten, Online, 18 June.