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Research paper

The role of teachers in the bullying involvement of students with emotional and behavioral difficulties

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ABSTRACT

Previous research suggests that students with emotional and behavioral difficulties (EBD) are more vulnerable to becoming directly involved in bullying dynamics. To date, no study has tested the role of teachers' emotional support and positive teacher-student relationship climates in EBD students' bullying involvement. This study tests whether the relationships between students' EBD and students' bullying involvement is mediated by teachers' emotional support and the quality of the teacher-student relationship climate. Results indicate that only teachers' collaborative efforts to improve school relationship climates are important mechanisms for explaining EBD students' bullying involvement.

Bullying in schools is an internationally recognized public health problem that severely impacts students' and teachers' mental and physical health (Organisation for Economic Co-operation and Development/OECD, 2019). Even though recipients of bullying are generally perceived as suffering the most, empirical research suggests that bullying behavior negatively impacts the health of everyone directly or indirectly involved, including those in the bullying (Stuart & Jose, 2014) and bystander roles (Rivers et al., 2009), as well as students' and teachers' families (Benatov, 2019; Harcourt et al., 2015). Students with emotional and behavioral difficulties (EBD) are involved in bullying dynamics to a higher degree than their peers without EBD (Halabi et al., 2018; Kokkinos & Panayiotou, 2004; Swearer et al., 2012). However, there is a research gap on the processes that can explain this higher vulnerability to bullying of EBD students. Given the importance of positive relationships for children's psychosocial development, this study investigates the role of teachers' individual and collective support as mediators of the relationship between students' emotional and behavioral difficulties and their direct bullying involvement. The results guide future research and practice in how to reduce the direct bullying involvement of some of the most vulnerable students.

1. The bullying involvement of students with emotional and behavioral difficulties

No common agreement exists on a universal definition of bullying, but certain characteristics of aggressive interpersonal interactions are widely perceived as preconditions for bullying behavior as opposed to other forms of violence (see e.g., Jimerson et al., 2009). First, physical or psychological harm occurs, resulting from the negative actions of other (s), which can be direct, overt, and observable, or indirect, subtle, and relational. Second, recipients of the harm are believed to be weaker (physically, mentally) or in a weaker social position than those who inflict the harm. Third, bullying tends to occur repeatedly and over extended periods of time (Olweus, 2010).

A growing number of studies indicates that students with EBD are particularly vulnerable to bullying. For example, students who report engaging in higher levels of disruptive behavior have been found to report greater direct involvement in bullying, i.e., either as the one bullying or being victimized (Halabi et al., 2018; Kokkinos & Panayiotou, 2004). Furthermore, students labelled as special needs students with behavioral disabilities report higher levels of bullying and victimization than their general education peers (Swearer et al., 2012). However, these studies, based on cross-sectional data, could not test the directionality of the effect.

Empirical research has yielded support for a bidirectional effect

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between EBD and bullying involvement. Over 20 years ago, a longitudinal study by Kumpulainen and Räsänen (2000) found that experiences of being bullied in elementary school predict psychiatric symptoms at the age of 15. More recent studies confirm this association (e.g. Fisher et al., 2016; Reijntjes et al., 2011). Similarly, the bullying role is associated with an increase in externalizing symptoms, especially the risk of developing antisocial personality disorder (Copeland et al., 2013) and to a lesser degree an increase in internalizing symptoms (e.g. Leiner et al., 2014; Sigurdson et al., 2015). In contrast, a recent study based on a cross-lagged panel design and teacher ratings of behavioral and learning difficulties as well as peer nominations on social acceptance indicates that social rejection predicted no behavioral and learning difficulties, but behavioral and learning difficulties led to higher ratings of social rejection (which is considered a form of relational bullying) in class two years later (Krull, Wilbert, & Hennemann, 2018). Chu et al. (2019) found that adolescent students who suffered from lower self-esteem, higher levels of stress, depression, loneliness, or social anxiety were more likely to be victimized in bullying dynamics a year and a half later. This result is consistent with a number of older studies that came to similar conclusions (e.g. Gibb & Hanley, 2010; Wang et al., 2013). Externalizing behavior among fifth graders was found to predict bullying and being bullied in sixth grade (Farmer et al., 2015). This finding is particularly concerning because students who report to be in both roles of direct bullying involvement, often referred to as bully-victims in the literature, tend to suffer from the comparatively lowest levels of self-esteem, lower than students who only experience being in the victim role (Pollastri et al., 2009).

In sum, empirical research indicates a bidirectional effect between EBD and bullying involvement. Students with EBD are more likely to become directly involved in bullying dynamics, and being involved in bullying exacerbates mental health over time. This raises questions about the types of processes that can explain these effects, which could point to potentially effective strategies for preventing students' negative psychosocial development. The current scientific discourse about inclusive education focuses on teachers' negative attitudes towards the inclusion of students with EBD (de Boer et al., 2011) and teachers' perceived challenges with EBD students in class (Øen & Krumsvik, 2022). Therefore, in the following we highlight the link between EBD and bullying dynamics as an important approach to inclusion for EBD students. One important explanation for this association might be the lower quality of relationships resulting from EBD. Children with EBD – which can have their origin in traumatic early childhood experiences (Zimmermann, 2016) – already start school with an increased risk of getting directly involved in bullying due to their deficiencies in social-emotional skills. These make it difficult for children with EBD to navigate challenging social environments and to build up reliable relationships to others (Rose-Krasnor & Denham, 2009). Additionally, previous research shows that authoritarian parenting increases the risk of getting directly involved in bullying dynamics (Gómez-Ortiz et al., 2016), which might be explained by the fact that authoritarian parenting and bullying dynamics share certain relational characteristics, such as a tendency to dominate others by the means of force and shaming (Twemlow & Sacco, 2011, 2013). Students with authoritarian parents might thus be familiar with the victimized role and unconsciously choose this role in different contexts. This idea is closely related to the phenomenon that individuals with abusive childhood experiences are also more likely to be in abusive relationships as adults (Olsen et al., 2010), which has been explained by the theory that individuals often rationalize their own victimization experiences with the more or less unconscious idea that something is wrong with them and thus they deserve being abused. Given the importance of positive relationship experiences for children's psychosocial development (Korpershoek et al., 2016) and based on a theoretical understanding of bullying as a group process (Twemlow & Sacco, 2011, 2013), we consider teacher-student relationships as an important mediator of the association between EBD and bullying.

1.1. *Individualistic versus group dynamic understandings of bullying*

When bullying research was in its infancy in Western developed countries,[1] individual characteristics (i.e., flaws) were believed to be its root cause. Olweus (1978, 1984), widely regarded as the first bullying researcher in the Western hemisphere, described students who bullied others as more aggressive, physically stronger, more popular, and with average self-esteem (without differentiating self-esteem from narcissism). In contrast, he described bullied students as physically, mentally, or socially weaker on average and as having lower self-esteem. Based on his observations, Olweus (2004) developed the first anti-bullying intervention program, which recognized that a whole-school approach is required to effectively reduce bullying. Consequently, this approach includes interventions on the student (e.g., mediation between bullies and victims), class (e.g., establishment of anti-bullying classroom rules), and school (e.g., monitoring during breaks) levels. However, because of Olweus' rather individualistic understanding of the causes of bullying, his program also applied and still applies punishment strategies in the belief that it deters bullying students by mainly focusing on behavior management, that is, behavioral strategies to suppress bullying. This strategy has been rightfully criticized because it neglects important group-dynamic root causes of bullying (e.g., how explicit or implicit social norms shape how people respond to someone else who is hurting or being hurt or the role of witnesses) and tends to only shift bullying out of the purview of adults rather than reduce the behavior (Temko, 2018). Even though the program was later expanded to incorporate new developments in bullying research, the critical role of bystanders, monitoring, and (light) punishment are still its core elements today (Olweus, 2004). The Olweus' intervention program (and a vast number of other programs modeled after it) have been adopted globally in schools (Olweus & Limber, 2010), indicating that many educational leaders and practitioners still share the belief that individual character flaws are the main root cause of bullying behavior, a prime example of the large gap between educational research and practice.

Nonetheless, theories on the root causes of bullying have shifted the focus from individuals to groups and group dynamics. Individuals in an environment in which bullying occurs automatically take on a range of different roles of involvement (Saarento & Salmivalli, 2015). In this newer understanding, bullying is a process generated by the entire group and its social norms instead of one or a few individuals, although individual characteristics influence which roles created by the group dynamics will be assumed by the individual group members. Twemlow and Sacco (2011, 2013), two violence researchers and clinical practitioners who have successfully worked with a large number of schools in the U.S. to reduce bullying, are strong proponents of this view. They suggest to think of bullying dynamics as a phenomenon resembling a theater play. In this view, those bullying and those being victimized are not the only and not even the most important roles in this play. Instead, bystanders willingly or inadvertently influence the bullying group process by consciously or unconsciously identifying with the bullying or victimized roles. They concurrently fail to recognize, understand, and/or acknowledge their involvement in the bullying process, and they dispute any responsibility. In essence, bystanders unwittingly and inadvertently provide the fuel for bullying dynamics by consciously or unconsciously pushing students with certain individual characteristics, such as students with authoritarian parenting or physical punishment experiences (Gómez-Ortiz et al., 2016), both of which are closely linked to EBD (Gershoff et al., 2018; Shaw & Starr, 2019), into the bullying and victimized roles. Consequently, Twemlow and Sacco (2011, 2013) argued that the only effective and sustainable strategy to reduce bullying is to make everyone directly or indirectly involved in bullying dynamics consciously aware of their role and encourage them to take

[1] In the 1980s, for example, Japanese researchers started to investigate *ijime*, a concept similar but not equivalent to bullying (Taki, 2020).

responsibility for creating more pro-social relationship dynamics. Their view is supported by numerous empirical studies and meta-analyses that underscore the importance of bystanders in the bullying process and the need to convince "uninvolved" bystanders of taking on the role of upstanders (i.e., actively trying to find ways that help those in the victimized role) to effectively and sustainably reduce bullying dynamics (e.g., Barnett et al., 2019; Padgett & Notar, 2013; Polanin et al., 2012; Salmivalli, 2010).

1.2. The crucial role of teachers

Following the assumption that all individuals in a setting are involved in the processes of bullying, teachers become a primary focus because they are an important part of the class, and they are believed to strongly influence the class ecology. In this sense, for example, Farmer et al. (2011) referred to the teacher as the *invisible hand*. Teachers guide their students' behavior and social interactions, influence the quality of peer relationships, and shape the classroom as a community. The authors also stated, however, that little research has been conducted on this influence of teachers. In their model on prosocial classrooms, Jennings and Greenberg (2009) described teachers' competences, especially their social-emotional skills and well-being, as influencing the classroom climate as well as students' social-emotional and academic outcomes. In sum, the authors of both studies recognized that teachers play a crucial role in shaping positive peer relationships in their classrooms. These positive relationships in turn are believed to reduce bullying dynamics (Crosnoe, 2011). In line with this argument, Dietrich and Cohen (2019) found in a large dataset of several thousand U.S. secondary classrooms that students who perceived more positive teacher-student relationships also perceived less bullying involvement, and this association was mediated by the quality of peer relationships. Given the increasing recognition of the importance of teacher-student relationships in fostering positive student-peer relationships and student developmental outcomes, teachers' social-emotional health and training has become a key national policy recommendation in the U.S. (Schonert-Reichl et al., 2017; The Aspen Institute, 2018).

The influence of teachers on their students' relationships has its origins in a variety of mechanisms. First, teachers determine the classroom setting, which includes classroom rules for social behavior (Farmer et al., 2011) and seating arrangements (Gest & Rodkin, 2011). Second, the way teachers interact with their students provides students a model of how people can respectfully interact with each other and build positive relationships (Hendrickx et al., 2016; Kiuru et al., 2015; Pianta et al., 1997). Consequently, teacher-student relationships have the potential to shape students' *inner working models* of relationships, including peer relations. In line with this argumentation, research shows that teachers' emotional support is positively linked with students' enjoyment, relaxation, and pride in class (Donker et al., 2021) as well as with cooperation, prosocial behavior, and friendship between students (Gest et al., 2014; Gest & Rodkin, 2011; Luckner & Pianta, 2011). In addition, the more students perceive their teacher as understanding and supportive, the more students will like each other (Hendrickx et al., 2016). In contrast, the more students perceive their teacher as confrontational, the more the students will act aggressively towards each other (ibid.). Previous research also suggests that one of the most effective ways to help vulnerable students is to ensure that they feel connected to at least one caring adult (Lehr et al., 2009). Hence, how teachers interact with and react to EBD students' behavior in class is crucial. Teachers tend to perceive disruptive behavior by their students during lessons as highly challenging (Weiss et al., 2021), which can lead to less understanding and support for EBD students and an increase in the risk for their involvement in negative peer relationships. Severe externalizing behaviors including aggressive emotional outbreaks, mistreatment, abuse, and injuries put teachers in emotionally highly demanding social situations (Dietrich et al., 2021) and make it more difficult for them to remain respectful and supportive. Research shows that instead, teachers tend to react in punitive and authoritarian ways, and thereby exacerbate conflict dynamics between peers (Doumen et al., 2008; Okonofua et al., 2016).

In contrast, in the context of vulnerable students with EBD, teachers might positively influence their social status in class through respectful, supportive, and patient interactions with these students. This assumption is partially supported by a longitudinal study in which children's risk for reading disabilities and their social withdrawal and disruptive behavior was assessed in kindergarten, and peer nominations on rejection were measured in the first year of primary school (Kiuru et al., 2012). Primary school teachers also reported on their supportiveness of the classroom climate. Results indicate that children at risk for reading disabilities were less likely to be rejected by their peers in classrooms with supportive teachers, but the same positive effect of teacher support was not found for children with social withdrawal or disruptive behavior. However, this study measured teacher support on the class level. The effects of teacher support in one-on-one relationships for students with EBD remains an open research question. Furthermore, students' perception of the teacher-student relationship might be more crucial for explaining the effects on student outcomes than the teacher's perception (Hendrickx et al., 2016).

1.3. The role of a positive school relationship climate

In addition to high quality and supportive dyadic relationships between teachers and their students in class, strong evidence suggests that teachers might influence students' bullying involvement through their collective impact on the school climate in general and social norms in particular. These results can be explained by Twemlow and Sacco's (2011) understandings of the origins of bullying. According to their view, bullying roles are created by the group as a whole, i.e., the bystanders/school community and thus bullying behavior is a symptom of toxic relationship climates. By contrast, bullying is less likely to occur in positive relationship climates. Meta-analytic findings show, on average, a medium-sized correlation between the quality of the school climate and violence in schools (Steffgen et al., 2013), and longitudinal studies suggest that better school climates lead to a reduction in bullying behavior over time (Teng et al., 2020; Wang et al., 2018). Hence, empirical evidence supports the idea that a positive school climate reduces bullying dynamics and other forms of violence in school.

However, one criticism of this line of research is the absence of a universally accepted definition of school climate and thus there is no agreement on what the concept of school climate encompasses or which aspects of it are most important (Thapa et al., 2013). A growing number of researchers (e.g., Farina, 2019; Gage et al., 2014; Teng et al., 2020; Varela et al., 2020) have adopted Cohen et al.'s (2009) definition that the school climate concept describes "the quality and character of school life" and includes "norms, values, and expectations that support people feeling socially, emotionally, and physically safe" (p. 182). Four years later, Cohen and Freiberg (2013) argued that the idea of school climate is "at its core about healthy, positive and connected relationships" (p. 2). In the context of bullying research, empirical evidence supports this view by showing a stronger (negative) association between bullying and the perceived quality of teacher support at the school-level than between bullying and a wide range of other aspects of school climate (Aldridge et al., 2018). These findings suggest that a school's teacher-student relationship climate is a particularly important factor for explaining students' involvement in bullying dynamics. However, no study to date has empirically tested whether this assumption is also true for the direct bullying involvement of students with EBD.

1.4. Study aim

The main objective of this study is to better understand EBD students' bullying involvement in schools by examining the role of teachers in providing supportive teacher-student relationships and thereby also

influencing peer relationships. This has the potential to reveal insights into how teachers might be able to prevent such involvement. Consequently, the main research question is: What role does individual classroom teachers' emotional support and the teacher-student school relationship climate play in the association between students' internalizing or externalizing EBD and their self-perceived direct involvement in bullying dynamics as those victimized or bullying?

Fig. 1 presents the hypothesized path model. Previous research findings suggest a positive path from students' EBD to bullying involvement (Halabi et al., 2018; Kokkinos & Panayiotou, 2004; Swearer et al., 2012), and teachers' emotional support (Gest et al., 2014; Gest & Rodkin, 2011; Hendrickx et al., 2016; Luckner & Pianta, 2011) and a positive school relationship climate (Teng et al., 2020; Wang et al., 2018) have been identified as factors that can influence all students' peer relationships and bullying involvement. To date, however, no study has examined whether bullying involvement, particularly among students with EBD, can be explained by teacher emotional support and a positive teacher-student relationship climate. Hence, the hypothesized path model tests whether the relationships between students' internalizing or externalizing EBD and students' self-perceived roles of bullying or being bullied are mediated by teachers' emotional support and the quality of the teacher-student relationship climate. We expected a positive association between students' externalizing EBD and perceived bullying role (hypothesis 1a), and internalizing or externalizing EBD and perceived bullying-victimized role (hypothesis 1b). Furthermore, based on the literature review we assumed that these associations are mediated by teachers' emotional support (hypothesis 2a) and the teacher-student relationship climate (hypothesis 2b).

2. Methods

2.1. Participants

Student survey data were collected from 446 students (Grades 7–9) in the fall of 2019. Schools were private or public and included different German school forms at the secondary level (i.e., Gymnasien, which are higher-track academic schools in preparation for university studies and lower-track integrated secondary schools). The participating classrooms were selected by German class teachers who were willing to participate in the study. In order to find teachers to participate in this study, the authors initially contacted all of the approximately 200 secondary schools in a large German city via email and phone to inquire about teachers' interest in participating in a study on the topic of the link between teacher relationship work and students' behavioral difficulties. A majority of schools never responded, and of those responding, a majority explained that the teachers were simply too overwhelmed to participate. Eventually, 37 teachers from nine schools agreed on participating and implementing a student survey. These relatively low response and participation rates are not surprising, due to the severe problems, which have plagued the German school system for many years, including teacher shortages and underfunding (Klemm, 2022).

Only class teachers were chosen because in Germany, class teachers spend notably more time than other (so-called subject) teachers with their students throughout a school week and are thus better equipped to build close relationships with students. Each participating teacher was instructed to select only one class to prevent cross-classification problems at the study's data analysis stage.

Table 1 provides detailed information on the participating students' sociodemographic characteristics. Most importantly, the sample had a notably higher percentage of students with EBD (23%) than the national average (17%), as measured by the *Strengths & Difficulties Questionnaire* (SDQ,[2] Klipker et al., 2018). The sample was also highly diverse in terms of national and ethnic family background as well as socioeconomic status (SES).

Student participation was voluntary, and they were informed in advance that they can end their participation at any time and without negative consequences. Ethical permission to collect the data was granted by the federal state's responsible public authorities. The authorities stipulated that the research team must collect explicit participation permissions from all parents of students below the age of 16. In addition, SES questions were only collected from students whose parents explicitly gave permission to answer such questions, independent of student age, because of strict German data privacy laws. Even though the emotional risks for participating students were considered to be low by the state's ethics evaluator, the research team provided all students an information sheet with contact information of professional telephone help lines for adolescents with emotional difficulties or emergencies.

2.2. Procedures

Cross-sectional student data on students' EBD, the quality of teacher-student relationships in class, the teacher-student school relationship climate, and students' perceptions of their own bullying or victimized role in the school context were collected in 1-h classroom sessions led by the teachers who agreed to participate in this study. These teachers received instructions on how to collect the survey data in their classrooms on a time and date of their choice, and they were given the option to conduct the survey online or via pen and paper. All except five teachers opted for the pen and paper version of the survey.

Teachers first read a brief statement on the study's purpose to their students and then gave technical and procedural instructions on how to complete the survey. All teachers remained present while the students responded to the survey items to provide support if unforeseen technical difficulties arose or students had questions about the survey. All students took between 30 and 45 min to finish the survey according to informal teacher feedback.

2.3. Instruments

2.3.1. Emotional and behavioral difficulties

Students' emotional and behavioral difficulties were assessed with the German version of the self-report SDQ for the age range 11–17 years (SDQinfo, 2016). The SDQ includes a total of 25 items, which are measured on a 3-point Likert scale ranging from "Not True" to "Certainly True." Previous research supports the SDQ's validity and reliability (Goodman, 2001), and the survey has been used in Germany's large nationally representative studies to assess students' EBD (Robert Koch Institut; Koch Institut, 2014). Better comparability with these studies was an important reason for the choice of this instrument.

Another advantage of the SDQ is the possibility to distinguish and calculate scores on the two EBD subscales *internalizing difficulties* and *externalizing difficulties*, which contain 10 items each (SDQ scoring generally omits five of its 25 items). They were coded continuously instead of dichotomously, which is the standard coding approach to score the SDQ, to retain the maximum amount of statistical information. Cronbach's internal reliability of the internalizing difficulties subscale was $\alpha = 0.69$ and for the externalizing difficulties subscale, $\alpha = 0.67$. These comparatively low α results slightly below 0.70 are typical for studies based on the SDQ's subscales (Giannakopoulos et al., 2013; Mieloo et al., 2012). Here, it is important to consider that EBD are highly heterogeneous concepts, which fall into a category of trait and behavioral concepts that tend to have comparatively low α values (Peterson,

[2] Please note that this study uses the student survey of the SDQ, while the Klipker et al. (2018) nationally representative study used the SDQ's parental survey.

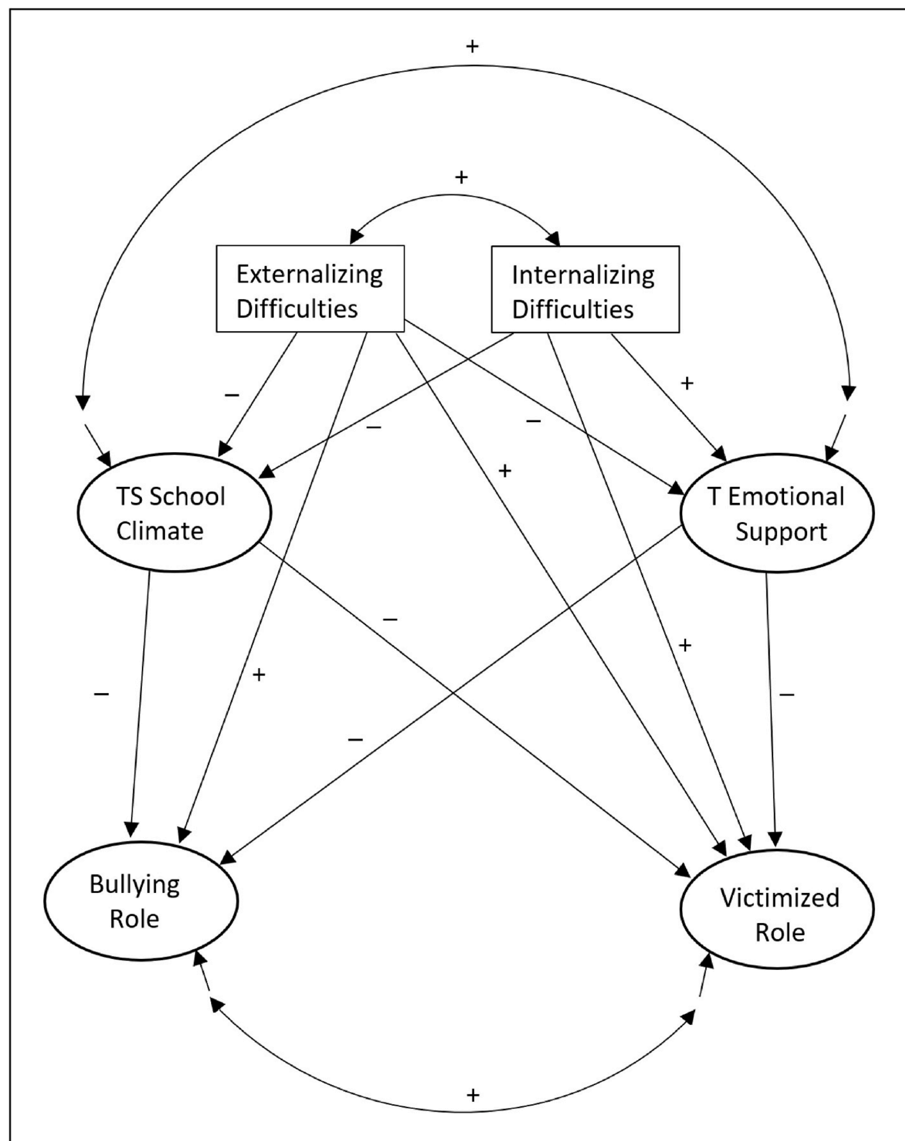

Fig. 1. Hypothesized path model.

Table 1
Sociodemographic characteristics of students.

Variable Name	%	*n* (of *N* excl. missings)
Male	46	192 (418)
White	71	253 (357)
University Degree Parents	55	153 (278)
Three or More Siblings	12	54 (452)
Emotional and Behavioral Difficulties	23	36 (444)

Note. Total $N = 446$.

1994). Hence, it has been argued that Nunnally's (1978) recommendation for an α value of 0.70 has been misinterpreted as a hard cut-off point (Lance, Butts, & Michels, 2006). Rather, it needs to be understood as an orientation point, which requires consideration of other factors, such as research phase, number of items, and type/-heterogeneity of construct.

2.3.2. Perceived bullying involvement

Perceived direct bullying involvement was measured via students' self-report of having assumed a bullying role or the role of a victim of bullying. Items were derived from the *Tripod student survey* (Tripod Education Partners, 2019) and adapted by the research team. The bullying-role variable includes the four items "Other students think I am a bully," "I have bullied other students at school," "Some of my friends bully other students at school," and "In this class, I tease students for making mistakes." The role of bullying-victim includes the two items "I get bullied at school" and "Some of my friends get bullied in school." Answers were given on a 5-point Likert scale ranging from "Never" to "Always". Cronbach's internal reliability for the self-reported bullying role was $\alpha = 0.80$ and for the self-reported bullying-victim role, $\alpha = 0.85$.

This study also evaluated the internal structure and discriminant validity of the two factors via confirmatory factor analysis (CFA). Factor loadings ranged from 0.45 to 0.75, and the two factors' covariance is 0.70 standard deviation. All model fit statistics are within the acceptable range recommended by Hu and Bentler (1999), χ^2 (8, $N = 423$) = 11.35, $p = .183$; $CFI = 0.988$, $RMSEA = 0.031$; $SRMR = 0.028$. These results support the internal structure and discriminant validity of the two factors.

2.3.3. Teacher-student school relationship climate & teacher emotional support

Students reported on their perception of the teacher-student school

relationship climate via three items: "Teachers in the hallways treat me with respect, even if they don't know me," "I treat the adults at this school with respect, even if I don't know them," and "I would quiet down if someone said I was talking too loudly in the hallway." Responses were given on a 5-point Likert scale ranging from "Never" to "Always". This instrument has been previously used in Dietrich and Cohen (2019) who also confirmed its internal structure. This study's dataset had an internal reliability of $\alpha = 0.82$.

Students' reports on the perceived emotional support from their classroom teachers were measured via the following five items derived from the *Tripod* 7Cs *of Effective Teaching* (Tripod Education Partners, 2015), the *Teacher-Student Relationship Scale* (Pianta, 2019), and the *Teacher-Student Relationship Instrument* (Barch, 2015): "I share an affectionate, warm relationship with the teacher in this class," "If upset, I will seek comfort from the teacher in this class," "The teacher in this class is aware of my feelings," "When I am in a bad mood, the teacher in this class knows how to handle me," and "My teacher seems to know if something is bothering me." Response options ranged from "Totally Untrue" to "Totally True" on a 5-point Likert scale. The internal reliability of the perceived emotional support from teachers was $\alpha = 0.81$.

A CFA of both latent factors, *Teacher-Student School Relationship Climate* and *Teacher Emotional Support*, supports their internal structure and discriminant validity. Factor loadings ranged from .52 to .80, and the two factors' covariance is 0.27 standard deviation. All model fit statistics are within the acceptable range recommended by Hu and Bentler (1999), χ^2 (19, $N = 435$) = 36.641, $p = .0088$; $CFI = 0.952$; $RMSEA = 0.046$; $SRMR = 0.043$.

2.4. Analyses and missing data

To test the hypothesized path model (see Fig. 1), Mplus 8 was used to compare structural regression models (Kline, 2015). Structural regression modeling permits the specification of complex mediation analyses with latent factors, all of which were evaluated via CFA in this study as suggested by Anderson and Gerbing (1988). Only the two EBD variables were entered into the models as observed variables. Mplus' maximum likelihood estimator is the preferred approach for estimating the model parameters as long as all endogenous variables are normally distributed (skewness <2 and kurtosis <7). To compare models, χ^2_M, *SRMR*, *CFI*, and *RMSEA* model fit statistics are reported. Recommended cutoffs are from Hu and Bentler (1999) with a nonsignificant χ^2 statistic, $RMSEA \leq 0.06$ and $CFI \geq 0.95$ as excellent fit and a nonsignificant χ^2 statistic, $RMSEA \leq 0.08$ and $CFI \geq 0.90$ as acceptable fit. A significant χ^2 statistic was expected because of the large sample size. The nested data structure is accounted for by the complex data option in Mplus, which partials out the between-classroom from the between-student variance to assure unbiased estimates at the student level, which is the models' main level of analysis. The significance of mediation effects was calculated with the normality approach, which is more conservative than bootstrapping and thus, more prone to produce Type II errors (Preacher & Hayes, 2004). Bootstrapping was omitted because it could not be combined with complex data in Mplus 8. Standardized values are reported for all path coefficients. For easier comparisons, study results are reported in effect sizes.

Most missing values occur in the teacher emotional support items, ranging from 11 to 20 percent (see Table 2). The analyses apply the full information maximum likelihood (FIML) approach in Mplus to handle missing data. This approach is considered superior to even highly advanced multiple-imputation techniques (Allison, 2012).

3. Results

Fig. 2 displays the final model with the best model fit statistics, which are within Hu and Bentler's (1999) recommended range, χ^2 (94, $N = 446$) = 144.819, $p = .0006$; $CFI = 0.947$; $RMSEA = 0.035$; $SRMR = 0.049$. In line with hypotheses 1a and 1b, results show direct and positive paths from externalizing and internalizing difficulties to the perceived victimized role, and a direct path from externalizing difficulties to the perceived bullying role. Individual effect sizes of these three paths are small but significant (ranging from $p < .01$ to $p < .001$).

Regarding the hypothesized mediation effects, the model partially supports the hypothesized model. In support of hypothesis 2b, but not hypothesis 2a, the relationship between students' EBD and their perceived direct involvement in bullying was mediated by the teacher-student school relationship climate, but not by teachers' individual emotional support. Specifically, the path from externalizing difficulties to students' bullying role was partially mediated by the perceived quality of the teacher-student school climate (total indirect effect = .20 standard deviation, $p < .01$). This mediation effect accounted for almost half of the total effect from externalizing difficulties to a perceived bullying role (total effect = 0.46 standard deviation, $p < .001$). In contrast, individual emotional support of classroom teachers did not mediate the relationship between externalizing EBD and either of the two roles of direct bullying involvement.

Against the expectations of both, hypothesis 2a and 2b, the path from internalizing difficulties to students' perceived bullying-victimized role was not mediated by either school climate or teacher emotional support. However, the paths from internalizing difficulties to teacher-emotional support and from teacher-emotional support to the victimized role were left in the model because of slightly better fit statistics, even though both paths were not statistically significant (thus, marked as a dashed line in Fig. 2).

Table 2
Missing values.

Variable Name	*n*	%
Emotional and Behavioral Difficulties (EBD)		
Internalizing Difficulties	12	3
Externalizing Difficulties	8	2
Bullying Role		
V13A	39	9
V13D	38	8
V13E	37	8
V13I	36	8
Bullying-Victimized Role		
V13B	33	7
V13C	37	8
Teacher-Student School Climate		
V3B	23	5
V3C	26	6
I_V3D	26	6
Teacher Emotional Support		
V4I	89	20
V4E	54	12
V4G	49	11
V4J	64	14
V2H1	59	13

Note. Total $N = 446$.

4. Discussion

The aim of the current study was to test whether students' perceptions of their class teacher's emotional support and the overall teacher-student relationship climate mediate EBD students' direct bullying involvement. The results provide deeper insights into bullying dynamics in schools and are relevant for teacher education, school development, and teaching practices.

We found that externalizing and internalizing difficulties are both associated with students' perception of higher direct involvement in bullying dynamics. This finding is consistent with a series of studies indicating that students with EBD are particularly vulnerable to bullying (e.g. Halabi et al., 2018; Kokkinos & Panayiotou, 2004; Swearer et al., 2012). Comparing the two dimensions of EBD, our data indicate that internalizing symptoms are predominantly associated with the

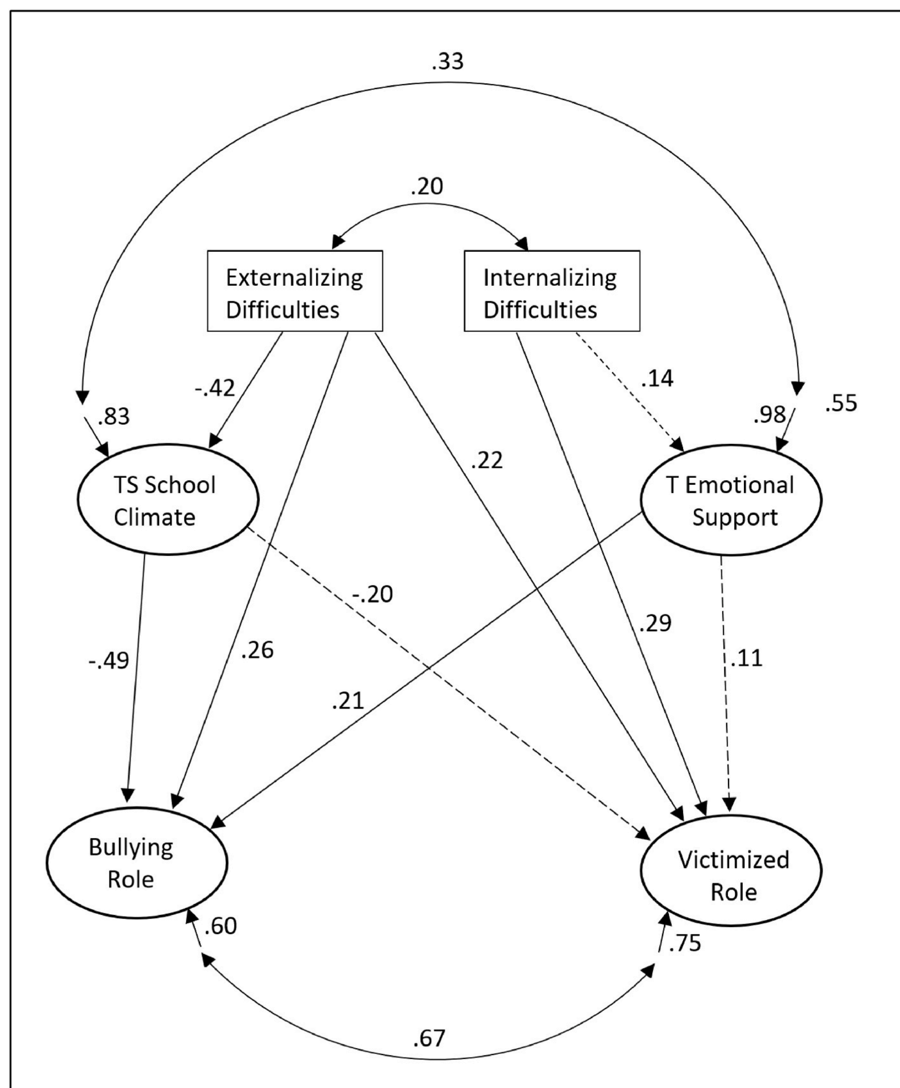

Fig. 2. Final Path Model
Note. All standardized path coefficients are effect sizes. Dashed paths are statistically nonsignificant ($p > .05$).

victimized role, whereas externalizing symptoms are associated with both the bullying and the victimized role. These results are also in line with previous research (Chu et al., 2019; Farmer et al., 2015) and point to specific risks for students with internalizing versus externalizing behaviors. The unexpected nonsignificant path in the final model from internalizing difficulties to class teachers' emotional support might be explained by findings from previous research that the majority of teachers overlook internalizing behavior among students (Gresham & Kern, 2004). Students with internalizing difficulties are especially at risk for being overlooked by their teachers because they tend to interpret students' withdrawal as a lack of motivation or academic ability (Coplan et al., 2004; Deng et al., 2017; Keogh, 2003). This disconnect adds to the already difficult social status that internalizing students tend to experience within their peer group (Farmer et al., 2015) and poses an additional threat to their social-emotional development. In addition, qualitative research has revealed that even when teachers are aware of their own students with internalizing difficulties receiving too little attention, they can feel powerless to change this situation (Dietrich et al., 2023). Specifically, they report that dealing with externalizing students requires such a great amount of energy and attention that they feel relief when internalizing students do not (openly) demand attention.

For externalizing students, we found that their bullying role is mediated by the teacher-student relationship climate of the school, whereas the dyadic teacher-student relationship appears to play no mediating role. This might indicate that positive teacher-student relationship experiences are particularly important *at the school level*, which provide students with examples of positive and respectful social interactions within a strictly hierarchic context. In turn, this could influence the way stronger students interact with their weaker peers (Chory & Offstein, 2018; Hughes et al., 1999). Positive interactions between teachers and students might be most important at the school level, because bullying in schools predominantly occurs outside of classrooms, such as in hallways, in student bathrooms, and on school buses (Migliaccio et al., 2017). As such, bullying dynamics in school are best understood as a systemic social phenomenon. In other words, bullying is a large group phenomenon, and large groups are – compared to small groups – characterized by particularly high levels of insecurity and anxiety (Behr & Hearst, 2018). This means that in order to successfully reduce bullying in schools the whole school community needs to take responsibility and implement school-wide structures and routines that reduce bystanders' (including teachers' and students') fears of directly

intervening or initiating other strategies that counteract bullying, i.e., taking on the role of upstanders (Twemlow & Sacco, 2013).

The greater importance of the quality of teacher-student relationships at the school-level compared to supportive dyadic relationships between class teachers and students might also be due to the difficult burden of providing emotional support for students with externalizing difficulties (Dietrich et al., 2021). Severe externalizing behavior can be characterized by aggressive emotional outbursts, mistreatment, abuse, and infliction of injuries. Under these conditions, teachers must refrain from reacting in authoritarian and punitive ways because such responses are likely to exacerbate aggressive behavior and conflict (Zimmermann, 2016). Instead, teachers need to be able to set clear boundaries but at the same time remain respectful and supportive. In other words, teachers need to implement authoritative pedagogic strategies (Walker, 2009) in emotionally highly demanding and charged social situations. The difficulty of such a task should not be trivialized. Consequently, teachers need the support from the collective stance of the school against bullying to compensate for their lack of individual strength.

Another explanation for individual class teachers' limited role in EBD students' bullying involvement is that students simply spend too little time with individual class teachers throughout a school week. Even if a single teacher's emotional support effectively reduces the likelihood of EBD students' involvement in bullying dynamics, this effect could be suppressed by a negative impact of less supportive teachers who react to externalizing behavior in counterproductive ways (Zimmermann, 2016). Previous research indicates that many teachers react to externalizing student behavior in punitive and authoritarian ways and thus unintentionally exacerbate conflict dynamics (Doumen et al., 2008; Okonofua et al., 2016). In the present study, students reported only on the emotional support they received from their class teacher. Future research needs to consider students' perceptions of all of their teachers' emotional support.

Furthermore, the positive and significant path from teachers' emotional support to students' perception of being in the bullying role (and to a lesser degree the nonsignificant positive path to the bullying-victimized role) suggests that individual teachers' emotional support can even have unintended consequences. Future research needs to untangle whether the link between individual teachers' emotional support and students' perception of being in the bullying role exists because class teachers try to react to students' bullying involvement in empathetic and supportive ways or whether teachers' display of emotional support inadvertently pushes some students even more deeply into the bullying role. The latter explanation would indicate that some students react negatively to teachers' emotional support of their classmates, perhaps because of jealousy (Thornberg et al., 2012) and the perception of their peer being a "teacher's pet." Jealousy and being perceived as a teacher's pet probably invite malicious teasing, which in turn might lead to aggressive reactions, particularly among students with externalizing difficulties. As a result, students in the role of a teacher's pet might perceive themselves as in a bullying role because of their own aggressive behavior. This explanation is in line with previous research on so-called bully-victims/aggressive victims, that is, students who are simultaneously in bullying and victimized roles. Studies have found that bully-victims are particularly likely to display reactive forms of aggression when compared to "pure bullies" (Unnever, 2005), and they typically show signs of EBD (Leiner et al., 2014) and especially low self-esteem (Pollastri et al., 2009). Consequently, teachers need to be highly alert and very careful with their reactions to students who are directly involved in bullying dynamics, and they need to avoid responses that lower EBD students' already low social standing among peers. Put differently, they need to find strategies that support socially vulnerable students but avoid stigmatization.

5. Limitations

This study has several important limitations. First, its design is cross-sectional and thus cannot provide evidence on the directionality of effects. Therefore, future studies should evaluate these findings with longitudinal data. Second, some of the unexpected findings could have resulted from suppression effects such as the non-significant and positive path from teachers' emotional support to students' victimized role or the positive and significant path from teachers' emotional support to students bullying role. Future research needs to explore these unexpected findings.

Third, students with more severe EBD could have biased perceptions of their teachers' emotional support, the teacher-student relationship climate, or their own involvement in bullying dynamics. The unexpected positive path from teachers' emotional support to the bullying role and the missing path between teachers' emotional support and the students' perceived victimized role could be explained by such biased perceptions. EBD students' biased perceptions might be due to a defensive psychological mechanism with a protective function, that is, achieving a coherent state of mind despite severe psychosocial burdens. Evidence supporting this idea comes from research based on social information processing theory (Dodge & Rabiner, 2004) and mentalization theory (Luyten et al., 2020), which shows that people who suffer from internalizing or externalizing difficulties are more likely to use negatively skewed mental state reasoning or impaired reflective functioning (e.g., Katznelson, 2013; Macfie et al., 2017; Marsh & Blair, 2008). This lack in turn might lead to biased perceptions of bullying dynamics, which could have skewed the results in the present study.

A reasonable assumption, however, is that EBD students' skewed perceptions can lead to real changes in their behavior. This idea is supported by research showing that students' ratings of the teaching quality are associated with their engagement, interest, and achievement in school (Fauth et al., 2014; Quin et al., 2017). More specific to the present study, Hendrickx et al. (2016) found that students' ratings of their teachers' emotional support, rather than observations or teacher self-reports of their emotional support, are correlated with the quality of peer relationships in class. Therefore, student reports might be the preferable approach for research on teacher-student relationships and bullying involvement.

6. Conclusions

The results of this study underscore the assumption that bullying dynamics are best understood as a school-wide phenomenon. In line with already existing intervention programs that have proven to be effective (e.g., Gaffney et al., 2019; Salmivalli et al., 2013), systemic anti-bullying strategies throughout the entire school are required to more effectively reduce bullying dynamics. When considering the specific challenges of teachers' relationships with EBD students (Dietrich et al., 2021), more collaboration among teachers may be essential to face the complex dynamics impacting students' behavioral problems, peer status, and teachers' educational practices. Teacher collaboration has the potential to support teachers' professional development and their learning of new educational practices when integrated into a school-wide concept (Jurkowski et al., 2020). Teacher collaboration is also a core element of inclusive schooling, which needs to be developed by the entire school staff (Ainscow & Sandill, 2010).

Practical examples of highly successful school efforts to improve teacher collaboration are *Circle* (Dickson & Carlson, 2017), and *We Are Crew* (Berger et al., 2020). These approaches shift the main focus of education to building positive relationships among teachers and students, by creating a (social) space in which teachers and students get the opportunity to talk about difficult feelings, conflicts, and other everyday challenges that potentially undermine learning. Through better team collaboration, teachers could learn to improve their responses to challenging situations, to support each other, and to employ the same effective strategies to reduce bullying (Vangrieken et al., 2015). This necessity for teacher collaboration is supported by previous research indicating that collaboration among teachers increases the overall

effectiveness of anti-bullying efforts (O'Brennan et al., 2014).

The present study indicates that teachers' collaborative efforts to improve the school's relationship climate is even more important than teachers' individual emotional support in reducing EBD students' direct bullying involvement. This finding is particularly important in light of current efforts in research and practice to integrate more students with special needs into the general education system (Harrison, 2018; Hind et al., 2019).

Credit author statement

Lars Dietrich: Conceptualization, methodology, formal analysis, writing – original Draft & Editing, visualization, data curation Susanne Jurkowski: Methodology, writing – Original Draft & Editing Nicola-Hans Schwarzer: Writing – Original Draft David Zimmermann: Supervision.

Declaration of competing interest

The authors declare no conflict of interest.

Data availability

Data will be made available on request.

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