



The Association between Teacher–Student and Peer Relationships and the Escalation of Peer School Victimization

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Abstract

Peer school victimization via minor and less severe forms of violence may predict victimization via more severe and major forms of violence. Nonetheless, very rarely are the escalating patterns of violence addressed theoretically or empirically tested. In the school context, the quality of peer and teacher–student relationships are critical determinants of peer victimization, although inconclusive mechanisms have been suggested to establish associations among students’ interpersonal relationships and peer victimization. To address prior inconsistencies and better conceptualize theoretical knowledge of these associations, this study developed and tested a path model of peer and teacher–student relationships and peer victimization via relational, verbal, and physical victimization. Secondary data analysis of a nationally representative sample of fifth- and eighth-grade students in Israel ($N=75,852$) revealed an escalation pattern across types of victimization, in which relational victimization was associated with victimization via verbal and physical violence. Although both types of relationships significantly influenced victimization, peer relationships had the strongest effect, beyond the influence of teacher–student relationships. The identified empirical links among interpersonal relationships and peer victimization can support theoretical and operational frameworks essential to preventing school victimization and protecting students from negative educational, social, and emotional outcomes. Finally, we suggest important directions for future research.

Keywords school violence · peer victimization · violence escalation · peer relationships · teacher–student relationships

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Compliance with Ethical Standards.

1. Disclosure of potential conflicts of interest: We have no conflict of interest to disclose.

2. Research involving Human Participants and/or Animals: Questionnaires, procedures, informed consent forms, and instructions were reviewed by the Israeli Ministry of Education and the ethics committee of the authors' university. All procedures performed in this study were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

3. Informed consent: Before the beginning of the study, school principals received passive consent forms and parents received letters informing them of the study goals and questionnaire, giving them the option of declining their child's participation. Students whose parents objected their participation in the research were asked to leave the classroom. Participants (students) were informed of their right to decline to participate in the study, their option to not answer all the questions, and their ability to stop at any stage.

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Researchers worldwide have acknowledged that school violence is a serious and persistent problem with serious negative outcomes for students (Chester et al., 2015; Harel-Fisch et al., 2016; Wang et al., 2020). Students may be subjected to relational (e.g., social exclusion, friendship ruination), verbal (e.g., cursing, intimidation), and physical (e.g., pushing, shoving, hitting) peer violence at school (Benbenishty & Astor, 2019). Prior research identified an escalation pattern in which peer victimization via minor and less severe forms of violence preceded victimization via more severe and major forms of violence (Berkowitz, 2013; Johnson et al., 2011; Lorber & Stouthamer-Lorber, 1998; Winstok et al., 2004; Zillmann, 1994). Assessing the determinants of peer victimization is an important step to inform successful prevention efforts and protect youth from later maladaptive outcomes.

Although individual characteristics may increase the risk of peer victimization (e.g., Espelage et al., 2000; Mishna, 2003), more recent research recognized the central role of interpersonal relationships and social dynamics in the school environment in peer victimization. In particular, the quality of peer and teacher–student relationships is critical to understanding peer victimization.

Teachers are significant adults who can provide children with support and emotional security when encountering social challenges at school (Troop-Gordon & Kopp, 2011). They are important socializing agents who teach and model appropriate self-regulation and problem-solving skills (Hughes et al., 2008). Children are more likely to seek support from teachers with whom they share positive relationships and

use them as supportive resources to avoid or recover from peer exclusion and victimization (Wang et al., 2016).

Alternatively, the literature suggests that positive peer relationships are associated with decreased peer victimization. Perpetrating violence against a peer with low social status is a tool to increase one's popularity (Elledge et al., 2016). Thus, having supportive friends and general peer acceptance can protect children against victimization (Buhs, 2005; Card & Hodges, 2008; Rodkin & Hodges, 2003).

Numerous patterns of interrelationships have been suggested to establish associations among teacher–student and peer relationships and peer victimization. Some authors suggested that teacher–student relationships directly influence risk of peer victimization, beyond the contribution of peer relationships (Cornell & Huang, 2016). Others suggested that peer relationships directly influence peer victimization and are more predictive of victimization than teacher–student relationships (Elledge et al., 2016; Reavis et al., 2010; Shin & Kim, 2008). Teachers are unable to intervene in the private world of children (Cowie, 2009) and have much less knowledge of peer interactions compared with that of peer group members (Berkowitz, 2014). Thus, solutions for peer conflicts may arise spontaneously out of peer interactions, rather than as a result of teachers' interventions (Cowie, 2011). Each approach implies different means and useful strategies that may be taken to tackle students' peer victimization. Additional research is needed to empirically test the network of interrelationships among peer and teacher–student relationships and peer victimization with disparate types of violence and to better conceptualize theoretical knowledge of the structure of these associations.

To address these gaps in research and account for prior inconsistencies, this study used a large nationally representative sample of fifth- and eighth-grade students in Israel to examine the network of interrelationships among teacher–student and peer relationships and peer victimization via relational, verbal, and physical victimization. Next is a review of the theoretical perspective that guided this study and empirical evidence of associations among school peer victimization and peer and teacher–student relationships.

1 Theoretical Perspective

The study used a socioecological approach that conceptualizes individual development through interactions among proximal and more distal ecological settings, including the peer group, family, school, neighborhood, and culture (Bronfenbrenner, 1979). Building on socioecological theory, school violence and safety researchers have perceived school violence as being shaped by interacting contexts—internal and external to the school—that affect students' victimization (Astor & Benbenishty, 2019). The study focused on interpersonal relationships to explain peer victimization because interactions in the immediate environment have the most direct impact on development, behaviors, and outcomes (Bowen et al., 2008; Richman et al., 2004). Children develop intellectually, emotionally, and socially through participation in regular ongoing reciprocal activities with at least one person with whom they establish a strong emotional attachment (Bronfenbrenner, 2005). Close friends, peers, and

teachers are meaningful others with whom human development occurs (Astor & Benbenishty, 2019; Bronfenbrenner & Morris, 2007; Swearer et al., 2012).

2 School Peer Victimization

School violence is broadly defined as any behavior intended to physically or emotionally harm individuals in school and their property (American Educational Research Association, 2013). It may include relational, verbal, and physical types of violence (Benbenishty & Astor, 2019). Because students often experience multiple forms of victimization (e.g., Felix & McMahon 2007; Nishina & Juvonen, 2005; Raskauskas, 2010; Wang et al., 2010), we hypothesized that a positive association would emerge among relational, verbal, and physical peer victimization.

Although many studies have focused on verbal and physical types of peer victimization, the study of relational victimization is an important extension (Crick & Grotpeter, 1996). Relational violence delineates a unique category of aggression in that it encompasses behaviors that are specifically designed to inflict harm on, manipulate, or damage peer relationships, reputation, or social status (Sullivan et al., 2006). Such stressful and negative interactions with peers provide relatively clear feedback that one doesn't fit into the peer group (Coleman & Byrd, 2003; Crick & Bigbee, 1998), generating hostile social climate and negative peer attitudes and likely demonstrating the initial support and legitimization of the peer group of further infliction of violence. Thus, we hypothesized that the relational form of victimization would be associated with verbal and physical victimization.

Although verbal and physical types of violence are deliberate, each may unfold varying potential of harm for the victim (Anderson et al., 2008; Espelage et al., 2012; Winstok, 2012). Some authors considered verbal violence as less severe because it only inflicts emotional harm, without an immediate physical threat to the victim. Physical violence, however, inflicts not only emotional harm, but also an immediate physical threat to the victim, which makes it a more harmful experience (Berkowitz, 2013; Winstok et al., 2002). Evidence supports the notion that verbal violence often escalate into more serious and harmful physical violence (Hazler & Carney, 2000; Potegal & Knutson, 2013; Zillmann, 1994; Winstok, 2008). Numerous researchers from various disciplines have used the term "escalation" to represent a pattern of mild behaviors becoming increasingly severe (Potegal & Knutson, 2013). Escalation is an interpretive term based on the relationships between variables that represent varying severity levels of behavior. Escalation as interpretation is based on studies that found that in cases of severe and overt aggressive behavior, milder aggressive behaviors exist as well. On the other hand, in cases of mild aggressive behavior, more severe aggressive behaviors do not necessarily exist as well (Berkowitz, 2013; Winstok et al., 2004; Winstok, 2008; Zillmann, 1994). Despite agreement on the importance of studying escalating patterns of violence, very rarely have they been addressed theoretically or empirically tested. Based on prior research, we hypothesized that an escalation pattern across the victimization types will emerge, in which less serious forms of verbal violence would be associated with more severe physical violence. It is important to note that to empirically establish escalation, it is neces-

sary to conduct longitudinal observations; however, this study was based on a cross-sectional design. Thus, we only examined direct and indirect associations among variables in a hypothesized causal model based on the literature.

3 School Interpersonal Relationships and Peer Victimization

3.1 Teacher–Student Relationships

Positive teacher–student relationships, in which students enjoy more caring, personal, and supportive relationships with teachers, can reduce peer victimization, even among students who experience peer rejection (Cornell & Huang, 2016; Elledge et al., 2016; Sulkowski & Simmons, 2018; Johnson, 2009) systematically reviewed research on mechanisms by which the school environment determines the likelihood of school violence and concluded that schools with less violence are characterized by positive teacher–student relationships.

Teachers play a critical role in students' socialization. Through their interactions with teachers, students establish emotion regulation and other important social skills and behaviors that help them better cope with peer conflicts and avoid peer harassment (Hughes et al., 2008; Moore et al., 2012; Rivara & Le Menestrel, 2016). Further, through positive and supportive relationships with teachers, students feel more engaged and connected to their schools, enjoy a more structured and orderly learning environment in which they are cared and watched for by teachers, and are thus less likely to experience peer victimization (Cornell & Huang, 2016; Johnson, 2009; Wang et al., 2013). Last, because of their proximity and ongoing interactions with students, teachers are also in a unique and influential position to intervene in violence episodes, protecting the victims of peer aggression and giving them support (Berkowitz, 2014). This approach may indicate that an effective intervention for reducing peer victimization should largely focus on teacher–student relationships as a primary component influencing the problem.

3.2 Peer Relationships

Other scholars did not find strong evidence of reduced levels of peer victimization among children who had close and supportive relationship with teachers (Reavis et al., 2010; Shin & Kim, 2008; Troop-Gordon & Kopp, 2011). Although students who experienced positive teacher relationships were victimized less, the quality of peer relationships was more predictive of victimization than the quality of their teacher–student relationships (Bollmer et al., 2005; Buhs, 2005; Pellegrini & Long, 2002; Perry et al., 2001).

In the peer group, violence is often used to establish social status (Sijtsema et al., 2020; Rodkin & Hodges, 2003) synthesized research on the peer ecology of school victimization and concluded that students with lower social status at the margins were most likely to experience peer violence. Targeting students with perceived lower status is a strategy that allows peers to pursue greater popularity and visibility while minimizing the negative consequences of their aggression, such as depre-

ciation and condemnation of their violence by the peer group (Elledge et al., 2016; Rivara & Le Menestrel, 2016). On the other hand, greater peer acceptance predicts less peer victimization (Buhs, 2005; Card et al., 2007; Card & Hodges, 2008; Rodkin & Hodges, 2003).

Violence may also emerge through peer conflicts as they reach an escalatory culmination (Winstok, 2008). Negative peer interactions and experiences trigger more conflicts that may increase use of violent means to resolve conflicts (Johnson, 2009; Nishina & Bellmore, 2010). On the other hand, strengthened friendships and greater peer acceptance may increase the likelihood that peers will intervene to protect their friends from being victimized (Berkowitz, 2014; Cowie, 2011). This approach implies the critical role of positive peer relationships and the importance of improving them to decrease peer victimization.

Overall, prior findings demonstrate inconclusive evidence of the associations among teacher–student and peer relationships and peer school victimization. This study sought to address these inconsistencies and map the empirical relations and structure of pathways among the variables.

4 Gender, Grade Level, and Ethnocultural Differences in Peer Victimization

Gender, grade level, and ethnic and cultural affiliations have been central to research on peer victimization and school violence. Prior findings indicated significant differences in types and frequency of peer victimization between boys and girls and between younger and older students. Physical violence has been consistently associated with boys, whereas relational and indirect violence has been described as more typical for girls (Astor & Benbenishty, 2019; Berkowitz & Benbenishty, 2012; Musu et al., 2019). Although gender differences in escalating patterns of victimization were previously examined among adults in the context of intimate partner violence (Winstok et al., 2017; Winstok & Straus, 2011), there is a lack of empirical evidence to establish associations among school-aged children. Further, early elementary school students exhibit greater physical victimization compared to older students, who typically exhibit greater verbal and relational victimization (e.g., Cook et al., 2010; Musu et al., 2019; Rivara & Le Menestrel, 2016).

Findings concerning the ethnic or cultural origins of students demonstrate inconclusive patterns, with some research indicating greater victimization among minority students (e.g., Berkowitz 2020; Wang et al., 2010), lower victimization among minority students (e.g., Rivara & Le Menestrel 2016), or no significant differences in victimization rates and types among students by race and ethnicity (Vitoroulis & Vaillancourt, 2015). In the United States, victimization rates have varied by students' ethnicity, although findings have been inconsistent (Connell et al., 2015). The presence and proportion of minority groups in schools and their interaction with the majority group could influence the type and magnitude of peer victimization (Graham & Juvonen, 2002; Hanish & Guerra, 2000; Vervoort et al., 2010).

Different empirical associations may also emerge among peer and teacher–student relationship variables across subgroups of students by gender, grade level, and

ethnicity. For example, researchers indicated that girls typically establish more intimate, less conflictual relationships with teachers, as compared with boys (Silver et al., 2005). Further, teacher–student relationships influence peer victimization more strongly for boys than for girls (Di Stasio et al., 2016). Teacher–student relationships may also change depending on students' grade level. In early elementary school, children typically enjoy more trustful, intimate, and close relationships with teachers, which tend to weaken as they reach higher grade levels (Gehlbach et al., 2012). Students of different ethnic and cultural affiliations may also hold different perceptions of the school environment, and their experience at school may be distinctively influenced by the quality of relationships with teachers and peers (Astor & Benbenishty, 2019). More research is needed to explore whether peer and teacher–student relationships and their association with peer victimization remain consistent or significantly differ across multiple subgroups by gender, grade level, and ethnocultural affiliation.

5 The Israeli Context

Historically, prior to the establishment of the state of Israel, political parties instituted schools affiliated with distinct political streams, maintaining their disparate ideologies, religiosity, and culture (Israel Archives, 2017). This educational organizational structure, which has persisted throughout the years, ensures that the curriculum, instruction and textbook language, and culture coincide with the student population and families of the various political streams. Consequently, all public schools in Israel are intentionally organized around culture and language, such that Muslim, Christian, Druze, Bedouin, and Jewish families, either religious or secular, can choose schools for their children based on religious and cultural orientations. The unique structure of schools enabled us to test the structure of associations among the study variables across distinct ethnic and cultural groups (Hebrew- and Arabic-speaking students), in addition to gender and grade level. Prior research conducted in Israel indicated greater peer victimization among Arabic language students, as compared to their Hebrew language counterparts (Berkowitz, 2020; Khoury-Kassabri, 2019; Khoury-Kassabri et al., 2005).

6 Research Questions and Hypotheses

The first research question was: Do associations exist among peer and teacher–student relationships and student victimization by relational, verbal, and physical violence? Based on concepts derived from the literature on peer school victimization, the study team hypothesized that: (1) there would be a positive significant association among relational, verbal, and physical peer victimization; and (2) less serious forms of relational and verbal violence would be associated with more severe physical violence. Additionally, (3) a significant positive association would emerge among peer and teacher–student relationships; and (4) both peer and teacher–student relationships would have a negative effect on peer victimization. Because prior research that examined the association among peer and teacher–student relationships and victim-

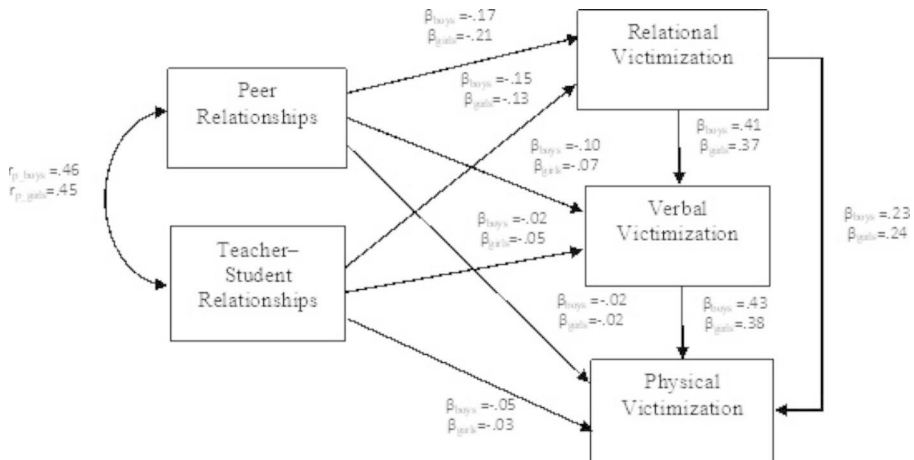


Fig. 1 Research Model and Analysis Findings

ization demonstrated contradictory and inconclusive findings, this study tested this pattern of interrelationships without presenting a specific hypothesis.

Due to the centrality of students' gender, grade level, and ethnic and cultural affiliations in research on peer victimization and school violence, the study further tested their potential moderating effect on the associations among the study variables. Thus, the second research question was: Do the associations among peer and teacher–student relationships and peer victimization differ across multiple subgroups by gender, grade level, and ethnocultural affiliation? Please refer to Fig. 1 for a visual representation of the study model.

7 Method

This study used data from a large-scale national education monitoring system overseen by the Israeli Ministry of Education for fifth- and eighth-grade students in public schools in Israel (National Authority of Measurement and Evaluation, n.d.). This system provides information on students' experiences at school, including victimization via relational, verbal, and physical violence and peer and teacher–student relationships. The system also measures students' test scores in four core subjects.

Questionnaires, procedures, informed consent forms, and instructions were reviewed by the Israeli Ministry of Education and the ethics committee of the authors' university. Before the beginning of the study, school principals received passive consent forms and parents received letters informing them of the study goals and questionnaire, giving them the option of declining their child's participation. Professional and trained pollsters collected data for this study. Students whose parents objected their participation in the research were asked to leave the classroom. The pollsters explained the study's aim, emphasized its purpose and importance to the students, and informed of their right to decline to participate in the study, their option to not answer all the questions, and their ability to stop at any stage. Students who

expressed their willingness to participate in the study were asked to fill in printed paper questionnaires privately and anonymously. To ensure privacy and increase the data validity, the teachers were asked to leave the classrooms while students filled in the questionnaires. The pollsters provided assistance upon request.

8 Study Sample

All schools in the official public school system supervised by the Ministry of Education were classified into four clusters; each cluster constitutes a nationally representative sample of all schools. Clustering was based on schools' affiliation with municipal councils, such that each municipality had all its schools participate in the same wave of data collection. Data from half of all schools in the country are collected each year; thus, two years (2008–2009) were used in the current study to create a census of all fifth- and eighth-grade students.

Because private schools are a very small minority of Israeli schools, the sample represents most students. The sample featured 75,852 students from 1,188 schools, of whom 70% were Jewish, about 59% were girls, 53% were in fifth grade (10 years old), and 47% were in eighth grade (14 years old). The schools' response rates ranged between 88% and 92%.

9 Measurements

Questionnaires were developed by the Ministry of Education team based on insights gathered from several sources: focus groups of teachers and principals, discussions with education ministry officials, consultation with academic scholars, and reviews of the current literature.

9.1 Demographics

The data included information on students' demographics, including gender (male or female), grade level (fifth or eighth grade), and ethnocultural affiliation (Arabic or Jewish). These three dichotomous variables were used to compute a grouping variable representing the eight combinations across gender, grade level, and ethnocultural affiliation.

9.2 Physical Victimization

The Ministry of Education's subscale measuring students' experiences at school includes four items measuring prevalence of physical violence during the past month (e.g., "A student who wanted to hurt you kicked you, hit you or slapped you"; "A student gave you a hard beating"). The response scale was 1 = *never*, 2 = *once or twice*, and 3 = *three times or more* during the past month. Physical victimization was computed as the mean of these four items ($\alpha=0.70$).

9.3 Verbal Victimization

Students were asked to report the prevalence of peer victimization by verbal violence using four items (e.g., “During the last month, a student cursed at me purposely to hurt me”; “During the last month, a student mocked, humiliated, or insulted me”). Responses were solicited on the same 3-point scale as for physical victimization responses. The mean of these nine items was used for subsequent analysis ($\alpha=0.68$).

9.4 Relational Victimization

The subscale measuring prevalence of peer victimization to relational violence included two items (“During the last month, students tried to persuade other kids not to talk to me and not be friends with me”; “During the last month, I was boycotted, a group of students did not want to play or speak with me”). Responses were solicited on the same 3-point scale. Relational victimization was computed as the mean of the two items ($\alpha=0.63$).

9.5 Teacher–Student Relationships

Students responded to nine items that capture key elements of teacher–student relationships, including closeness, appreciation, respect, and support. (e.g., “I have close and good relationships with most of the teachers”; “In my school, teachers treat students decently”). Responses were solicited on a 5-point Likert scale: 1 = *strongly disagree*, 2 = *disagree*, 3 = *agree a little*, 4 = *agree*, 5 = *strongly agree*. A teacher–student relationship score was computed as the mean of the nine items, indicating their quality in terms of level of closeness, respect, and support ($\alpha=0.86$).

9.6 Peer Relationships

The subscale measuring peer relationships included four items that capture key elements of peer relationships, including support, respect, and helpfulness (e.g., “In my class, there is good atmosphere among students”; “Most students in my class think it is important that we help each other”). Responses were solicited on the same 5-point scale as for teacher–student relationship responses. A peer relationships score was computed as the mean of the four items, indicating their quality in terms of level of support, respect, and helpfulness ($\alpha=0.79$).

Table 1 presents descriptive statistics for the study variables.

10 Analytic Method and Study Model

The study team tested the research hypotheses using confirmatory path analysis, a statistical technique used to examine the comparative strength of direct and indirect associations among variables, in which correlational data are used to disentangle processes underlying the outcomes in a hypothesized causal system (Loehlin & Beaujean, 2016). The path analysis method allowed estimation of a system of associations

Table 1 Means, SDs, and Pearson correlations among the study variables (N=75,852)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Peer Relationships	3.62	0.92				
2. Teacher-student relationships	3.61	0.85	0.458*			
3. Relational victimization	1.22	0.35	-0.178*	-0.054*		
4. Verbal victimization	1.22	0.42	-0.214*	-0.111*	0.410*	
5. Physical victimization	1.17	0.39	-0.236*	-0.153*	0.411*	0.544*

Note: Relationships measured on a scale :1=*strongly disagree*; 2=*disagree*; 3=*agree a little*; 4=*agree*; 5=*strongly agree*
Victimization measured on a scale: 1=*never*; 2=*once or twice*; 3=*three times or more*
* $p < .01$.

that specify the hypothesized causal linkages among peer and teacher–student relationships and victimization, then decompose these associations into direct, indirect, and noncausal components (Lleras, 2005).

To further explicate the study model, multigroup analysis tested whether the hypothesized patterns of interrelationships remained consistent or manifested differently across subsamples defined by gender, grade level, and ethnocultural affiliation. Because gender is cardinal to violence research (e.g., Rivara & Le Menestrel 2016; Berkowitz, 2020; Winstok & Straus, 2016), the researchers first tested the model for the boy and girl subsamples, then for the eight subgroups composed of various combinations of gender, grade level, and ethnocultural affiliation.

The analyzed model included peer and teacher–student relationships and the three peer victimization forms—relational, verbal, and physical. The model presented an association between teacher–student and peer relationships. Further, six paths were presented between peer and teacher–student relationships and each of the three peer victimization variables, as well as relationships among the three peer victimization variables (Fig. 1). Because the model was based on correlations, it could not demonstrate causality, but could only indicate whether the hypothesized causal model fit the patterns of associations in the data.

Analyses was conducted using SPSS and AMOS (version 25) statistical software.

11 Results

11.1 Multigroup Analysis by Gender

Figure 1 presents the results for the gender subsamples. Overall, the multigroup path analysis by gender revealed insignificant differences in the structure and pattern of associations across the boy and girl subsamples. Overall, the analysis results for the victimization variables indicate that although all victimization types were correlated, relational victimization mostly affected verbal victimization ($\beta_{\text{boys}}=0.41$; $\beta_{\text{girls}}=0.37$; $p < .001$) but also physical victimization ($\beta_{\text{boys}}=0.23$; $\beta_{\text{girls}}=0.24$; $p < .001$). Verbal victimization had a significant positive effect on physical victimization ($\beta_{\text{boys}}=0.43$; $\beta_{\text{girls}}=0.38$; $p < .001$). This pattern of associations confirms that relational victimization precedes verbal victimization, which precedes physical victimization.

Teacher–student and peer relationship variables were significantly and positively correlated ($r_{p_boys} = 0.46$; $r_{p_girls} = 0.45$, $p < .001$). All negative effects of peer and teacher–student relationship variables on the victimization variables were significant, although two effects were especially strong: peer relationships and relational victimization ($\beta_{boys} = -0.17$; $\beta_{girls} = -0.21$; $p < .001$) and peer relationship and verbal victimization ($\beta_{boys} = -0.15$; $\beta_{girls} = -0.13$; $p < .001$). These findings indicate that peer relationships contribute to the escalation of victimization, beyond the contribution of teacher–student relationships to peer victimization. In addition, teacher–student relationships had a significant negative effect on verbal victimization in the boy subsample ($\beta_{boys} = -0.10$, $p < .001$).

Finally, the explained variance of the physical victimization variable was meaningful ($R^2_{boys} = 0.38$; $R^2_{girls} = 0.30$). The explained variance of the verbal victimization variable also was meaningful ($R^2_{boys} = 0.21$; $R^2_{girls} = 0.18$).

12 Multigroup Analysis by Gender, Grade Level, and Ethnicity

We reexamined the study model across eight subgroups defined by gender, grade level, and ethnocultural affiliation. The findings, presented in Table 2, reveal a similar structure of associations among the model variables across the eight subsamples. Although peer and teacher–student relationships were correlated, peer relationships influenced peer victimization more strongly than teacher–student relationships. Further, in most cases, the association between peer relationships and relational victimization was stronger than the association with verbal or physical victimization. The three types of peer victimization were associated, indicating an escalating pattern of victimization in which relational victimization was associated with verbal and physical victimization. These findings give further support for the mechanisms by which peer and teacher–student relationships are associated with relational, verbal, and physical victimization, as found in the gender subsample analysis.

13 Discussion

This study sought to map the structure of associations among peer and teacher–student relationships and peer school victimization via relational, verbal, and physical violence. The current findings demonstrate an association among relational, verbal, and physical peer victimization, indicating that they tend to co-occur and that victimized children are often subjected to more than one form of violence. In accord with prior research (Astor & Benbenishty, 2019; Felix & McMahon, 2007; Raskauskas, 2010), the findings support the hypothesis that the distinct types of victimization are interrelated in a predictable manner. Children exhibiting multiple victimization regularly face a significantly greater risk of a wide array of maladaptive outcomes (Gardella et al., 2016; Reavis et al., 2010) that persist beyond childhood and adolescence into adulthood (Copeland et al., 2013; Espelage et al., 2016; Holt et al., 2014). Thus, it is important to develop multifaceted interventions that address more than one type

Table 2 Multigroup Path Analysis Results (N = 75,852)

Subsamples	Standardized Effects for										Pearson Correlation				Explained Variance					
	Peer Relationships and Victimization					Teacher-student Relationships and Victimization					for Victimization Types				R ²					
	Gndr	Ethn	Grd	%	r _p	β	R	V	P	β	R	V	P	r _p	R-V	R-P	V-P	R	R-V	R-V-P
1	M	J	5	18.1	0.45	-0.23	-0.28	-0.11	*	*	*	*	*	0.36	0.45	0.17	0.06	0.20	0.37	0.37
2	F	J	5	18.7	0.45	-0.28	-0.14	*	*	*	*	*	*	0.33	0.39	0.20	0.08	0.17	0.31	0.31
3	M	A	5	7.9	0.48	-0.19	-0.14	*	*	*	*	*	*	0.44	0.31	0.35	0.08	0.23	0.38	0.38
4	F	A	5	8.3	0.44	-0.17	-0.12	*	*	*	*	*	*	0.37	0.42	0.25	0.06	0.19	0.37	0.37
5	M	J	8	16.6	0.38	-0.19	-0.12	-0.10	*	*	*	*	*	0.36	0.44	0.19	0.05	0.18	0.34	0.34
6	F	J	8	17.6	0.37	-0.22	-0.15	-0.12	*	*	*	*	*	0.31	0.28	0.14	0.05	0.15	0.18	0.18
7	M	A	8	6.1	0.42	-0.20	-0.10	*	*	*	*	*	*	0.53	0.41	0.37	0.06	0.33	0.51	0.51
8	F	A	8	6.6	0.41	-0.21	*	*	*	*	*	*	*	0.40	0.36	0.27	0.06	0.19	0.31	0.31

Note. All findings were significant. *Indicates significant correlation less than 0.10

M = male, F = female; J = Jewish, A = Arabic; 5 = fifth grade, 8 = eighth grade;

Rel = r Pearson correlation coefficients for peer relationships and teacher–student relationships;

Peer / Teacher-student Relationships and Victimization: R = relational victimization; V = verbal victimization; P = physical victimization;

r Pearson correlation coefficients for Victimization Types: R-V = relational and verbal; R-P = relational and physical; V-P = verbal and physical

of violence to prevent both short- and long-term negative outcomes among students exhibiting multiple forms of violence.

Consistent with prior research (Card et al., 2007; Elledge et al., 2016), the findings offer support for the hypothesis of an escalating pattern across the victimization types. Relational victimization was associated with verbal victimization, which was associated with physical victimization. These findings may highlight the importance of properly addressing the continuum of victimization, including incidents that may seem minor or less serious, in addition to more severe victimization. Disregarding victimization via minor acts of violence likely increases the chances that more serious violence will take place. These patterns of associations among the victimization types remained similar across subgroups of students by gender, grade level, and ethnocultural affiliation. Consistent with prior research (e.g., Buhs et al., 2010; Smith et al., 2002), the findings confirm conceptual equivalence across subgroups of the disparate types of peer victimization, providing further evidence regarding the structure of associations for these groups. Because the structure of associations was similar, the strategy of developing interventions that address more than one type of violence could work for both boys and girls, students at different grade levels, and students from different ethnocultural groups.

Not all types of victimization are equally harmful to student well-being (Ladd & Ladd, 2001). For example, a study found physical and verbal victimization were most strongly related to behavior problems, whereas relational victimization was not as strongly related (Felix & McMahon, 2006). Nonetheless, the current findings show that without proper intervention, relational victimization will most likely escalate into verbal and physical victimization, leading to negative student outcomes.

14 Influence of Peer and Teacher–Student Relationships on Escalation of Peer Victimization

Peer conflicts may escalate into violence infliction to a greater extent in the context of negative and hostile school environment in which violence is more widespread, common, and considered as a legitimate or unpreventable manner of behavior (Booren et al., 2011; Steffgen et al., 2013). Thus, effective intervention strategies require an understanding of the social ecology in which victimization occurs (Hong & Espelage, 2012; Kaufman et al., 2021). This study focused on the immediate and most meaningful ecology of students at school: peers and teacher–student relationships (Bronfenbrenner & Morris, 2007). Peer and teacher–student relationships are two central aspects of school climate (Berkowitz et al., 2017; Wang & Degol, 2016), a fundamental component necessary to decrease victimization and create safer school environments (Benbenishty et al., 2016; Bradshaw, 2015; Cornell et al., 2015; Moore et al., 2020). Thus, schools striving to reduce victimization must act to improve their social climate, particularly relationships among peers and between teachers and students. This can help reduce the possibility that violence will be normalized, enhance students' feeling of being cared for, and increase their sense of acceptance and connectedness to school, which would eventually decrease peer victimization (Benbenishty & Astor, 2005; Booren et al., 2011; Whitlock, 2006).

Because prior research that examined the contribution of peer and teacher–student relationships and victimization demonstrated inconclusive findings, this study explored the influences of both types of relationships on victimization without presenting a specific hypothesis. The findings show that although both types of relationships significantly influenced victimization, peer relationships had a stronger effect on victimization, beyond the contribution of teacher–student relationships. These findings dovetail with prior research indicating a direct influence of peer relationships on victimization, beyond the influence of teacher–student relationships (Elledge et al., 2016; Reavis et al., 2010; Romano et al., 2011). Similar to other Western (e.g., Hodges et al., 1999) and non-Western (e.g., Abou-ezzeddine et al., 2007) cultures, the current findings highlight the protective role of positive peer relationships for the Israeli Arabic collectivistic and conservative culture and for the Israeli Jewish culture, which has been described as similar to industrialized European cultures (Goldscheider, 2019).

Considering the central role of peer relationships to victimization (Kaufman et al., 2021), educators have many options to intervene and prevent victimization. Strategies that strengthen peer relationships will have a direct influence on both minor and severe peer victimization and their associated deleterious outcomes. Strategies that focus on individual students mainly focus on improving children’s social skills and emotion regulation (Beaumont et al., 2019). Other strategies target peer relationships at the classroom level through efforts to optimize the overall organization of peer network patterns, rather than focusing on students’ individual deficits. These may include teachers’ efforts to establish strong group norms supporting prosocial behavior, enhancement of positive social ties, ethnic integration, and diversity. These strategies have been associated with less aggression and bullying, stronger experiences of social relatedness, and increased richness of friendship ties in the classroom (Gest & Rodkin, 2011). Children who do not have a best friend or peer support would benefit from more positive, supportive, and caring relationships with teachers, which could buffer the risk of peer victimization (Elledge et al., 2016).

Pitner and colleagues (2015) suggested that successful schoolwide interventions are comprehensive, intensive, and ecological and raise the awareness, responsibility, and input of the school community regarding the types and magnitude of school violence. Successful programs create clear guidelines and rules for all members of the school community, target various social systems in the school, and clearly communicate to students, teachers, and parents what procedures should be followed before, during, and after violent events. Whole-school violence programs should fit easily into the normal flow and mission of the school setting and rely on faculty members, staff members, and parents to form a program tailored to their needs to increase the chance of success (Astor et al., 2009; Pitner et al., 2015). By implementing comprehensive programs that improve overall school climate, schools may be able to reduce the risk of minor and more serious violent incidents (Skiba & Peterson, 2000).

15 Study Limitations and Recommendations for Future Research

Despite the large-scale representative sample of students, the results of the current study, although informative, are also limited in certain respects. First, this study's models and theories are founded on causal arguments from which research hypotheses were derived. The data used to test these hypotheses were collected at one point in time. These data can demonstrate associations between the variables, rather than their causal relationship. To establish causal arguments based on large population-based samples, longitudinal data are required. It is recommended that future studies rely on longitudinal research arrays to allow exploration of causal arguments stemming from the models and theories.

Further, the measurement of relational victimization was composed of only two items. Future research would benefit from a more comprehensive and holistic measurement of the phenomena such that a wider range of victimization to relational types of violence is considered. More holistic measurement of relational victimization could also shed light on ethnocultural differences. Relational victimization may manifest in both direct and indirect forms of peer maltreatment (Crick et al., 2001). The professional literature has attributed different forms of aggression to collectivist and individualist societies, with relational indirect forms of violence posited as more prevalent in collectivist societies due to inhibition of direct aggression (Forbes et al., 2009). It is important to further explore victimization via direct and indirect relational types of aggression across cultures and ethnicity, because patterns may change considerably.

Further, although this study grouped the peer victimization items using a conceptual approach to distinguish relational, verbal, and physical victimization, victimization may be further organized based on the level of severity to discriminate between mild and moderately aggressive behaviors and more serious forms of violence. Future research could include more items to measure different types of victimization that also reflect their severity (e.g., moderate physical victimization such as pushing, in addition to severe physical victimization such as serious beating and kicking). Prior findings indicated that the severity of victimization is strongly associated with its frequency of occurrence: Severe victimization is rare, whereas frequent victimization is milder and less harmful (Benbenishty & Astor, 2005). A more nuanced examination that also considers the severity of the disparate types of victimization could better capture and explain the structure of associations among student victimization and peer and teacher–student relationships. In addition, future research is encouraged to explore the intensity of peer victimization, reflecting the victims' experience of violence as harmful, in addition to measuring the frequency of victimization. Although high victimization frequency ratings were associated with the victims' experience of intensity (Kaufman et al., 2020), the intensity of victimization may be a clearer indicator of the escalation of peer victimization, not only in terms of the types of behaviors (i.e., relational, verbal, and physical) but also in terms of harmfulness.

This study was based solely on students' reports, whereas studying the topic holistically based on the perspectives of various stakeholders of the school also would be very informative. Prior research that examined school violence using multiple perspectives showed that schools in which students' and staff members' perceptions

were significantly different had the highest levels of victimization (Benbenishty & Astor, 2005). In addition, exploring school staff perceptions of collegial relationships is important, because the extent to which teachers and staff members effectively communicate, collaborate, and support one another significantly influences peer victimization (Wang & Degol, 2016). To illustrate, studies found that reduced administrative support (Martinez et al., 2016), decreased support from the principal, and negative collegial relationships are related to more peer victimization (Galand et al., 2007). In addition, greater relational trust among school staff members makes it more likely that reform initiatives, such as school safety programs, will diffuse broadly across the school (Bryk & Schneider, 2002).

Prior research indicated that a significant number of students experiencing peer victimization also perpetrate violence against other peers (e.g., Jansen et al., 2011; Veenstra et al., 2005). These students have the most negative school experiences in various areas, including negative relations with teachers and peers (Berkowitz & Benbenishty, 2012; Khoury-Kassabri, 2009; Olweus, 1993). Thus, future research would benefit from exploring students' perpetration of relational, verbal, and physical violence, in addition to being victimized by such acts, such that the reciprocal nature of peer violence and its association with interpersonal relationships is more fully addressed.

Overall, this study adds to a growing body of literature indicating the contribution of interpersonal relationships to peer victimization in schools. The findings imply that peer victimization is a problem that intensifies and escalates, and that schools striving to reduce violence would benefit from mainly focusing on strengthening peer relationships and teacher–student relationships. The identified empirical network of links among interpersonal relationships and peer victimization can support theoretical and operational frameworks essential to successfully preventing school victimization and protecting students from negative educational, social, and emotional outcomes.

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