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EMPIRICAL ARTICLE

CHILD DEVELOPMENT

Peer victimization and empathy for victims of bullying: A test of bidirectional associations in childhood and adolescence

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Abstract

Anti-bullying interventions often assume that knowing how it feels to be bullied increases empathy for victims. However, longitudinal research on actual experiences of bullying and empathy is lacking. This study investigated whether within-person changes in victimization predicted changes in empathy over 1 year using random-intercept cross-lagged panel models. Self- and peer-reported victimization, and cognitive and affective empathy for victims were measured in a sample of 15,713 Finnish youth (M_{age} = 13.23, SD_{age} = 2.01, 51.6% female; 92.5% had Finnish-speaking parents; data was collected in 2007–2009 when information about participants' race/ethnicity was not available due to ethical guidelines for the protection of personal information). Results indicated small, positive longitudinal associations from victimization to cognitive empathy. Implications for empathy-raising interventions are discussed.

Empathy—the ability to be aware of, understand, and share another person's emotional experience is generally viewed as a desirable life skill because it enables us to take on the perspective of others so that we may engage in healthier and more satisfying interpersonal relationships (Schonert-Reichl, 2011). Indeed, a robust, positive association has been observed between the ability to empathize with the suffering of another and a desire to help the person in distress (Eisenberg et al., 2015). Empathy also plays an important role in school bullying, as it is negatively associated with bullying perpetration concurrently (van Noorden et al., 2015; Zych, Farrington, et al., 2019) and over time (Stavrinides et al., 2010), and positively predicts defending of victimized peers (Lambe et al., 2019; Ma et al., 2019; van Noorden et al., 2015). Due to these established associations between empathy and youth's behavior in bullying situations, empathy-raising activities are a common component in most anti-bullying programs (e.g., Frey et al., 2005; Kärnä et al., 2011). Such activities generally consist of exercises that help students put themselves "in the shoes" of victims. A critical assumption underlying these types of interventions is that knowing what it feels like to be victimized contributes to feeling greater empathy for other victims of bullying. Yet, paradoxically, the relation between actual experiences with victimization and empathy for victims has rarely been the main focus of empirical studies. Research on this topic has been mostly cross-sectional, focused on general empathy rather than empathy for victims, and has produced mixed findings. Therefore, little is known about whether the experience of being bullied actually contributes to higher empathy for other victims. Moreover, the possible effects of empathy on future victimization remain unclear. Whether empathy helps to protect adolescents from peer victimization or makes them a more vulnerable target has important implications for intervention practices, by indicating whether empathy-raising efforts should be targeted systematically at all children.

The purpose of the current study was to investigate whether changes in victimization were associated with changes in empathy for victims over time (or vice versa) using an extension of the cross-lagged panel model (CLPM). An important limitation of the traditional

Abbreviations: CFI, comparative fit index; CLPM, cross-lagged panel model; ICC, intraclass correlation; MCAR, missing completely at random; PRQ, Participant Role Questionnaire; RI-CLPM, random intercept cross-lagged panel model; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; TLI, Tucker–Lewis index.

CLPM is that it does not distinguish between-person effects (i.e., inter-individual differences) from within-person effects (i.e., differences observed within the same individual, over time), which can lead to erroneous conclusions (Hamaker et al., 2015). As the current research question concerned how individual differences in victimization and empathy might affect each other over time (i.e., changes at the within-person level), this study used a random intercept CLPM (RI-CLPMs) as the method of analysis.

Is peer victimization associated with empathy?

Most studies of peer victimization have focused on negative outcomes (e.g., internalizing problems, academic difficulties, etc.; see Moore et al., 2017). Whether victimization may also be related to the development of positive psychological characteristics, such as the ability to better understand and feel the emotions of others in distress, has rarely been investigated (see Pabian et al., 2022 as a notable exception). Is it possible that peer victimization also contributes to greater understanding and appreciation of others' suffering—that is, greater empathy?

Theoretical rationale

There are theoretical reasons for expecting an association between peer victimization and empathy. First, post-traumatic growth theory (Tedeschi & Calhoun, 2004) argues that, in addition to the adverse outcomes typically associated with extremely stressful experiences like being bullied (Andreou et al., 2021), there is growing evidence that some individuals can also experience post-traumatic growth in the form of positive individual development following traumatic life events. In a recent study, approximately 25% of young adults who were bullied in adolescence described experiencing some positive outcomes in adulthood, such as prioritizing healthy relationships, becoming more assertive, and being able to recognize and stand up to bullying (Pabian et al., 2022). Whether being bullied in adolescence is associated with other positive traits, like increased empathy, remains unclear.

Second, greater empathy for victims of bullying may be aroused more easily in those who have shared the same experience. According to the motivational theory of empathy (Zaki, 2014), individuals are motivated to either approach or avoid situations which may elicit empathy, and regulate their behavior accordingly. One motivation for inhibiting empathic arousal is when empathy interferes with intergroup competition—that is, when the person who is suffering belongs to an outgroup. As bullying is a group phenomenon that involves many different participant roles (Salmivalli, 2010), it can be expected that youth who tend to share the same participant role across bullying situations (e.g., victims) should be more likely to empathize with other members of that group, compared to those who have a different bullying role. According to the "risky strength theory" (Tone & Tully, 2014), individuals that are higher in empathic sensitivity may be at increased risk for experiencing internalizing problems, which may contribute to greater stress and more relationship problems (Hammen, 1991), including peer victimization (Christina et al., 2021). Consequently, by being more willing to engage with the suffering of others (rather than avoid it), it is also theoretically plausible that children who are more empathic towards victims of bullying may be at increased risk for becoming victimized themselves.

Finally, there are important developmental processes to consider during adolescence that may influence intrapersonal changes in empathy. Due to changes in peer dynamics (e.g., shifting from dyadic to group-based relationships), school context (e.g., transition from primary to secondary school), and maturational factors (e.g., decreased behavioral inhibition) that support the use of aggression to obtain status within the peer group, adolescents are at particular risk for experiencing peer victimization compared to other age groups (Troop-Gordon, 2017). In addition, whereas concern for others emerges in early childhood (i.e., 1–3 years old, see Eisenberg et al., 2015), a recent study found a significant increase in perspective-taking skills beginning at age 6–7 (Dorris et al., 2022), suggesting that different forms of empathy emerge during different periods of development. In particular, early adolescence appears to be a "sensitive period" for the development of perspective-taking skills (Farrell & Vaillancourt, 2020; van Lissa et al., 2014) which may be necessary for victims to put themselves "in another person's shoes." Given the convergent timing of both of these events (e.g., increases in peer victimization and perspective taking), the transition from childhood to adolescence appears to be an especially relevant developmental period for studying possible associations between victimization and empathy.

Types of empathy

Empathy is an other-oriented emotional response, meaning that it involves awareness of another's emotional state followed by a corresponding emotional reaction in the observer, often leading to feelings of concern for the other person (Cuff et al., 2016; Eisenberg et al., 2015). The literature typically distinguishes two types of empathy: (1) *cognitive empathy*, which involves correctly identifying and understanding the emotions of others (also known as perspective taking) and (2) *affective empathy*, or the experience of increased emotional arousal in response to another person's suffering, usually the same or similar emotions that one imagines the other person to feel. Empathic concern (also referred to as sympathy

or compassion) is a specific form of affective arousal that involves feeling concern for the well-being of others combined with a desire to relieve their suffering, and has often been used interchangeably with affective empathy in the scientific literature (see Cuff et al., 2016).

Bullying perpetration tends to be more strongly associated with having less affective empathy, whereas defending has been positively associated with both forms of empathy (van Noorden et al., 2015). Unfortunately, there is a notable lack of longitudinal research on the associations between empathy and peer victimization. Therefore, it is necessary to form hypotheses about intra-individual changes in empathy based on information from cross-sectional studies examining individual differences. Next, the current state of knowledge about the relations between peer victimization and cognitive and affective empathy is briefly summarized.

Summary of cross-sectional findings

Previous research on the concurrent associations between victimization and empathy has produced inconsistent results (van Noorden et al., 2015; Zych, Farrington, et al., 2019). Many cross-sectional studies have not found a significant association between self-reported victimization and affective empathy (Antoniadou et al., 2019; Antoniadou & Kokkinos, 2018; Barhight et al., 2013; Ciucci & Baroncelli, 2014; Coleman & Byrd, 2003; Correia & Dalbert, 2008; Espelage et al., 2018; Poteat & Espelage, 2005; Raskauskas et al., 2010; Sticca et al., 2013; Troop-Gordon et al., 2019; see also Zych, Ttofi, et al., 2019), or cognitive empathy (Ciucci & Baroncelli, 2014; Espelage et al., 2018; van Noorden et al., 2016; see also Zych, Ttofi, et al., 2019), and others failed to find a relation between cognitive empathy and peer-reported victimization (Gleason et al., 2009) or teacher-reported victimization (Belacchi & Farina, 2012). Among the small body of research that has found a significant correlation between self-reported victimization and affective empathy, some studies have found a positive association (Kokkinos & Kipritsi, 2012; Rodríguez-Hidalgo et al., 2018, 2019; van Noorden et al., 2016), whereas others reported a negative association (Colasante et al., 2019; Malti et al., 2010). Another study found a positive correlation between peer-reported victimization and affective empathy, but only among girls (Caravita et al., 2010). Regarding the links with cognitive empathy, a positive link with self-reported victimization has been found in some samples of youth (Rodríguez-Hidalgo et al., 2018, 2019). However, other studies have found that self-reported victimization was negatively correlated with cognitive empathy (Antoniadou et al., 2019; Antoniadou & Kokkinos, 2018; Kokkinos & Kipritsi, 2012; Schokman et al., 2014; Williford et al., 2016), though sometimes only among girls (Poteat & Espelage, 2005).

Taken together, previous findings on the connection between empathy and peer victimization are inconsistent, and when statistically significant effects are observed, they tend to be small. It is important to note that what is currently known about the relation between empathy and peer victimization is limited by several factors. Most of the previous literature has focused on the association between peer victimization and cognitive or affective empathy measured as a general trait, and results may vary depending on how empathy was defined (e.g., overall empathy vs. empathy felt toward a specific target, such as empathy for victims of bullying). In addition, whether a relation has been found between empathy and victimization appears to vary depending on how peer victimization was measured (e.g., self- vs. peer-report), and whether other forms of empathy were controlled for in the analysis (e.g., examining the joint contributions of both cognitive *and* affective empathy). Due to methodological differences across studies (e.g., sample age, type of empathy, and informant of peer victimization), it is not possible to definitively state which results most likely reflect the actual relation between empathy and peer victimization. The current study aims to disentangle some of these overarching issues by examining whether individual differences in both self- and peer-reported victimization are related to within-person changes in affective or cognitive empathy for adolescent victims of bullying, using a three-wave longitudinal design.

Does peer victimization lead to changes in empathy?

In addition to the theories described above, it seems reasonable to propose that children who have first-hand knowledge of how it feels to be bullied should have a greater understanding of how painful it is, which should increase their empathy for those who are subjected to the same adverse experience. Research conducted with young children has shown that empathic distress (e.g., expressed feelings of sadness) for a distraught peer is heightened when the observing child has recently had a similar negative experience (Barnett, 1984), and experiencing highly upsetting events in childhood has been associated with higher levels of empathic responding in adulthood (Barnett, 1984). In fact, *perceived similarity* (e.g., the belief that one has similar personal characteristics or has shared a similar experience) is frequently offered as a rationale for having empathy for strangers (Batson et al., 2005; Israelashvili et al., 2020), and has been shown to predict greater empathic concern (Batson et al., 1996; Eklund et al., 2009). Therefore, it has been suggested that knowing someone else has shared the same negative experience could help to increase empathy toward that person. However, it is also possible that highly empathic individuals are more likely to look for similarities between themselves and others. Longitudinal

research that does not solely rely on individuals' perceptions of their similarity with the target of empathy is needed to help clarify the direction of this association.

With respect to bullying, Farrell and Vaillancourt (2020) found that childhood experiences of peer victimization positively predicted an increasing trajectory of empathic concern during adolescence, but did not predict differences in perspective taking. Another study found that the positive association between victimization and empathic concern for other bullied children, both concurrently and 1 year later, only held for children who reported higher emotion regulation skills (Jambon et al., 2021), suggesting that the ability to manage feelings of personal distress may be critical for transforming negative emotional arousal into an other-oriented empathic response. Shared experience may contribute to greater feelings of concern by providing the observer with relevant background information from which to organize their empathic response (Batson et al., 2005; Hodges et al., 2010), and orienting the attention of past victims to the current victims' suffering (Preston & de Waal, 2002). In addition, because of their shared experience, previous victims may place greater value on the well-being of other victims compared to non-victims, which has also been shown to contribute to greater feelings of empathic concern (Batson et al., 2007).

It also seems plausible that children's negative peer experiences could interfere with their ability to feel empathy toward others. Indeed, increased peer victimization during kindergarten has been found to predict decreased empathic concern for victims (Malti et al., 2010). There are at least two potential ways that victimization may lead to having less empathy over time. First, as victimized youth often have fewer and poorer quality friendships compared to other children (Salmivalli & Isaacs, 2005), and positive peer relationships are associated with the development of empathy (Silke et al., 2018), children who are frequently victimized may have fewer opportunities to practice expressing empathy for their peers. Indeed, children who reported being victimized because of their aggressive behavior were rated by their parents as being less sensitive to others' well-being (Colasante et al., 2019), suggesting that some children who are victimized may also suffer from an empathy skill deficit. Second, the experience of being victimized by peers has been associated with being more likely to view others as hostile, untrustworthy, and insensitive (Salmivalli & Isaacs, 2005), and may contribute to victims behaving more aggressively toward others rather than expressing empathy for them.

Could empathy lead to changes in peer victimization?

It is also important to consider the possibility that the association between empathy and peer victimization could be bidirectional. That is, the tendency to empathize with others could predict future victimization. Empathy has been described as a "risky strength" that can make individuals more vulnerable to personal distress, excessive guilt, and increased internalizing problems (Tone & Tully, 2014), the latter of which has been a well-documented risk factor for peer victimization (e.g., Christina et al., 2021). In support of this hypothesis, Malti et al. (2010) found that victims who were higher in empathy toward those who were bullied had more concurrent emotional problems compared to those who were less sensitive to others' well-being. A recent longitudinal study also found that adolescents who were classified as having higher, increasing developmental trajectories of cognitive and affective empathy (17% of sample) also displayed higher levels of childhood anxiety compared to youth characterized by stable or decreasing empathy (Farrell & Vaillancourt, 2020), providing support for a prospective link between internalizing problems and empathy. However, it remains an open question whether being more empathic places youth at increased risk for becoming a target of bullying.

Lastly, it is also conceivable that empathy which has been positively associated with other important social and emotional skills (e.g., Silke et al., 2018) may actually help to prevent children from victimization. Understanding others' emotions and responding empathically to a peers' distress were both found to be negatively associated with concurrent peer victimization among young children (Garner & Lemerise, 2007). Thus, the ability to shift one's focus to the suffering of others may be an important social strength that both support the development of positive peer relations and protect children from peer victimization. Clearly, the question of whether youth's experiences with peer victimization are related to changes in empathy is complex. Although there is some evidence suggesting possible effects in both directions, the current literature does not provide any strong support for either the presence or the direction of an association between peer victimization and feeling empathy for other victims of bullying.

The current study

The belief that children who have experienced peer victimization themselves should have more empathy for other victims underlies current anti-bullying intervention efforts, many of which attempt to raise the empathy of non-victims by trying to help them understand how it feels to be bullied. However, the current literature does not provide clear evidence about whether *actual* experiences of victimization increase empathy for victims. Most research on this topic is cross-sectional, and the lack of previous, within-person longitudinal studies precludes drawing any conclusions about the direction of effects (e.g., whether victimization predicts changes in empathy, or empathy is associated with subsequent victimization).

The purpose of the present study is to clarify the possible links between these constructs by examining the concurrent and longitudinal bidirectional relations between adolescents' self- and peer-reported victimization and their cognitive and affective empathy for victims of bullying, across three time points.

Specifically, two sets of competing hypotheses were tested simultaneously: (a) that increases in peer victimization would positively predict one or both forms empathy for victims, (b) that increases in peer victimization would be associated with a decline in either form of empathy toward victims, (c) that increases in affective or cognitive empathy for victims would contribute to increased peer victimization, and (d) that greater empathy for victims would protect youth from being bullied and be negatively related to victimization. The focus of this study was to explore possible within-person longitudinal associations between empathy and victimization. Therefore, a RI-CLPM was used to distinguish between-person differences (confirmatory analysis) from within-individual changes over time. Expanding on previous cross-sectional research, this approach allowed for the estimation of concurrent within-person associations among study variables, and extended these findings longitudinally. Finally, given that this was the first study to investigate within-person changes in empathy and peer victimization, sensitivity analyses were conducted to further explore whether their association varied under different conditions, including participant gender, school level (primary vs. secondary), and whether the school was actively implementing an anti-bullying intervention.

METHOD

Procedure

This study was carried out in accordance with the recommendations of the university ethics board. Parents provided informed consent, and students provided informed assent prior to participating in the first wave of data collection. Students filled out online surveys in the school computer labs during regular school hours. Surveys were completed in 20–30 min sessions and were supervised by school staff who were provided with information about the study procedures in advance of the data collection. Three waves of data were collected over two school years: For the primary school sample (grades 3–5 at T1), in May 2007 (T1), December 2007 (T2), and May 2008 (T3); for the secondary school sample (grades 4–7 at T1), in May 2008 (T1), December 2008 (T2), and May 2009 (T3). As different schools participated in each phase of the project, there was no overlap between the two samples. The surveys consisted of self-report and peer nomination items measuring children's experiences with and attitudes about bullying, including their participation in various bullying roles, peer relationships, social–emotional well-being, and perceptions of class climate. Variables relevant to the current study were measured at all three waves (see Measures). For more information about study procedures, see Kärnä et al. (2011, 2013).

Participants

The sample for this study was drawn from the randomized control trial of the KiVa anti-bullying program (average participation rate of 90% at T1; see Kärnä et al., 2011, 2013). The data used in the current study included 17, 209 students in grades 3–8 at T1 (M_{age} = 13.34, SD_{age} = 1.86; 51.1% female; 40.6% primary school; 92.5% born to Finnish-speaking parents; data collection occurred in Finland at a time when information on participants' race/ethnicity was not available due to ethical guidelines for the protection of personal information) from 78 primary and 78 secondary schools that were randomly assigned to either the intervention or control condition. The majority of the sample (80%) participated at all three time points. From this total sample, n = 15,713 students (M_{age} = 13.23, SD_{age} = 2.01; 51.6% female; 40.1% primary school; 92.3% born to Finnish-speaking parents) were identified who had parental consent at T1 and participated in at least two waves of data collection (e.g., T1 and T2 or T3), and who were enrolled in classrooms with at least 10 students at T1 and T2 (intervention schools: 39 primary, 38 secondary; control schools: 30 primary, 30 secondary). The sample for all models using peer-nominated victimization included students in classrooms with at least 60% participation at each time point to increase the validity of peer-victimization scores (n = 12,437; average class size = 20.8 students; Cillessen & Marks, 2011).

For the self-reported victimization models, affective empathy, and cognitive empathy, the amount of missing data varied by wave: at T1 missing data ranged from <1% to 1.4% across variables; 5.8% to 6.8% at T2, and 14.9% to 19.6% at T3. Youth who were missing at either T2 or T3 reported lower cognitive empathy at T1 were more likely to be nominated as a bully by their peers at T1, tended to be younger, and were more likely to attend control schools compared to youth who were present at all three time points. Little's (1988) MCAR test indicated that the data were not missing completely at random (not MCAR), χ^2 = 290.32, df = 145, p < .001. Data that are not MCAR may produce biased estimates and results should be interpreted with caution. Sensitivity analyses were conducted by testing whether gender, school level, and intervention status influenced the model estimates. Bullying perpetration was included as a control variable in all models. Note that although these data were collected several years ago, the current study was interested in developmental processes, which should be detectable regardless of when the data were collected. Furthermore,

given the lack of longitudinal research on this topic, the availability of a large, longitudinal dataset represented an opportunity to examine an important question that can further our understanding of factors that influence empathy for victims of bullying in adolescence. It is recommended that these analyses be corroborated using more recent samples.

Measures

Self-reported victimization

Participants' self-reported peer victimization experiences were assessed at each time point using a single global item from the revised Olweus Bully/Victim Questionnaire (Olweus, 1996): "How often have you been bullied at school in the last couple of months?" Answers were given on a 5-point scale: 0 = not at all, 1 = once or twice, 2 = two or three times a month, 3 = once a week, 4 = several times a week.

Peer-reported victimization

Participants' reputation for being victimized by peers was measured using three peer-nomination items from the Participant Role Questionnaire (PRQ; Salmivalli & Voeten, 2004; e.g., "s/he is called names and made fun of"). Students were presented with a list of their classmates (including male-identifying and female-identifying peers) and could nominate an unlimited number of classmates for each item. For each participant, the received nominations were summed and divided by the number of possible nominators within each class to form a proportion score. The final peer-reported victimization score for each time point was the average of peer nominations received across the three items, with scores ranging from 0 to 1. Cronbach's α = .75–.78.

Peer-reported bullying perpetration

Bullying perpetration was assessed using three peer-nomination items from the PRQ (e.g., "starts bullying"). Students were presented with a list of their classmates (including male-identifying and female-identifying peers) and could nominate an unlimited number of classmates for each item. The received, unlimited nominations for each item were summed and divided by the number of possible nominators within each class. Bullying perpetration scores were created by averaging the proportion scores across the three items for each student, with scores ranging from 0 to 1. A cut-off score of 1 standard deviation above the classroom mean for bullying perpetration was used to identify students who scored higher than average on peer nominations for this behavior.

Empathy for victims of bullying

Two types of empathy were measured using the seven-item empathy toward victims scale (Kärnä et al., 2013). Three items measured *cognitive empathy for the victim* (e.g., "I can understand how the bullied pupil must feel," Cronbach's α = .86–.91), and four items measured *affective empathy for the victim* (e.g., "when the bullied pupil is sad, I also feel sad", Cronbach's α = .88–.92). Answers were given on a 4-point scale (0 = never, 3 = always). Items within each subscale were averaged at each wave of data collection to create a mean score for cognitive and affective empathy for each participant at each time point.

Analytic plan

First, descriptive analyses were conducted to examine correlations between variables within and across time points, and individual differences in victimization and empathy over time across the entire sample. A RI-CLPM was conducted to examine the within-person longitudinal associations between victimization, cognitive empathy, and affective empathy (see Hamaker et al., 2015). In contrast to the traditional CLPM, which assumes that all individuals vary around a common group mean, the RI-CLPM assumes that there are stable between-person differences. The RI-CLPM differentiates this between-person variance, which represents the part that remains stable over time for individuals, from the within-person variance, which represents the difference between the observed scores and the expected mean score for each individual (i.e., person-mean centered scores, captured with a latent factor at each wave).

At the between-person level, random intercepts were added that reflect the trait-like differences between individuals in victimization, cognitive empathy, and affective empathy, based on the observed scores of each variable at each time point, with all factor loadings constrained to 1. Stable between-person relations among the study variables were controlled for by adding covariances between the random intercepts. At the within-person level, the observed score for each variable at each time point was loaded on its own latent factor (one latent factor for each variable) with the factor loadings constrained to 1. These latent factors represent each individual's expected mean score on the variable, that is, their expected score given both their own stable trait factor and the sample mean (see Hamaker et al., 2015, pp. 104–105 for more information).

The RI-CLPMs were conducted using the lavaan package in R (Rosseel, 2012). In each model, autoregressive paths, cross-lagged paths, covariances at T1, and covariances between disturbances at T2 and T3 were included between the within-person latent factors. In the first model, peer-nominated bullying was controlled on the observed variables at each time point (i.e., results

were estimated controlling for bullying perpetration at T1 on all T1 variables, bullying perpetration at T2 on all T2 variables, etc.). Gender, school level (i.e., primary or secondary school), and school intervention status (i.e., control or intervention school) were controlled on the observed variables, constrained to be equal across time. In subsequent models, gender, school level, and intervention status were individually tested as potential moderators of the association between victimization and empathy. The models were estimated using full information maximum likelihood estimation with robust standard errors (MLR) to account for missing data and nonnormality. Potential dependencies in the data due to students being nested within classrooms were corrected using the "cluster" option in lavaan. All models were conducted separately for self- and peer-reported victimization.

RESULTS

Descriptive statistics

Means, standard deviations, and correlations among study variables are presented in Table 1. Due to the large sample size, all descriptive analyses were conducted with $\alpha = .001$. At baseline, 66.5% of the sample reported that they had not been bullied at all in the past few months, compared to 22% who were bullied once or twice, and 11.6% who were bullied more frequently. In contrast, 26.6% of participating youth were not identified as a victim by their classmates at T1, whereas 4.6% were nominated by ¼ of the students in their class, and 0.6% were nominated as a victim by at least half of their peers. Affective empathy and cognitive empathy were positively associated at each time point (*r*s ranging from .67 to .75) and were both relatively stable across time (*r*s ranging from .51 to .63 and .44 to .53, respectively). There was also high stability of peer-reported victimization from T1 to T2 and T2 to T3 ($r = .74$ and $r = .72$, respectively), and moderate stability of self-reported victimization ($r = .44$ and $r = .45$, respectively). Concurrent associations between peer- and self-reported victimization ranged from $r = .29$ to $r = .39$. Self-reported victimization was positively associated with both cognitive and affective empathies at T1 (*r*s = .13 and .09, respectively) and T2 (*r*s = .12 and .09), and with cognitive empathy only at T3 ($r = .04$). Peer-reported victimization positively correlated with cognitive empathy at T2 only ($r = .05$), but did not correlate with affective empathy at any time point.

A series of repeated measures analyses of variance revealed a statistically significant decrease, on average, for each of the study variables over time: self-reported victimization, $F(2, 24{,}892) = 147.67$, $p < .001$, $\eta^2 = .01$; peer-reported victimization, $F(2, 26{,}842) = 221.31$, $p < .001$, $\eta^2 = .02$; affective empathy, $F(2, 23{,}084) = 376.32$, $p < .001$, $\eta^2 = .03$; cognitive empathy, $F(2, 23{,}456) = 808.83$, $p < .001$, $\eta^2 = .07$. Follow-up analyses indicated that this pattern held when examined separately by gender, school level, and intervention status, with few exceptions. Specifically, among girls, there was no difference in the average level of peer-reported victimization from T1 to T2, $t(7475) = 0.07$, $p = .95$. Among the primary school sample, both self-reported victimization and peer-reported victimization increased from T1 to T2, $t(5989) = -4.29$, $p < .001$; $t(6034) = -5.02$, $p < .001$. In contrast, among the secondary sample, self-reported victimization did not change significantly from T2 to T3, $t(7506) = 2.50$, $p = .01$, and affective empathy was stable from T1 to T2, $t(8639) = -0.71$, $p = .48$, or T2 to T3, $t(6909) = 0.39$, $p = .69$. Finally peer-reported victimization remained stable from T1 to T2 in control schools, $t(6164) = 0.07$, $p = .95$.

Random intercept cross-lagged panel models

To determine the amount of variance that could be explained by stable differences between persons versus within-person fluctuations, intraclass correlations (ICCs) were calculated for each variable (peer-reported victimization, self-reported victimization, cognitive empathy and affective empathy) across the three waves (e.g., Keijsers et al., 2016; see also Hamaker et al., 2015). The ICCs for peer-reported and self-reported victimization indicated that 41.4% of variance of self-reported victimization could be explained by between-person differences (58.6% by within-person differences), and 68.4% of the variance of peer-reported victimization could be explained by between-person differences (31.5% by within-person differences). The ICCs for cognitive and affective empathy indicated that 49.8% of the variance in cognitive empathy could be explained by between-person differences (50.2% by within-person differences) and 57.8% of the variance in affective empathy could be explained by between-person differences (42.2% by within-person differences).

Concurrent and prospective associations between empathy and self-reported victimization

The RI-CLPM examining the links between self-reported victimization, cognitive empathy, and affective empathy had adequate fit, $\chi^2(39) = 878.17$, $p < .001$, root mean square error of approximation [RMSEA] = .044 (90% CI [.041, .047]), standardized root mean square residual (SRMR) = .027, Tucker–Lewis index (TLI) = .957, and comparative fit index (CFI) = .981. As shown in Figure 1, at the between-person level, there were small, positive associations between the random intercept factors of self-reported victimization, cognitive empathy, and affective empathy. This indicates that youth who reported higher

TABLE 1 Descriptive statistics and variable correlations.

	SRV-T1	SRV-T2	SRV-T3	PRV-T1	PRV-T2	PRV-T3	CE-T1	CE-T2	CE-T3	AE-T1	AE-T2	AE-T3
SRV-T2	.44	—										
SRV-T3	.35	.45	—									
PRV-T1	.39	.28	.22	—								
PRV-T2	.34	.35	.26	.74	—							
PRV-T3	.29	.28	.29	.62	.72	—						
CE-T1	.13	.12	.06	.03 ($p = .007$)	.05	.04	—					
CE-T2	.11	.12	.06	.03	.05	.05	.53	—				
CE-T3	.06	.08	.04	.02 ($p < .05$)	.03	.03 ($p = .002$)	.44	.52	—			
AE-T1	.09	.10	.05	−.02 ($p < .05$)	.00 (*n.s.*)	.01 (*n.s.*)	.67	.48	.42	—		
AE-T2	.07	.09	.05	−.02 (*n.s.*)	.01 (*n.s.*)	.01 (*n.s.*)	.46	.70	.48	.63	—	
AE-T3	.02 ($p < .05$)	.04	.02 ($p < .05$)	−.02 (*n.s.*)	−.00 (*n.s.*)	−.01(*n.s.*)	.36	.44	.75	.51	.60	—
M	0.55	0.51	0.40	0.06	0.06	0.05	1.89	1.83	1.63	1.44	1.43	1.31
SD	0.97	0.96	0.88	0.09	0.08	0.07	0.79	0.81	0.87	0.80	0.81	0.82
Range	0–4	0–4	0–4	0–0.9	0–0.8	0–0.8	0–3	0–3	0–3	0–3	0–3	0–3
n	15,704	14,795	13,367	12,437	12,437	12,437	15,491	14,642	12,835	15,491	14,639	12,632

Note: All correlations are significant at $p < .001$, two-tailed, unless otherwise noted.

Abbreviations: AE, affective empathy; CE, cognitive empathy; PRV, peer-reported victimization; SRV, self-reported victimization.

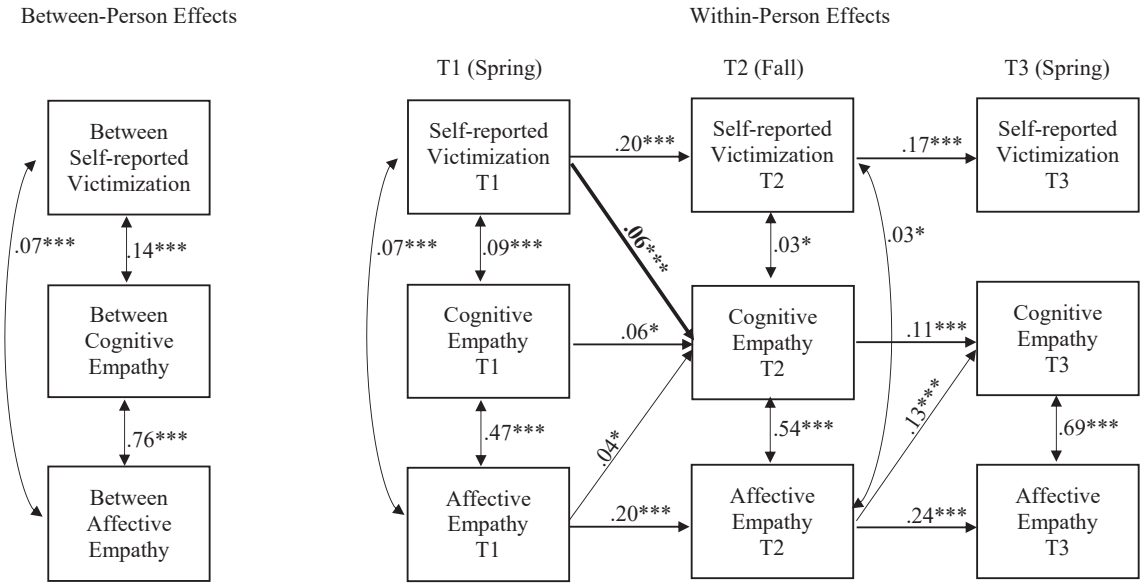

FIGURE 1 Simplified random intercept cross-lagged panel model (RI-CLPM) of self-reported victimization and cognitive and affective empathy (Gr. 4–9, $n = 15{,}713$). Only pathways with significant standardized estimates are shown in the figure; $^{*}p < .5$, $^{**}p < .01$, $^{***}p < .001$.

frequencies of self-reported victimization (across time) also tended to report higher cognitive and affective empathy for victims compared to youth who reported little to no victimization. Similarly, individuals with higher levels of one of form of empathy also tended to report higher levels of the other form of empathy.

Concurrent within-person associations

At the within-person level, small, but statistically significant, positive, concurrent associations were observed between self-reported victimization and both forms of empathy at T1 and T2, but not T3. Youth with a higher mean score in self-reported victimization at T1 also tended to have higher mean scores for cognitive and affective empathy, and youth whose self-reported victimization tended to change from their own mean score between T1 and T2 were also likely to change in cognitive and affective empathies in the same direction. Moderate to large concurrent associations between cognitive and affective empathy were observed within each time point. Participants with higher initial mean scores in cognitive empathy were also likely to score higher in affective empathy. Significant concurrent associations at T2 and T3 indicate that participants whose cognitive empathy score tended to deviate from their own mean score were likely to change in affective empathy in the same direction.

Longitudinal stability of empathy and peer victimization

Regarding within-person changes over time, moderate, positive associations from T1 to T2 and from T2 to T3 were found for self-reported victimization and affective empathy, with smaller, positive within-person associations observed for cognitive empathy. This pattern indicates that individuals who scored higher than their expected score at one time point tended to have higher scores on the same variable at the subsequent time point.

Within-person cross-lagged effects

A small but significant, within-person cross-lagged effect was observed between self-reported victimization at T1 and cognitive empathy at T2. This means that higher person-mean centered scores in self-reported victimization at T1 positively predicted changes in cognitive empathy for victims at T2. However, this effect was not observed between T2 and T3, and the paths from cognitive empathy to self-reported victimization were not significant. There were also no significant cross-lagged effects between self-reported victimization and affective empathy in either direction. Finally, there were significant within-person cross-lagged effects from T1 affective empathy to T2 cognitive empathy, and from T2 affective empathy to T3 cognitive empathy, such that youth who deviated from their expected scores in affective empathy at T1 and T2 tended to change in the same direction for cognitive empathy at subsequent waves. However, cognitive empathy at one time point did not predict subsequent affective empathy.

Effect size estimates

As shown in Table 2, the R^2 values for all outcome variables in the self-reported victimization RI-CLPM model ranged from .01 to .06. This indicates that the proportion of variance explained for each of the outcome variables by all predictors was small (ranging from 1% to 6% of the total within-person variance). It is worth noting that the cross-lagged effects of within-person deviations in self-reported victimization and affective empathy at T1 on T2 cognitive empathy were small ($\beta = .06$ and .04, respectively; see Orth et al., 2022), and the combination of all

predictors only accounted for 1% of the within-person variance in cognitive empathy at T2.

Concurrent and prospective associations between empathy and peer-reported victimization

The RI-CLPM examining the links between peer-reported victimization, cognitive empathy, and affective empathy had adequate fit, $\chi^2(39) = 513.72$, $p < .001$, RMSEA = .043 (90% CI [.039, .046]), SRMR = .025, TLI = .968, and CFI = .986. As shown in Figure 2, at the between-person level, there were small, but positive, associations between the random intercept factors of peer-reported victimization, cognitive empathy, and affective empathy, suggesting that, across the three waves, individuals with higher levels of peer-reported victimization also reported higher cognitive and affective empathies compared to individuals with lower levels of peer-reported victimization. Likewise, students who reported higher cognitive empathy across the measurement waves also reported higher affective empathy compared to individuals with lower cognitive empathy.

TABLE 2 Effect sizes (R^2) for the within-person cross-lagged effects of the random intercept cross-lagged panel models of self-reported victimization and peer-reported victimization.

	Effect size (R^2)	
Outcome variable	**Time 2**	**Time 3**
Self-reported victimization	.04	.03
Cognitive empathy	.01	.04
Affective empathy	.04	.06
Peer-reported victimization	.22	.05
Cognitive empathy	.02	.05
Affective empathy	.04	.07

Concurrent within-person associations

At the within-person level, there was a small, concurrent positive association between peer-reported victimization and cognitive empathy at T1 (but not T2 or T3), indicating that individuals with higher initial scores in peer-reported victimization also tended to have higher scores in cognitive empathy. As with the self-reported victimization model, positive concurrent associations between cognitive empathy and affective empathy were observed at each time point.

Longitudinal stability of empathy and peer victimization

As before, moderate within-person longitudinal associations were observed for affective empathy, while smaller, positive within-person changes were found for cognitive empathy. Moderately large, positive, within-person associations from T1 to T2 and from T2 to T3 were found for peer-reported victimization, indicating those who deviated from their expected score at one time point tended to change in the same direction at the subsequent time point.

Within-person cross-lagged effects

There was a small but statistically significant, positive within-person cross-lagged effect from T1 peer-reported victimization to T2 cognitive empathy, indicating that higher scores in peer-reported victimization at T1 positively predicted change in cognitive empathy at T2. However, this pattern was not observed between peer-reported victimization at T2 and cognitive empathy

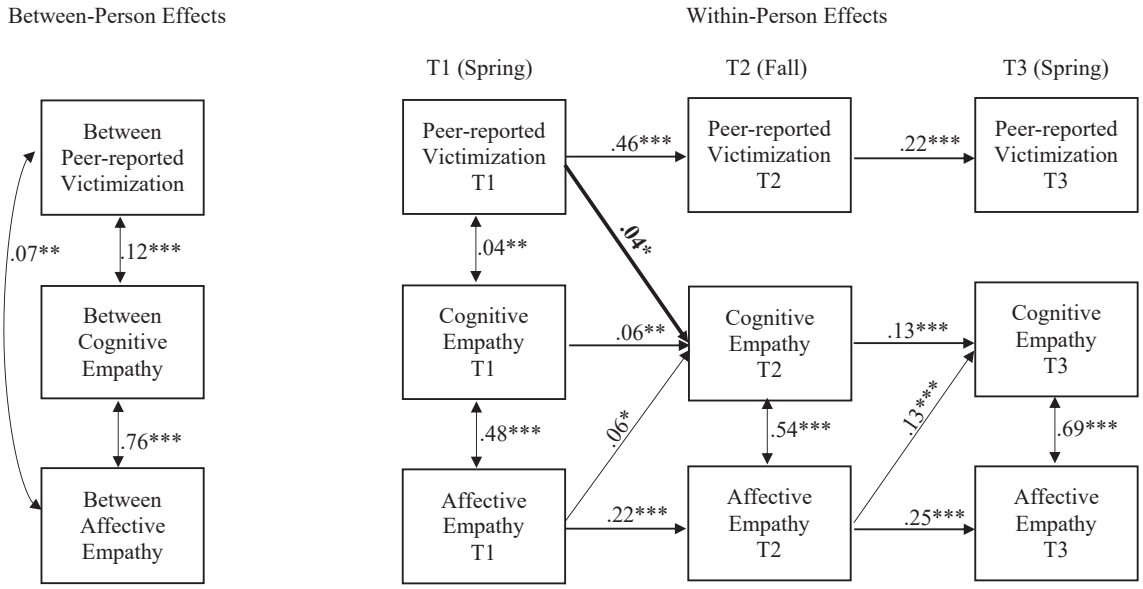

FIGURE 2 Simplified random intercept cross-lagged panel model (RI-CLPM) of peer-reported victimization and cognitive and affective empathy (Gr. 4–9, n = 12,437). Only pathways with significant standardized estimates are shown in the figure.

at T3, and the paths from cognitive empathy to peer-reported victimization were not significant. There were no cross-lagged effects between peer-reported victimization and affective empathy in either direction. Finally, as with self-reported victimization, within-person cross-lagged effects were only observed from affective empathy to cognitive empathy for the peer-reported model.

Effect size estimates

As shown in Table 2, the R^2 values for all outcome variables in the peer-reported victimization RI-CLPM model ranged from .02 to .22. As with the self-reported victimization model, the cross-lagged effects of T1 peer-reported victimization and T1 affective empathy on T2 cognitive empathy were small (β = .04 and .06, respectively), and the combination of all predictors only accounted for 2% of the within-person variance in cognitive empathy at T2.

Moderating effects of gender, bullying perpetration, school level, and the KiVa anti-bullying intervention

To test the potential moderating effects of gender, school level, and intervention status, multigroup analyses were conducted testing each moderator separately. For each variable, a two-group model was run (boys and girls; bullies vs. non-bullies; primary school and secondary school; intervention and control) and fit was compared between a model with the within-person cross-lagged and autoregressive paths constrained and a model where these paths were unconstrained.

For the models with self-reported victimization, the fit of the model with all within-person predictive paths constrained to be equal for boys and girls was not significantly worse than the unconstrained models (p = .26), indicating no significant differences. The same was true for the models testing differences for peer-reported bullies (p = .34), between primary and secondary schools (p = .19), and for students enrolled in intervention schools compared to control schools (p = .19). There were no significant differences in the parameter estimates between self-reported victimization and affective and cognitive empathy based on gender, bullying perpetration, school level, or intervention status.

For the models with peer-reported victimization, the fit of the model with all within-person predictive paths constrained to be equal for boys and girls had significantly worse fit (p = .007), $\chi^2(84)$ = 610.82, p < .001, RMSEA = .040 (90% CI [.037, .043]), SRMR = .030, TLI = .973, CFI = .986, than the model with the paths freely estimated. Examination of each path individually revealed that the paths from T1 affective empathy to T2 affective empathy and T1 affective empathy to T2 cognitive empathy significantly differed by gender. An additional model was conducted with these two paths unconstrained and all other predictive paths constrained to be equal between boys and girls. This model did not fit significantly worse, $\chi^2(82)$ = 596.85, p < .001, RMSEA = .040 (90% CI [.037, .044]), SRMR = .030, TLI = .973, CFI = .986, than the model with all pathways freely estimated. The T1 to T2 path for affective empathy was stronger for boys compared to girls (β = .27, p < .001; β = .14, p < .001). The path from T1 affective empathy to T2 cognitive empathy was significant for boys (β = .11, p < .001) but not girls (β = .01, p = .83). No evidence was found that any of the cross-lagged paths between peer-reported victimization and either form of empathy differed between boys and girls.

Next, the moderating effect of school level was tested. The fit of the model with all within-person predictive paths constrained to be equal across primary and secondary school, $\chi^2(84)$ = 241.71, p < .001, RMSEA = .023 (90% CI [.020, .026]), SRMR = .016, TLI = .991, CFI = .995, was significantly worse (p < .001) than the model with all paths freely estimated, $\chi^2(66)$ = 189.84, p < .001, RMSEA = .023 (90% CI [.019, .027]), SRMR = .015, TLI = .990, CFI = .996. Comparing each predictive path constrained individually indicated that the autoregressive paths for cognitive empathy from T1 to T2 and peer-reported victimization from T2 to T3 significantly differed by school level. A final model was conducted with these two paths freely estimated and all other predictive paths constrained to be equal across groups. The fit of this model, $\chi^2(82)$ = 208.46, p < .001, RMSEA = .020 (90% CI [.017, .024]), SRMR = .016, TLI = .992, CFI = .996, was not significantly worse than the fit of the model with all paths unconstrained. The autoregressive path of cognitive empathy from T1 to T2 revealed a statistically significant positive association among secondary school students (β = .07, p = .003), but not primary school students (β = .04, p = .21), indicating that older youth who scored higher than their personal average for cognitive empathy at T1 also tended to have higher cognitive empathy scores at T2. In contrast, the autoregressive path of peer-reported victimization from T2 to T3 revealed a statistically significant positive association in primary school (β = .31, p < .001), but not secondary school (β = −.03, p = .90), indicating that younger students who were higher than their own average for peer-reported victimization at T2 were also higher in peer-reported victimization at T3. No evidence was found that any of the cross-lagged paths between either form of empathy and peer-reported victimization differed between age groups.

When examining the moderating effect of intervention status on the association between peer-reported victimization and affective and cognitive empathy the fit of the constrained model was not significantly worse than the model with all paths freely estimated (p = .68), indicating that the pattern of findings did not significantly differ by intervention status. Lastly, the moderating effect of bullying perpetration on the association between

peer-reported victimization and empathy was examined. The fit of the constrained model was not significantly worse than the model with all paths freely estimated (p = .22), indicating that the pattern of findings did not significantly differ based on students' reputation for bullying others.

DISCUSSION

As interventions designed to raise empathy for victims of bullying generally rely on the assumption that knowing what it feels like to be victimized will lead to increases in empathy (e.g., Frey et al., 2005; Kärnä et al., 2011), this study sought to test whether there is a prospective link between youth's firsthand experiences with peer victimization and their level of empathy for other victims of bullying. With data from a large sample of primary and secondary school students, a RI-CLPM was used to disentangle within-person from between-person effects. Small, but significant positive associations were found between youths' experiences with peer victimization and their empathy for other victims of bullying; however, results varied depending on the type of empathy (cognitive vs. affective), and whether victimization was measured using self- or peer-report.

Between-person associations of empathy and victimization

Between-person associations of empathy and victimization (based on a random-intercept measured across three time points) confirmed previous findings on the relation between victimization and empathy. Replicating previous research on the concurrent, between-person associations between victimization and empathy, youth who had been victimized more in the past year (as measured by either self-reported frequency of victimization, or strength of peer-reported reputation for being bullied) tended to report experiencing more cognitive *and* affective empathy for victims compared to youth who were less victimized, or not victimized at all. This aligns with previous studies that also found a positive, concurrent association between individual differences in empathy and peer victimization (Caravita et al., 2010; Rodríguez-Hidalgo et al., 2018, 2019). Similarly, consistent with previous longitudinal research on empathy development in adolescence, affective empathy tended to remain stable among older youth; however, cognitive empathy unexpectedly declined across the entire sample (Farrell & Vaillancourt, 2020; van Lissa et al., 2014). This discrepancy is likely due to differences in time sampling—participants in the current study were surveyed every 4–6 months over 1 year, whereas previous studies collected data annually over a longer time period.

Victimization predicting within-person changes in empathy

With respect to concurrent, within-person associations between empathy and victimization, when youth reported higher levels of victimization compared to their own average, they also reported more cognitive and affective empathy for victims. In contrast, youth's reputation for being bullied was only positively correlated with cognitive empathy for victims, indicating that youth who were more likely to be seen as victims by their peers also reported being able to better understand the experiences of others who were going through the same experience. This difference may help to explain some of the inconsistent effects found in the previous literature, and further underscores the importance of considering the perspective of different informants of victimization within the same study. In addition, small, but generally consistent cross-lagged associations between the two forms of empathy was observed across time, such that youth who deviated from their average level of affective empathy for victims at one time point were more likely to change in the same direction in cognitive empathy for victims several months later. This suggests that affective arousal may be important for motivating youth to take the perspective of a victim, regardless of shared experiences. This is also consistent with previous developmental research showing that the ability to share another's emotions tends to develop earlier in life, and is distinct from the ability to understand another's emotional or mental state (Farrell & Vaillancourt, 2020; Kanske et al., 2016; Van der Graaff et al., 2014).

Regarding the within-person cross-lagged effects, consistent with post-traumatic growth theory (Tedeschi & Calhoun, 2004) and the motivational theory of empathy (Zaki, 2014), a small longitudinal effect of peer victimization on empathy was found, but only for cognitive empathy for victims of bullying. Specifically, relative to their own average scores, youth who reported that they had been bullied with greater frequency at the end of one school year were more likely to report higher cognitive empathy for victims during the beginning of the next school year. Similarly, having a stronger reputation for being bullied also positively predicted youth's reports that they understood the experiences of other victims the following year (i.e., cognitive empathy), but did not influence their tendency to feel upset in response to another's victimization (i.e., affective empathy). These associations held for both genders, across primary and secondary school levels, and regardless of whether youth were involved in bullying others, or were participating in an anti-bullying intervention that has been shown to positively influence affective empathy (Garandeau et al., 2021). No support was found for the hypothesis that victimized youth would demonstrate less empathy for their victimized peers as a consequence of their previous negative peer experiences.

Empathy as a risk factor for future victimization

Finally, this study also addressed whether empathy predicted either increased or decreased victimization. Despite previous theory suggesting that empathy might be a "risky strength" (Tone & Tully, 2014), there was no evidence of a significant pathway from empathy to peer victimization. Thus, the current results do not indicate that youth who are more empathic toward victims are at greater risk for being bullied themselves. Empathy for victims also does not appear to be an asset that protects youth from future victimization.

Summary of study findings

In summary, consistent with post-traumatic growth theory (Tedeschi & Calhoun, 2004) and changes in perspective-taking abilities observed during adolescence (Farrell & Vaillancourt, 2020; van Lissa et al., 2014), personally experiencing peer victimization appears to provide a small contribution toward having greater empathy for other victims of bullying, in terms of adolescents' belief that they are better able to understand and take the perspective of another victimized youth (i.e., "I know what they are going through"). This finding is also consistent with previous empirical research on the empathy of young children (Barnett, 1984), and adults (Batson et al., 1996, 2005; Eklund et al., 2009; Hodges et al., 2010), which has shown that sharing the same experience with someone can motivate feelings of empathy toward that person (also see Zaki, 2014). The current study further extends the previous literature to show that both between-person differences and within-person changes in empathy for victims of bullying can be partially explained by sharing the negative social experience of being bullied.

Strengths, limitations, and suggestions for future research

The current study used a large, longitudinal dataset, multiple informants of peer victimization, and a robust analytical design. In addition, actual victimization experiences were measured rather than perceptions of similarity with the empathy target. Unlike perceived similarity, it is highly unlikely that youth's self-reported victimization would be influenced by social desirability bias (e.g., wanting to be seen as more empathetic toward victims of bullying). This lends further credence to the finding that personally experiencing peer victimization contributed to increased concern for other victims of bullying. Moreover, the concurrent within-person association between affective empathy and self-reported victimization—but not peer-reported victimization, suggests that *self-identifying* as a victim of bullying may be more strongly linked with an emotional reaction in response to another's victimization than having a reputation for being bullied. In other words, regardless of whether you are seen as a victim by others, *believing* that you are similar to the person in distress in terms of victimization seems to be related to having feelings of concern for their well-being (see Batson et al., 2005; Hodges et al., 2010).

An important limitation of the current study concerns the relatively small effect sizes, which are consistent with previous research (e.g., see van Noorden et al., 2015; Zych, Farrington, et al., 2019; Zych, Ttofi, et al., 2019), and further indicate that other personal and social factors likely contribute to feeling more (or less) empathy for victims. Regarding individual characteristics, early differences in empathic temperament are at least partly explained by genetic inheritance—by age 3, 47% of the variability in empathy is explained by heritability (Knafo et al., 2008), and among adults heritability estimates range from 27% to 28% for cognitive empathy, and 54% for empathic concern (Melchers et al., 2016; Warrier et al., 2018). In addition, individual differences in social and emotional learning skills, including emotional awareness and self-regulation skills, have been shown to protect children from victimization (Zych, Farrington, et al., 2019), and may be necessary to enable victims to transform their personal suffering into empathy for others (Jambon et al., 2021; Rieffe & Camodeca, 2016).

With regard to social experiences, youth's perceptions of the severity of their victimization have been shown to be a better predictor of empathy than the frequency with which they were bullied (van Noorden et al., 2016). Since severity was not measured in the current study, it remains possible that a single, severe incident of peer victimization may be sufficient to induce an empathic response for other victims similar to repeated exposure to multiple, but less upsetting bullying events. The current study also did not measure by whom youth were victimized, or how many peers participated in their victimization. Being repeatedly victimized by a large group of peers could contribute to more negative perceptions of others in general, thereby interfering with the development of empathy toward victimized peers. The extent to which youth attribute the cause of their own victimization to external forces (e.g., blaming others) may lead to more empathy for other victims, who could also be viewed as not being personally responsible for their situation.

Additional research is needed that examines how victim's peer relationships influence when and how they demonstrate empathy for other victims. In the current study, empathy was measured toward victims in general, rather than toward a specific bullied peer. In real life, empathy for another victimized peer may vary depending on whether that person is a close friend, someone who has supported them in the past, or someone who has remained passive when they were bullied. Indeed, previous research has shown that feeling *empathic anger*

on behalf of the victim was over two times more common in real-life bullying situations where youth liked the victim, compared to when the victim was someone they did not know (Trach & Hymel, 2020). Moreover, since empathy promotes the formation and strengthening of social bonds (Zaki, 2014), individuals who are socially isolated or rejected may be more likely to display empathy in order to bond with others, regardless of the extent to which they have shared a similar experience. For example, both victims and bully victims have been found to express more empathy for uninvolved children rather than other bullying roles (van Noorden et al., 2017). Thus, victims may be more likely to express higher empathy for peers in general, or toward those who are not involved in bullying, as a way to improve their social connections.

Finally, although this was the first study to show that youth who have been victimized are increasingly likely to empathize with others who are bullied, the effects obtained were small, and of a relatively short-term duration (less than one school year). Therefore, even when sharing the same painful experience does bolster empathy for others, the effects may be short-lived. It is possible that changes in the peer relational context (i.e., transitioning from one academic year to another) are necessary to promote more empathetic feelings toward other victims as a way to increase social bonding at the beginning of a new school year (Zaki, 2014). This might explain why the effect of victimization on later empathy was not significant within the same academic year (T2–T3). Observed patterns of overall declines in victimization and empathy across time, as well as missing data due to sample attrition may have limited the size of effects, especially considering that the magnitude of the relation between empathy and victimization found at other time points was small. Moreover, it is possible that the lack of within-person effects between changes in victimization and empathy may be related to low rates of self- and peer-reported victimization (i.e., floor effects).

Finally, it is important to note that this research was conducted using a relatively homogeneous sample of European children and adolescents. Although there is no evidence to date that the association between empathy and peer victimization would vary by cultural context, this remains an open question that should be explored in future research studies that consider this issue from both a cross-cultural perspective, as well as in relation to the degree of within-sample diversity. Additional longitudinal research is also needed that also considers the impact of different forms of peer victimization (including cyber-victimization) on changes in empathy, as well as whether empathy mediates the association between youths' experiences of victimization and youth's likelihood of helping a peer in need. Similarly, future meta-analyses should consider the impact of different study methods on both concurrent and longitudinal associations between children's peer relationships and empathy development, including developmental stage, as well as the specific techniques and measures used to assess both constructs.

Implications for interventions

Gathering more information about the effects of victimization on empathy is useful for informing bullying prevention and intervention efforts. The current study findings suggest that anti-bullying interventions are on the "right track" in their attempts to increase empathy among bystanders by helping them to understand how it feels to be bullied. That said, these results *should not* be used to suggest that anti-bullying interventions expose *more* youth to real-life experiences of peer victimization in order to increase their empathy for victims as a strategy for *reducing* bullying. Nevertheless, interventions that seek to raise empathy for victims can be implemented without concern for increasing the risk of being bullied.

Given that it is hypothesized to be an important mechanism of change for reducing bullying, empathy deserves further scrutiny in the evaluation of anti-bullying interventions. To date, only a handful of studies have examined the effect of anti-bullying interventions on empathy, finding significant positive effects for affective empathy (Garaigordobil & Martínez-Valderrey, 2015; Garandeau et al., 2021; Ingram et al., 2019) and empathic concern (Limber et al., 2018). Across these studies, activities designed to increase empathy included listening to victims' stories, identifying others' emotions, perspective-taking through role-play, and group discussions led by a trained adult. Moreover, recent advances in technology provide new opportunities to explore the impact of virtual exposure to a bullying scenario on youth's ability to express compassion for victims. For example, Ingram et al. (2019) found positive effects on empathy for an anti-bullying curriculum that included virtual reality simulations where participants witnessed different ways of responding to bullying incidents from the perspective of a bystander, teacher, and the victim. However, it is not yet known whether virtual reality scenarios that actually show youth what it feels like to be bullied can provide a safe alternative for increasing empathy among non-bullied youth. At a minimum, drawing attention to the similarities between their own experiences of social exclusion or isolation and those currently in need of support may be a useful strategy for increasing empathy toward victims of bullying.

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CONFLICT OF INTEREST STATEMENT

None declared.

DATA AVAILABILITY STATEMENT

The data necessary to reproduce the analyses presented here are not publicly accessible. The analytic code and materials are available from the first author upon reasonable request. The analyses presented here were not preregistered.

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