Bullying in Schools: The Power of Bullies and the Plight of Victims

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Abstract

Bullying is a pervasive problem affecting school-age children. Reviewing the latest findings on bullying perpetration and victimization, we highlight the social dominance function of bullying, the inflated self-views of bullies, and the effects of their behaviors on victims. Illuminating the plight of the victim, we review evidence on the cyclical processes between the risk factors and consequences of victimization and the mechanisms that can account for elevated emotional distress and health problems. Placing bullying in context, we consider the unique features of electronic communication that give rise to cyberbullying and the specific characteristics of schools that affect the rates and consequences of victimization. We then offer a critique of the main intervention approaches designed to reduce school bullying and its harmful effects. Finally, we discuss future directions that underscore the need to consider victimization a social stigma, conduct longitudinal research on protective factors, identify school context factors that shape the experience of victimization, and take a more nuanced approach to school-based interventions.

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INTRODUCTION

Highly publicized school shootings and suicides by victims of chronic peer abuse have increased public concern about bullying. Although violent reactions to bullying are rare, awareness of peer maltreatment has generated a large body of research that allows us to better understand both the motives underlying bullying and its effects on victims. These studies, published largely since the late 1990s (Stassen Berger 2007), rely on two complementary research orientations: the American research tradition focusing on childhood aggression (e.g., Parke & Slaby 1983) and the Scandinavian research tradition illuminating the effects of aggressive behaviors on other children (Lagerspetz et al. 1982; Olweus 1978, 1993). Focusing on individual differences, the largely American studies provide insights into the social cognitions and relationships of bullies compared with their well-adjusted peers. In contrast, the Scandinavian research, stemming from a phenomenon known as mobbing, in which a group turns against one person (Olweus 1978), highlights the plight of victims as well as the group dynamics that encourage and maintain bullying behaviors.

In an effort to bridge these two traditions, we review the current research on both bullying perpetration and victimization. The review is divided into six sections. In the first section we define bullying and review its prevalence and the stability of bullying and victimization trajectories over time. The second section is devoted to bullying perpetration; we discuss the forms and functions of bullying as a subcategory of aggression in an effort to understand the motives and

social-cognitive mechanisms underlying the behavior. Turning to the plight of the victim in the third section, we review research on risk factors and the consequences of victimization, underscoring the cyclical processes between the two. After reviewing some of the social-cognitive and biological mechanisms that help account for the distress of victims, we examine in the fourth section the ways in which contexts (specifically, the school environment and electronic communication context) give rise to bullying and amplify the distress of the victim. In the fifth section we briefly review the main intervention approaches designed to reduce bullying in schools before considering future directions for research in the sixth and final section.

Definition and Prevalence of Bullying

Bullying involves targeted intimidation or humiliation. Typically, a physically stronger or socially more prominent person (ab)uses her/his power to threaten, demean, or belittle another. To make the target or victim feel powerless, the bully can resort to a number of aggressive behaviors (Olweus 1993, Smith & Sharp 1994). However, bullying entails more than aggression: It captures a dynamic interaction between the perpetrator and the victim. The power imbalance between the two parties distinguishes bullying from conflict. Although definitions of bullying frequently specify that it needs to be repeated (e.g., Olweus 1993), it is not clear that repetition is a required component, inasmuch as a single traumatic incident can raise the expectation and fear of continued abuse.

Bullying takes place among young children as well as adults in a variety of settings, but most of the research focuses on children and youth in schools (e.g., Juvonen & Graham 2001). Survey data indicate that approximately 20–25% of youths are directly involved in bullying as perpetrators, victims, or both (e.g., Nansel et al. 2001). Large-scale studies conducted in Western nations suggest that 4–9% of youths frequently engage in bullying behaviors and that 9–25% of school-age children are bullied (Stassen Berger 2007). A smaller subgroup of youths who both bully and are bullied (bully-victims) has also been identified (e.g., Nansel et al. 2001).

Stability of Bullying and Victimization

Developmental psychologists have assumed some degree of temporal stability in bullying and victimization, although more is known about perpetration of bullying than about victimization. Several large, multinational studies have examined the stability of aggression from early childhood through adolescence (Dodge et al. 2006). With repeated assessments over many years and advances in methods for modeling developmental trajectories, these studies have identified latent classes of individuals who vary in terms of the stability of aggressive behaviors.

In one of the most comprehensive studies to date, six longitudinal data sets from Canada, New Zealand, and the United States were used to examine developmental trajectories of aggressive youth (Broidy et al. 2003). On the basis of samples comprising more than 5,000 boys and girls, all of the databases had comparable aggression measures, including items that capture bullying from middle childhood (ages 5–7) through at least adolescence. Robustly identified across all of the data sets was a class of chronically aggressive youths, representing 5–10% of the samples. Classes of increasing and decreasing aggression trajectories were also identified, a finding that underscores the instability of aggression over time. These discontinuous classes were less robust, and their size varied from 15% to 60% across the different longitudinal data sets. Assuming that a subset of aggressive youths in these multinational studies were bullies, it seems reasonable to conclude that a small percentage of youths, less than 10%, are likely to be chronic bullies throughout childhood. The most consistent evidence regarding the discontinuous trajectories documents desistance from physical aggression over time, suggesting that many childhood bullies

"age out" of their tendency to physically intimidate others by adolescence. However, we do not know whether physical aggression is replaced by others forms of bullying.

Comparable longitudinal research examining the stability of victims of bullying across childhood and adolescence does not exist. Most victimization studies that address stability are relatively short term, usually spanning one or two years (e.g., Hanish & Guerra 2002, Juvonen et al. 2000), with a few extending to four or five years (e.g., Kochenderfer-Ladd & Wardrop 2001). Not surprisingly, stability coefficients are stronger when there is a shorter time interval between assessments (e.g., from the beginning to the end of a school year). Even within one school year, however, the stability estimates range from one-third (Juvonen et al. 2000) to approximately one-half (e.g., Fox & Boulton 2006).

Only a few studies of peer victimization have employed a latent class approach in which trajectories of victimization can be modeled, and none has aggregated data across multiple data sets. In one study of young adolescents, three latent classes were identified on the basis of self-reported experiences with bullying across three years of middle school: a frequently victimized class, a sometimes victimized class, and a nonvictimized class (Nylund et al. 2007). At the beginning of middle school, membership in these three classes was fairly evenly distributed: 20% of students were in the highly victimized class, 37% in the sometimes victimized class, and 43% in the nonvictimized class. By spring of eighth grade, only approximately 5% of students were in the victimized class, whereas the percentage of students in the nonvictimized class had increased to almost 70%. Hence, going from being the youngest to the oldest students in their schools, and transitioning from early to middle adolescence, was accompanied by a decline in experiences of victimization.

In summary, longitudinal research on bullying perpetration and victimization indicates more instability than stability. A host of changing factors, such as school transitions, probably contribute to the flux. However, this instability does not necessarily mean that bullying has no lasting effects. Although many temporarily victimized youths may subsequently appear adjusted, some of the symptoms and increased sensitivity to maltreatment persist after bullying has stopped (Rudolph et al. 2011). It is also important to consider the overlap among bully and victim groups over time. In one of the few studies that examined the co-occurrence of bullying and victimization longitudinally, 9% of the sample students who had reputations as bullies during childhood developed reputations as victims by adolescence, whereas approximately 6% who were childhood victims in the eyes of peers had become bullies three years later (Scholte et al. 2007). Thus, bullying perpetration and victimization are probably more dynamic than previously assumed.

FORMS AND FUNCTIONS OF BULLYING BEHAVIORS

Bullying takes many forms, ranging from name-calling and physical attacks to spreading of malicious rumors and sending embarrassing pictures online. Disentangling the "whats" from the "whys" of such behaviors, Little et al. (2003) maintain that any one form of aggression can be used for different purposes. For example, whereas a physical attack may capture a reaction to provocation, physical aggression can also be used proactively to intimidate a peer (see also Prinstein & Cillessen 2003). Although distinctions between different functions of aggressive behaviors are challenging to assess empirically, the conceptual differentiations help shed light on the motives underlying bullying behaviors. Before discussing these functions, we first review research on the forms of bullying—a topic that has received considerable empirical attention.

Direct and Indirect Forms of Bullying

Most forms of bullying can be classified as direct or indirect (Feshbach 1969, Lagerspetz et al. 1988). In contrast to direct confrontation (e.g., physical aggression, threats, name-calling), indirect

tactics include spreading of rumors, backstabbing, and exclusion from the group. In other words, the indirect forms frequently involve relational manipulation (Crick & Grotpeter 1995). Whereas the direct forms of bullying often involve intimidating, humiliating, or belittling someone in front of an audience, the indirect forms are designed to damage the targets' social reputation or deflate their social status while concealing the identity of the perpetrator (Björkqvist et al. 1992). That is, the bully is able to use the peer group as a vehicle for the attack (Xie et al. 2002) when relying on relationally indirect tactics.

Although one might expect a developmental progression from direct confrontation to reliance on indirect forms of aggression, inasmuch as the latter requires more sophisticated social understanding and skills (Rivers & Smith 1994), a recent meta-analysis of more than 100 studies did not reveal any reliable age differences in the use of direct versus indirect tactics (Card et al. 2008). This conclusion may be somewhat misleading, however, because some forms of aggression (e.g., the most covert tactics, such as spreading of rumors) are simply not studied among young children. Additionally, the lack of age differences between direct and indirect forms of aggression might simply reflect the heterogeneity of the types of behaviors that are grouped together. For example, although both name-calling and physical aggression are considered direct forms of aggression, only physical bullying is known to decreases with age (e.g., Brame et al. 2001).

Compared with age differences in preference for particular forms of aggression, gender differences have prompted a much livelier debate (e.g., Underwood 2003). Ideas of gendered forms of aggression are popular inasmuch as physical aggression is associated with males, whereas relational forms of aggression are considered to be the domain of females (hence the labels mean girls, queen bees, and alpha girls). What is the research evidence for such gender differences? If the question is whether boys are more physically aggressive than girls, the answer is a resounding "yes." At every age group and across races/ethnicities, social classes, cultures, and national boundaries, boys are more likely than girls to engage in physical forms of bullying such as hitting, kicking, and shoving (Archer 2004, Card et al. 2008, Dodge et al. 2006). Even the most physically aggressive girls are rarely as aggressive as the most physically aggressive boys (Broidy et al. 2003).

If boys are more physically aggressive, then are girls more relationally aggressive than boys? The answer to this question is more equivocal. Beginning in the 1980s with research by Finnish developmental psychologists (e.g., Lagerspetz et al. 1988), followed by the seminal research of Crick and colleagues in the United States (e.g., Crick & Grotpeter 1995; see review in Crick et al. 2007), researchers have documented that relational forms of inflicting harm on others (e.g., excluding a person from the group or spreading rumors to tarnish someone's reputation) were tactics more commonly employed by girls than by boys. Because girls were thought to value relationships more than boys, behaviors that harmed those relationships should be an especially effective form of aggression for them (Coyne, Nelson & Underwood 2011). Additionally, from an evolutionary perspective, girls who attack the reputations of other girls would be in a better position to compete for males (e.g., Artz 2005).

Two comprehensive meta-analyses conducted during the past decade (Archer 2004, Card et al. 2008) and one narrative review (Archer & Coyne 2005) have called into question popular beliefs about gender and relational aggression. Although girls use more relational than physical aggressive behaviors, there are no strong differences between the two genders in the use of relational aggression. Boys are just as likely as girls to enact behaviors that damage the reputation of peers or engage in exclusionary tactics. By middle adolescence, relational aggression probably becomes the norm for both genders as it becomes less socially acceptable for individuals to physically aggress against their peers (Archer & Coyne 2005). Moreover, the different forms of aggression are highly correlated. The meta-analysis by Card et al. (2008) reported an average correlation of $r = 0.76$ between direct and indirect forms,

which means that approximately half of the variance in these two forms of aggression is shared.

In summary, bullying takes many forms. The indirect forms of bullying require considerable social insight compared with the direct and overt tactics that include name-calling and physical aggression. Although one might assume that these forms would vary developmentally, the only reliable difference is that physical aggression decreases with age. Robust gender differences are also documented only for physical aggression. Indirect forms of aggression that typically involve manipulation of relationships do not show a reliable gender difference, although girls who desire to aggress against their peers are likely to use relational tactics.

Bullying and Social Dominance

Why do youths resort to any form of aggression to bully their peers? Early studies suggested that childhood aggression stems from a lack of social skills or that aggressive behaviors reflect a budding antisocial personality (e.g., Olweus 1978). However, there is substantial evidence suggesting that indirect forms of aggression, in particular, demand sophisticated social skills (Björkqvist et al. 2000, Sutton et al. 1999) and that most bullies do not turn into violent adults because bullying behaviors are often short-lived (Broidy et al. 2003, Loeber & Hay 1997). To understand why some youths resort to bullying, even if temporarily, it is therefore critical to consider the motives and the possible social function(s) underlying the behaviors.

When bullying is defined as a form of instrumental behavior, researchers acknowledge that bullies are not necessarily lacking social skills or the ability to regulate emotions. Rather, there is evidence suggesting that bullies are cold and calculating, often lacking empathy (Gini et al. 2007, Jolliffe & Farrington 2006) and resorting to coercive strategies to dominate and control the behavior of peers (Ojanen et al. 2005, Pellegrini et al. 1999). Indeed, bullies score high when asked how important it is to be visible, influential, and admired (Salmivalli et al. 2005, Sijtsema et al. 2009).

Not only do bullies strive to dominate, they also frequently have high social status. Beginning in elementary school, some aggressive children are considered to be popular (Rodkin et al. 2006). By early adolescence, peer-directed hostile behaviors are robustly associated with social prominence or high status (e.g., Adler & Adler 1998, Parkhurst & Hopmeyer 1998). These findings are consistent with ethological research demonstrating that aggression is a way to establish a dominant position within a group (e.g., Hinde 1974). Hence, bullying perpetration can be considered a strategic behavior that enables youths to gain and maintain a dominant position within their group (Hawley 1999, Juvonen et al. 2012; also see Eder 1985, Merten 1997).

If bullying behaviors are more temporary than stable and indeed reflect desires to be powerful and prominent, then bullying should peak during times of social reorganization and uncertainty. Indeed, status enhancement is particularly important during early adolescence, which coincides with a transition from elementary school to middle school (LaFontana & Cillessen 2010). Not only do bullying behaviors increase during this developmental phase (Espelage et al. 2001, Pellegrini & Long 2002), but there is a particularly robust association between aggressive behaviors and social prominence after the transition to the new school (e.g., Cillessen & Borch 2006; Cillessen & Mayeux 2004). The establishment of a social hierarchy may be adaptive not only for the one who desires to be powerful, but also for the larger collective. A dominance hierarchy allows youths to navigate the social scene more safely as they learn how to align themselves and establish their position in the hierarchy (Juvonen & Galván 2008).

Taken together, bullying behaviors are not only proactive or instrumental forms of aggression, but they appear to be guided by social dominance motives that peak at times of social

reorganization associated with transitions. On the basis of the current evidence, it is difficult to determine whether these transitions involve mainly environmental changes (e.g., larger schools, increased anonymity) or whether the combination of environmental and developmental (e.g., pubertal) changes is involved in the creation of social hierarchies based on aggression.

Inflated Self-Views and Social-Cognitive Biases of Bullies

In light of the positive relation between aggression and high social status, it should come as no surprise that many aggressive youths have high and even inflated perceptions of themselves (e.g., Cairns & Cairns 1994, Hymel et al. 1993). For example, aggressive elementary school students overestimate their competencies not only in terms of their peer status but in terms of academic and athletic domains as well (Hymel et al. 1993). Moreover, peer-identified bullies rate themselves lower on depression, social anxiety, and loneliness than do youths who are socially adjusted (Juvonen et al. 2003).

There are multiple explanations for why aggressive youths, and bullies in particular, display (unrealistically) positive self-views. One set of explanations pertains to their information-processing biases. For example, one meta-analytic review shows strong support for a hostile attribution bias in aggressive youths (De Castro et al. 2002). This attributional bias to perceive ambiguous situations as reflecting hostile peer intent (Dodge 1993) may account for bullies' lack of emotional distress. They can maintain their positive self-views by blaming and aggressing against others instead of accepting personal responsibility for negative events (Weiner 1995).

It is also important to realize that the social feedback bullies receive from peers is more positive than negative. Youths rarely challenge bullies by intervening when witnessing bullying incidents (e.g., O'Connell et al. 1999), although most condemn bullying behaviors (Boulton et al. 2002, Rigby & Johnson 2006). Moreover, when bullying incidents take place, some bystanders reinforce the bullies by smiling and laughing (Salmivalli et al. 1998). Although peers typically do not personally like those who bully others, they are still likely to side with the bully in part to protect their social status, reputation, and physical safety (Juvonen & Galván 2008, Salmivalli 2010).

The research described in this section indicates that bullies think highly of themselves on the basis of the social feedback they receive. This favorable social feedback, combined with hostile attributional bias, allows bullies to feel good about themselves and perhaps to discount the harm they inflict on others. When peers do not challenge bullies' aggressive behaviors, bullying is maintained and even reinforced by the peer collective.

PLIGHT OF VICTIMS

Not surprisingly, victims of bullying display numerous adjustment problems, including depressed mood and anxiety (e.g., Hawker & Boulton 2000), psychosomatic problems (e.g., headaches and stomachaches; Gini & Pozzoli 2009), and academic difficulties (e.g., Nakamoto & Schwartz 2010). However, due to the correlational nature of this research, it is not clear whether bullying experiences cause these adjustment problems or whether signs of maladjustment make victims easy targets.

Victim Subtypes

Bullying is rarely targeted randomly. To understand what factors increase the risk of being bullied, it is useful to consider which type of reactions might be rewarding for bullies. In other words, who makes a "safe" target in making the bully feel powerful? Olweus (1993) described the most typical group of victims as submissive victims: those who are anxious, insecure, and sensitive (e.g., those

who often cry in response to bullying). This profile of submissive victims has received subsequent support from longitudinal studies showing that internalizing problems (e.g., Hodges & Perry 1999, Hodges et al. 1999) and, specifically, lack of confidence in social interactions (Egan & Perry 1998, Salmivalli & Isaacs 2005) increase the risk of being bullied. The unfolding of this sequence was particularly well demonstrated in an observational study that relied on a paradigm in which youths with peer relationship problems (a history of rejection by classmates) were exposed to a new set of peers in the context of contrived play groups. Boys who submitted to peers' hostile behaviors became increasingly targeted across subsequent play sessions (Schwartz et al. 1993). Consequently, they also became more withdrawn, providing evidence for cyclical processes between risk factors and consequences of victimization.

In addition to submissive victims, Olweus (1993) identified another group of chronic targets: provocative victims who resort to aggression, much like bullies. Perry et al. (1990) labeled the aggression displayed by these targets as ineffectual, suggesting that their failed attempts to retaliate against more-powerful bullies did not stop the bullying. Hence, these individuals may also make easy targets whose emotional response is rewarding for bullies. Members of this group, frequently labeled bully-victims or aggressive victims in subsequent studies, appear to have emotion regulation and attention problems akin to attention deficit and hyperactivity disorders (e.g., Bettencourt et al. 2012). When compared with bullies and victims, the comorbid bully-victim group shares some of the plight of victims (e.g., moderate levels of distress, high level of peer rejection) but not any of the social benefits associated with the high social status of bullies (Juvonen et al. 2003). Given that reactively aggressive victims constitute a particularly stable group of targeted youths (Camodeca et al. 2002), bully-victims may indeed represent a distinct risk group whose developmental trajectories continue to be problematic (also see Burk et al. 2010).

Individual and Social Risk Factors

In addition to specific psychological characteristics that might encourage a bully to target a specific youth, several nonbehavioral characteristics increase the risk of being bullied. For example, obesity (Pearce et al. 2002) and off-time pubertal maturation (Nadeem & Graham 2005, Reynolds & Juvonen 2010) place youths at elevated risk of peer ridicule and intimidation. Additionally, children with disabilities (Son et al. 2012) and LGBT (lesbian, gay, bisexual, and transgender) youths (e.g., Katz-Wise & Hyde 2012) are much more likely to be bullied compared with their "typical" peers. Thus, any condition or characteristic that makes youths stand out from their peers increases the likelihood of them being bullied.

Research on rejected social status (i.e., being disliked and avoided) shows that any nonnormative behaviors or physical characteristics that set a child apart from the group place them at risk of being shunned by their group. Wright et al. (1986) adopted the label social misfit to describe individuals whose social behavior deviates from group norms. In a study of boys living in cottages while attending summer camp for youths with behavior problems, aggressive boys were rejected in cabins where verbal threats and hitting were low-frequency behaviors, whereas withdrawn boys were rejected in cabins where aggression was normative (Wright et al. 1986). These findings have been replicated in other experimental studies (Boivin et al. 1995) as well as in large-scale classroom contexts (Stormshak et al. 1999). Although the lack of fit between an individual and a group is likely to increase the risk of rejection within the group, it appears that the marginal social status, in turn, increases the risk of prolonged or more severe peer victimization because these youths are unlikely to be supported or defended by any group members.

Interpersonal risk factors can contribute to increased risk of peer victimization in a few different ways. For example, emotional or behavioral problems may elicit bullying especially when the targets are lower in social status (Hodges et al. 1999). Adolescents suffering from depression are

likely to be bullied because they have difficulties in establishing friendships (Kochel et al. 2012). Marginal social status (Buhs et al. 2006) and lack of friends (e.g., Hodges & Perry 1999) may also function as independent risk factors for peer victimization over time (Hodges et al. 1999, Kochenderfer & Ladd 1997). Although peers, even close friends, do not necessarily stand up for victims of bullying, emotional support from a friend plays a critical role in how victims are affected by being bullied. For example, one recent study shows that although bullied youths are more likely to have internalizing problems over time, those victims who report receiving emotional support from a friend are protected (Yeung et al. 2012).

Taken together, individual risk factors (e.g., obesity, disabilities, LGBT status) that set a youth apart from the group (norm) increase the risk of bullying, especially in the absence of friends or when rejected by the group. However, when an obese child or a sexual minority youth has friends or is accepted by classmates, the chances of being bullied are decreased. Even just one friend can protect against being bullied and the degree to which victimized youth feel distressed (Hodges et al. 1999, Hodges & Perry 1999).

Cyclical Processes and Consequences of Peer Victimization

Many factors that place youths at risk of victimization (e.g., internalizing problems, lack of social connections) can also be considered consequences of peer victimization. To address the question of directionality, the authors of a recent meta-analysis computed effect sizes for two sets of studies: those in which internalizing problems were considered antecedents of subsequent peer victimization (11 studies) and those in which changes in internalizing problems were examined as consequences of victimization (15 studies). The effect sizes for the first set of studies ranged from $r = -0.05$ to 0.20, whereas those for the second set of studies ranged from $r = 0.04$ to 0.41 (Reijntjes et al. 2010). Although the effects are somewhat stronger when internalizing symptoms are considered to be consequences of bullying experiences, the effect sizes do not statistically differ. Thus, the relationships between peer victimization and internalizing problems are reciprocal, probably reflecting cyclical processes over time.

Unless the reciprocal and possibly cyclical processes can be interrupted, victims of bullying are likely to manifest psychosocial difficulties later in life. In one of the most recent long-term longitudinal studies examining psychiatric outcomes in a large community sample across preadolescence to early adulthood, victims and bully-victims displayed elevated rates of psychiatric disorders in young adulthood (Copeland et al. 2013). Even when childhood psychiatric problems and earlier family hardships were controlled for, victims continued to have a higher prevalence of various anxiety-related disorders. Bully-victims, in turn, were at elevated risk of adult depression in addition to specific phobias and panic disorders. On the basis of additional evidence, bully-victims also appeared to be at the highest risk of suicide-related behaviors (Winsper et al. 2012).

Thus, the evidence suggests that victims of bullying are emotionally distressed both concurrently and over time. Even single incidents of bullying are related to increases in daily levels of anxiety (Nishina & Juvonen 2005). Although the associations between internalizing distress and victimization are likely to be cyclical, it is critical to understand the mediating mechanisms that account for the links between victimization and adjustment problems. In the following section, we turn to investigations that examine the underlying processes between peer victimization and psychosocial difficulties, as well as academic and health problems.

Mediating Mechanisms Underlying Psychosocial Problems

To understand reactions to negative social experiences, it is useful to consider the recipients' or targets' causal perceptions (attributions) of why they are mistreated. By relying on hypothetical

scenarios of bullying encounters in which the participant is asked to take the perspective of a victim (Graham & Juvonen 1998), middle-school students who were identified as victims of bullying by their peers were more likely to endorse attributions for bullying that were internal and uncontrollable by them (e.g., "I would not be picked on if I were a cooler kid," "Kids do this to me because they know I won't get them into trouble"). Capturing characterological self-blame (Janoff-Bulman 1979), such attributions partly accounted for the concurrent association between the victim's reputation and level of emotional distress. When examining similar associations over time, another study found that self-blame exacerbated the effects of victimization on internalizing problems (Perren et al. 2013).

Whereas self-blame may help account for why submissive victims are socially anxious and depressed, other-blame can in turn help explain why some victims of bullying want to retaliate in response to being bullied. Indeed, hostile attributions of negative peer intent partly account for why bullied youths experience increased externalizing problems over time (Perren et al. 2013). Thus, subjective interpretations of why victims are bullied enable us to understand the underlying mechanisms that account for or intensify the associations between bullying experiences and both internalizing and externalizing problems (Prinstein et al. 2005).

Mechanisms Underlying School Difficulties and Health Problems

Just as attributions help us comprehend how and why bullied youths display different types of psychosocial difficulties, such problems can in turn help us explain why bullied youths do not do well in school (e.g., Espinoza et al. 2013). Researchers are aware that victims of bullying are likely to be absent from school and to receive low grades from teachers (e.g., Juvonen et al. 2011). Testing a meditational model, Nishina et al. (2005) found that the association between earlier bullying experiences and subsequent school functioning (higher rates of absenteeism and lower grades) can be partly accounted for by emotional distress and somatic complaints. In other words, not only may victimized youths feel anxious, they may also suffer from headaches and other physical ailments that prevent them from coming to school.

An increasing number of studies document that victims of bullying indeed suffer from health problems (for a meta-analysis, see Gini & Pozzoli 2009). A possible physiological pathway by which peer victimization may give rise to health problems implicates the hypothalamic-pituitary-adrenal axis. By examining salivary cortisol samples, one study showed that peer victimization predicted poor health outcomes and that during a stress test victims had altered cortisol levels compared with their nonvictimized peers (Knack et al. 2011). Specifically, higher cortisol immediately after the stressor and lower cortisol 30 min after the stressor were associated with more health problems. These findings suggest that the association between peer victimization and poor physical health can be explained partly by differences in reactivity to stress detected at the neuroendocrine level.

Recent neuroimaging studies have, in turn, explored the underlying neural mechanisms associated with victimization in the form of social exclusion. College students who were led to believe that they were excluded by two others when playing an electronic ball-tossing game (*Cyberball*) showed increased activity in the dorsal anterior cingulate cortex (dACC) compared with those who continued to be included in the game. Moreover, increased dACC activity was associated with more self-reported feelings of stress following *Cyberball* (Eisenberger et al. 2003). The dACC is the same region that is activated when individuals experience physical pain. Studies with 12- and 13-year-old adolescents that used the same paradigm reported more activity in the subgenual anterior cingulate cortex (subACC) (Masten et al. 2011). Given that the subACC is a region associated with affective processes, the results suggest that adolescents have particular difficulty

handling the negative emotions associated with social exclusion (see review in Eisenberger 2012). Increased subACC activity following social exclusion in the study on adolescents was also associated with increases in depression 1 year later (Masten et al. 2011). These neuroimaging studies further demonstrate the ways in which the physiological responses of victims of bullying can help us understand their emotional and physical pain.

The above reviewed studies present solid evidence that peer victimization predicts increased adjustment difficulties and health problems over time (e.g., Arseneault et al. 2006), although many symptoms and victimization are likely to be cyclically related over time. In addition to social-cognitive mechanisms (specifically attributions about one's plight as a victim), physiological mechanisms, including neuroendocrine reactions to stress and neural mechanisms in response to social pain, can help explain the level of emotional distress. Emotional and physical stress, in turn, can help account for why victims of bullying often also struggle academically.

BULLYING IN CONTEXT: CYBERSPACE AND SCHOOLS

Thus far we have not said very much about the different contexts in which bullying takes place. Most bullying research is carried out in schools, where youths interact daily with their peers. Yet the online environment that so dominates the lives of today's youths is also a frequent context for peer abuse. In this section we first consider the relatively new topic of bullying in cyberspace. We then turn to factors in the school context that are related to increased rates of bullying and a heightened sense of vulnerability when victimized.

Cyberbullying

Labeled as cyberbullying, electronically mediated bullying involves texting via cell phone; emailing or instant messaging; or posting messages on social networking sites and in chat rooms. Much like bullying in general, cyberbullying can be either direct (i.e., threats or nasty messages are sent to the target) or indirect (i.e., malicious comments, pictures, and private messages are spread much like rumors). Although there are similarities between cyberbullying and other types of bullying in terms of bully-victim overlap and the emotional distress associated with such experiences (e.g., Kowalski et al. 2012), particular contextual features make cyberbullying distinct. Two of the unique features of electronic bullying are its speed and spread: Degrading messages can quickly reach not only the target, but also a vast number of other individuals (Patchin & Hinduja 2006, Ybarra & Mitchell 2004). Another feature associated with cyberbullying is anonymity. When screen names (that can be easily created and changed) are used to send instant messages or to take part in discussions in chat rooms, the identity of the perpetrator can be easily concealed. Such a sense of anonymity, combined with very limited social controls (i.e., monitoring), makes it easy to send a hostile message or post embarrassing pictures of someone (e.g., Slonnje et al. 2013). Because the lack of social cues in online communication also encourages greater self-disclosure (Mesch 2009), cyberspace may provide particularly fertile grounds for bullying. Such questions about the unique features of the online environment have yet to be explored in the cyberbullying literature, which thus far comprises mainly descriptive studies.

The School Context

Bullying is largely studied as a school-based phenomenon, but it is surprising how little empirical research has directly examined school factors as the context for peer victimization. Many student misbehaviors are related to school characteristics, including school size, urbanicity, teacher quality,

disciplinary practices, and percentage of ethnic minority students (Gottfredson 2001). However, these school context correlates are inconsistently related to bullying behavior (Bradshaw et al. 2009, Payne & Gottfredson 2004). Probably the most consistent school context correlate of bullying is school climate. To the degree that students do not feel accepted, supported, respected, and treated fairly in their schools, bullying is more of a problem (Bradshaw et al. 2009, Payne & Gottfredson 2004). In the following sections we highlight research on other school context factors that have been more uniquely linked to students becoming the victim of bullying.

Racial/ethnic diversity. A good deal of bullying research is conducted in urban schools where multiple ethnic groups are represented, but very little of that research has systematically examined ethnicity-related context variables such as the racial/ethnic composition of schools (Graham 2006). In part to address this void, one study examined sixth-grade students' experiences of vulnerability at school—defined as perceived victimization, feeling unsafe, feeling lonely, and having low self-worth—in 99 classrooms and 10 middle schools that varied in ethnic diversity (Juvonen et al. 2006). This study documented that greater ethnic diversity at both the classroom and school levels was related to a lower sense of vulnerability among Latino and African American students, including less self-reported victimization. The authors argued that power relations may be more balanced in ethnically diverse schools with multiple ethnic groups and that shared power, in turn, reduces incidents of bullying. (Recall the definition of bullying as a power imbalance.) Although a few studies have examined peer victimization in different ethnic groups (e.g., Hanish & Guerra 2000; also see Graham et al. 2009b), to our knowledge this is the first study to document the buffering effects of greater ethnic diversity.

Organization of instruction. In the school violence literature, the use of academic tracking has been associated with more disruptive behavior on the part of students who are grouped for instruction in low-ability tracks (e.g., Gottfredson 2001). The general argument has been that students who are exposed to a less demanding curriculum and to more deviant peers are at greater risk of antisocial behavior. There is no comparable literature documenting effects of the organization of instruction on the experience of victimization. However, one recent study examined the role of academic teaming in middle school on students' victimization experiences (L. Echols, manuscript submitted). Academic teaming is the practice of grouping students into smaller learning communities for instruction (Thompson & Homestead 2004). Students in these teams often share the majority of their academic classes, limiting their exposure to the larger school community. Although the social and academic benefits of teaming practices have been highlighted in the literature (e.g., Mertens & Flowers 2003), recent analyses suggest that teaming increased (rather than decreased) the experience of victimization for students who were not well liked by their peers (L. Echols, manuscript submitted). In other words, socially vulnerable adolescents who reside within small collectives may have few opportunities to redefine their social identities and instead become increasingly stigmatized.

Deviation from classroom norms. Previous sections of this article reviewed the psychological consequences of being the target of peer abuse. Many victims feel lonely, depressed, and socially anxious, and they tend to blame themselves for their harassment experiences. An important school context factor that may exacerbate these victim-maladjustment linkages is the extent to which victims deviate from the norms of their classroom. Like social misfits (Wright et al. 1986), victims might feel especially bad when they differ from most other students in their classroom.

Two recent studies on victimization and classroom norms are consistent with a social misfit analysis. Focusing on first graders, one study found that elevated levels of victimization and

emotional problems were reported by those residing in classrooms where most students got along well and were kind to one another (Leadbeater et al. 2003). To the extent that the first graders' own ratings were high in perceived victimization and deviated from the classroom norm, students were judged by their teachers to be depressed and sad. Similarly, a study of middle-school students documented that the relationship between victimization and social anxiety was strongest when sixth-grade students resided in classrooms that were judged by the their teachers to be orderly rather than disorderly (Bellmore et al. 2004). In this case the more orderly classrooms were those in which students on average scored low on teacher-rated aggression. In both studies, a positive classroom norm (prosocial conduct, high social order) resulted in worse outcomes for victims who deviated from those norms.

The above-described middle-school study also reported that victimization was more predictive of loneliness and social anxiety for students who were members of the majority ethnic group in their classroom (Bellmore et al. 2004). Being a victim when one's own ethnic group holds the numerical balance of power can be a particularly painful example of deviation from the norm. The evidence suggests that victims who are members of the majority ethnic group are more likely to endorse self-blaming attributions ("It must be *me*"), and self-blame, in turn, predicts adjustment difficulties (Graham et al. 2009a). Not only does more diversity with multiple ethnic groups that share the balance of power protect against victimization (Juvonen et al. 2006), but such diversity may also foster enough attributional ambiguity to ward off self-blaming tendencies (S. Graham & A.Z. Taylor, manuscript in preparation).

Thus, research on schooling as a context for bullying is still relatively recent. In the research reviewed we highlight context factors that predict victimization, such as low racial/ethnic diversity and academic teaming for instruction. With regard to the psychological consequences of bullying, we review research on the degree to which victims of bullying in particular classroom settings deviate from the local norms. The first-grade victim in a classroom where most peers are prosocial or the sixth-grade victim in a classroom where most of the students are from his or her ethnic group might have particular adjustment difficulties. A plausible mechanism is that victims who deviate from the norm are particularly vulnerable to self-blaming attributions.

INTERVENTIONS TO PREVENT AND REDUCE BULLYING IN SCHOOL

What can be done to prevent bullying? What works to get rid of it once it has been detected? As public awareness of the serious consequences of school bullying has increased, more attention than ever has been directed toward interventions that can provide answers to these questions. If we had been writing this article 10 years ago, the prevention/intervention literature would have been relatively sparse. For example, in 2001 we coedited one of the first comprehensive books on school bullying (Juvonen & Graham 2001), and that volume did not contain a single chapter on intervention. Today there is a growing international literature on school-based interventions; articles on intervention programs have been included in several edited volumes (e.g., Jimerson et al. 2009, Smith et al. 2004). Some of the programs involve the whole school, whereas others target at-risk individuals (typically bullies). Certain programs focus on prosocial skill building, whereas others rely on the punishment of undesirable behavior (e.g., zero-tolerance policies). The database of empirical studies is sufficiently large to have prompted at least three research syntheses within the past decade (Baldry & Farrington 2007, Smith et al. 2004, Vreeman & Carroll 2007). These syntheses have focused primarily on universal or schoolwide bullying interventions as opposed to targeted programs for bullies and victims, but we outline both types of approaches in the following sections.

Schoolwide Interventions

A schoolwide approach targets all students, their parents, and adults within the school, including administrators, teachers, and staff. Such programs operate under the assumptions that bullying is a systemic social problem and that finding a solution is the collective responsibility of everyone in the school. Systemic prevention requires changing the culture of the whole school rather than (or in addition to) focusing on the behavior of individuals or groups directly involved in bullying incidents.

Most schoolwide programs have their roots in the approach prescribed in the Olweus Bullying Prevention Program (OBPP) developed by Olweus (1993) in Norway. This approach requires increased awareness of the nature of the problem, heightened monitoring, and systematic and consistent responses to incidents of bullying. For example, students are asked to create their own rules about bullying, and they are provided with information about strategies for dealing with bullying and opportunities for classroom discussions about their experiences. Teachers and school staff receive training that includes strategies for preventing problems associated with bullying. Common across all program participants is knowledge of the school's rules about bullying, including what behaviors constitute bullying and what consequences students and staff will face if they engage in those behaviors. Evaluations of OBPP in Norway revealed decreases in self-reported bullying and victimization, decreases in teachers' and students' reports of other students' bullying, and increases in students' perceptions of a positive school climate (Olweus 1993). The success of OBPP in Norway fueled efforts to implement similar schoolwide programs in both Europe and the United States.

Two recent meta-analyses (Merrell & Isava 2008, Smith et al. 2004) and two narrative analyses (Baldry & Farrington 2007, Vreeman & Carroll 2007) of research on these Olweus-inspired antibullying programs provide evidence of the effectiveness of schoolwide approaches. Unfortunately, the effects are modest at best. When considering the reductions in incidents of bullying, only approximately one-third of the school-based interventions included in the Merrell & Isava (2008) meta-analysis showed any positive effects.

Several explanations have been offered for these disappointing findings. First, there is inconsistency in the degree to which the programs conformed to many of the principles of good intervention research, such as random assignment to treatment and control groups, careful monitoring of treatment fidelity, and appropriate intervals between pretests and posttests (Ryan & Smith 2009). Second, most interventions relied heavily on student self-reports of bullying—as target, perpetrator, or witness. Because whole-school approaches are designed to raise awareness of bullying, this increased consciousness might result in elevated reports of bullying, which could then mask treatment effects (Smith et al. 2004). Third, the Olweus intervention was implemented in Norwegian schools, where the norm is small classrooms, well-trained teachers, and relatively homogeneous student populations. An intervention developed in that setting may not be easily portable to other school contexts with very different organizational structures, student demographics, and staff buy-in (Limber 2011). Research on decision making about program adoption reveals that many teachers and administrators in American schools are reluctant to embrace whole-school interventions because they believe either that there is not enough time and space in the curriculum or that developing antibullying attitudes is primarily the responsibility of parents (Cunningham et al. 2009).

It would be premature to conclude that whole-school interventions are not effective inasmuch as some of the more recent programs not included in the previous reviews are showing promising results. One noteworthy program is KiVa, an acronym for *kiusaamista vastaan*, translated from Finnish as "against bullying" (Kärnä et al. 2011). Developed and implemented in Finland, KiVa differs from the Olweus program in its specific focus on bystanders or witnesses to bullying. KiVa

aims to develop among bystanders more empathy for victims and strategies to help victims when they are being harassed. A second noteworthy program is WITS (Walk Away, Ignore, Talk It Out, and Seek Help), developed in Canada (Leadbeater & Sukhawathanakul 2011). Focusing on the early grades, WITS raises awareness of the problem of school bullying and then teaches first- to third-grade students a set of social skills to help them resolve interpersonal conflicts. Although both KiVa and WITS have documented reductions in school bullying in Finland and Canada, respectively, neither has yet been evaluated in American schools. A third noteworthy recent program, and one that did originate in the United States, is Steps to Respect (Frey et al. 2009). Implemented during the elementary-school grades in the Pacific Northwest, Steps to Respect is unique in terms of its attention to relational aggression (e.g., gossip, ostracism) and the use of playground observation methods to assess changes in bullying behavior. With more rigorous experimental designs, manualized treatment, multiple informants, and long-term follow-up, all three of these programs are representative of a more current group of whole-school interventions that conform more closely to principles of good preventive interventions.

Targeted Interventions

Unlike schoolwide approaches that address the needs of everyone, a targeted intervention approach focuses on the 10–15% of youths who are involved in bullying incidents as bullies or victims, although research has concentrated almost exclusively on perpetrators rather than victims. The best known of these interventions emerge from the childhood aggression literature and are designed to address the dysfunctional thoughts and behaviors of the children who aggress against others. As described above, a dysfunctional thought pattern characteristic of some aggressive youths—many of whom are also bullies—is a hostile attributional bias, or the tendency to believe that peers are intentionally causing them harm, particularly in ambiguous situations (Dodge et al. 2006). Hostile attributional bias may be only one part of a larger set of deficits that interfere with adaptive social information processing. For example, Crick & Dodge (1994) proposed a five-step social-cognitive model that has become very influential in the bullying intervention literature. In that model, the information processing difficulties of bullies begin when they inaccurately interpret social cues associated with ambiguous peer provocation (e.g., someone is pushed while waiting in line and it is unclear why) and continue as they formulate goals, access from memory a repertoire of possible behavioral responses (e.g., "Should I retaliate or just ignore it?"), and finally choose a response.

One of the most extensive aggression interventions that includes social information-processing skills is Fast Track (e.g., Conduct Probl. Prev. Res. Group 2011). Begun in 1991 at four sites across the United States, Fast Track identified a sample of 890 kindergarten children at risk of conduct problems on the basis of parent and teacher reports. These children were then randomly assigned to either an intervention group or a no-treatment control group. Those in the intervention group participated in a year-long curriculum in first through fifth grades with weekly meetings that included training in social information processing, social problem solving, emotional understanding, communication, and self-control. The social-cognitive component was accompanied by individualized academic tutoring as needed, and there was a parent-training component as well. Intervention activities continued to tenth grade but were individualized in middle school and high school. Intervention participants showed improved social-cognitive skills and fewer conduct problems from the early elementary grades; remarkably, positive gains remained after the intervention ended (i.e., twelfth grade) for boys who were most at risk of conduct problems at entry into the Fast Track (Conduct Probl. Prev. Res. Group 2011).

Fast Track is a unique intervention because of its multiple components and longitudinal design. It is more of a demonstration project showing the potential of good intervention science

than a program that could be easily implemented by individual schools. However, other short-term and more streamlined social-cognitive interventions for aggressive boys have also reported improvements in both social information-processing skills and behavior. Examples of these targeted approaches are Brainpower (Hudley & Graham 1993) for elementary school–age boys and the Coping Power Program (Lochman & Wells 2004) for boys transitioning to middle school. Whether the short-term effects of these programs are maintained over time is not known.

No comparable interventions exist to alter the maladaptive social cognitions (attributional biases) of victims. Recall that victims are more likely to blame themselves for their harassment experiences ("It must be *me*") and that self-blaming attributions are related to mental health difficulties (Graham & Juvonen 1998). Thus, one intervention strategy might be to alter the victims' maladaptive thoughts about the causes of their plight. What more adaptive attribution might replace self-blame? In some cases change efforts might target behaviors (e.g., "I was in the wrong place at the wrong time"). The goal would be to help victimized youths recognize that there are responses in their repertoire to prevent future encounters with harassing peers. External attributions can also be adaptive because they protect self-esteem (Weiner 1995). Knowing that others are also victims or that there are some aggressive youths who randomly single out unsuspecting targets can help lessen the victims' tendency to feel humiliated because of self-blame (Nishina & Juvonen 2005). The idea of altering dysfunctional causal thoughts about oneself to produce changes in affect and behavior has produced a rich empirical literature on attribution therapy in educational and clinical settings (Wilson et al. 2002). There is no reason that the guiding assumption of that research cannot be applied to alleviating the plight of victims of bullying. Such an approach could be embedded in the context of a universal intervention program.

The schoolwide bullying prevention approach and the targeted intervention approach, although complementary, represent different schools of thought, and each has advantages and disadvantages. The schoolwide programs aim to build resiliency in all children and to create a more supportive school climate. As critiques of these programs have shown, how one determines that the school climate has actually changed for the better can be challenging. The targeted programs focus on the small number of youths at risk of negative outcomes. Whether or not the intervention has been successful is therefore easier to determine. However, because they rely on accurate identification, targeted interventions need to take into account what we know about the (in)stability of bully and victim status over time. Therefore, interventionists need to be aware of the possibility of false positives if identification is made at a single point in time. Interventionists must also guard against the risk of harmful (iatrogenic) effects that sometimes occur when youths with similar problems are aggregated together for treatment (Dodge et al. 2006).

Fidelity and sustainability, two important components of good interventions (Flay et al. 2005), are likely to be differentially achieved in the whole-school versus targeted approaches. Fidelity, or the consistency with which all of the components of the intervention are implemented, is probably easier to achieve in targeted approaches because there are fewer people, both adults (trainers) and children, to keep track of. With multiple activities at multiple levels involving multiple stakeholders, it is more difficult to monitor treatment fidelity in schoolwide programs, and indeed, that is one explanation for the disappointing findings in many of those interventions (Ryan & Smith 2009). However, sustainability may be easier to achieve in schoolwide programs. Systemic changes in individual students and adults at the classroom, school, and community levels are needed to build a foundation for long-term prevention of bullying. With the exception of Fast Track, most targeted interventions are imported from the outside, are implemented by the researchers, and are usually too short-lived to achieve the stakeholder buy-in needed to sustain them. Rarely are they powerful enough by themselves to maintain behavior change in individual children in the long term.

CONCLUSIONS AND FUTURE DIRECTIONS

Proposing future directions for research on school bullying requires that we distinguish between what the field already knows with much certainty—that is, what issues and complexities have already been resolved—and what issues, challenges, and complexities would benefit from continuing or new research. For example, the field probably does not need more studies in which the primary research goal is to document gender differences in rates of physical and relational bullying. Because the different forms of bullying (physical, verbal, and relational; or direct and indirect) tend to be highly correlated in research, there may be only limited theoretical payoff of more studies that seek to identify the unique correlates of each form.

On the basis of our understanding of school bullying as reviewed in this article, we suggest four directions for future research. None of the proposed directions can be discussed in detail, and surely they reflect our biases. We offer them as food for thought to enrich the study of bullying in schools.

Longitudinal Research on Victimization

Because the childhood aggression literature has a long history in both American and international research, that field has benefited from numerous longitudinal studies from multiple sites around the world that have identified the trajectories of aggressive children and the long-term risk factors associated with such behavior (Dodge et al. 2006). Consensus has emerged in longitudinal studies about the ways to assess aggressive behavior and the critical developmental periods that would need to be captured. These agreements have made it possible to aggregate data sets across multiple sites, yielding a robust picture of continuities and discontinuities in childhood aggression trajectories (e.g., Broidy et al. 2003). In part because American researchers did not begin to seriously study peer victimization before the 1990s, the field does not have a comparable multisite, multinational longitudinal literature on the trajectories of victims of bullying. Such studies are sorely needed. We know that the plight of the victim is a real one—socially, emotionally, physically, and academically—and that the underpinnings of that plight are biological, psychological, and contextual. What we do not know is why the experiences of victimization fluctuate over time, whether victim trajectories may decline developmentally (much like physically aggressive youths seem to "age out"), and what the undisputed long-term consequences of peer abuse are. Answers to these questions can be achieved only with collaborative longitudinal studies that cast a wide empirical net across age, time, setting, and measurement.

Victimization as Social Stigma

In this article we do not extensively discuss the individual characteristics of youths that put them at risk of victimization. Given space limitations, we mention almost in passing that youths who are ethnic or sexual minorities, are obese, or have mental and physical disabilities might be most at risk. A 2011 report on school bullying by the US Commission on Civil Rights confirms these as risk factors. After examining a compendium of school district data, legal briefs, and testimony of experts, the Commission concluded that "...bullying based on students' identities—such as their sex, race, ethnicity or national origin, disability, sexual orientation or gender identity, or religion—can be particularly damaging. Unfortunately these forms of bullying are all too common in American schools" (US Comm. Civ. Rights 2011, p. 8).

If these stigmatized social identities are among the major causes of victimization, it is surprising how unconnected the empirical literatures addressing these stigmas remain. For example, there is

a growing literature on the experience of school-based racial discrimination during adolescence, but most of that research has evolved from the adult racial discrimination literature, drawing few parallels to peer victimization research (Benner & Graham 2013). Similarly, childhood obesity research is largely found in the child health literature, despite knowledge that obese youths are often targets of peer harassment (e.g., Pearce et al. 2002); and research on bullying of LBGT youths, although increasing (e.g., Toomey et al. 2010), has not been well informed by the peer relations literature. Furthermore, none of the bullying interventions that we review herein specifically targeted any of these stigmatized groups.

We would like to see much more cross-fertilization between these separate social identity literatures and the school bullying literature. For example, are the correlates and mediating mechanisms associated with the plight of the victim the same in each of these stigmatized identities, or are they qualitatively different? Should schoolwide or targeted interventions be developed and tailored to each type of social stigma, or should the more general approaches in the bullying literature be expected to improve the plight of all victims, regardless of their stigmatized identity? Does it make a difference for the effectiveness of targeted intervention if an individual has multiple stigmatized identities that are experienced simultaneously (e.g., the ethnic minority boy who is LGBT)? We have no definitive answers to these questions. However, we believe that a more integrated developmental approach to social stigma—understanding commonalities and differences across particular identities and bringing this understanding to bear on intervention research—will move the bullying literature closer to addressing some of the most powerful social stressors of childhood and adolescence.

School Context Matters

Most bullying takes place at school and among schoolmates. Yet as our review shows, researchers know surprisingly little about the characteristics of schools that promote or protect against bullying by one's peers. One contextual characteristic that we believe to be particularly understudied is the racial/ethnic composition of classrooms and schools. A great deal of American bullying research is conducted in urban schools where multiple ethnic groups are represented, but not much of that research has examined the role that ethnicity plays in the experience of victimization. We do not think that ethnic group per se is the critical variable, given that there is no consistent evidence in the literature that any one ethnic group is more or less likely to be the target of bullying (Graham et al. 2009b). Rather, the more important context variable is whether ethnic groups are the numerical majority or minority in their school. Numerical minority group members appear to be at greater risk of victimization because they have fewer same-ethnicity peers to help ward off potential bullies (Hanish & Guerra 2002); youths who are victims as well as members of the majority ethnic group may suffer the most because they deviate from the norms of their group to be powerful (Bellmore et al. 2004); and ethnically diverse classrooms may reduce rates of victimization because the numerical balance of power is shared among many groups (Juvonen et al. 2006).

We view these studies as a useful starting point for a much fuller exploration of the ways in which school ethnic diversity can be a protective factor. Among the possible new directions for this research are the role of cross-ethnic friendships as sources of support and the degree to which students with stigmatized identities experience more acceptance and less harassment in ethnically diverse schools. Today's multiethnic urban schools are products of the dramatic changes in the racial/ethnic composition of the school-aged population in just a single generation. They are ideal settings in which to test hypotheses about the role of ethnic diversity in shaping the experience of victimization. Additionally, examination of ethnic diversity can provide some important insights

into protective factors that may also apply to other forms of diversity (e.g., students with disabilities, sexual minority youths).

Our review of the plight of the victim suggests the need for more studies on the degree to which schools are organized to be sensitive to developmental periods when youths may be most at risk. The middle-school transition, for example, appears to be a particularly vulnerable period in part because social dominance hierarchies become reconfigured and reestablished very quickly. We are struck by how little of the middle-school transition literature addresses bullying even though it is known to peak during these years. As we note above, some of the instructional practices that are designed to be both academically and socially supportive during transitions, such as small learning communities and academic teaming, may actually be risky for youths with reputations as victims (L. Echols, manuscript submitted). We would like to see a more systematic analysis by bullying researchers of other presumably sound pedagogical practices in schools that could be disadvantageous for youths at risk of victimization.

Designing Interventions That Work

The schoolwide intervention literature is large and increasing, but in some respects it is disappointing. Many of the programs simply do not work. Evaluations of these programs show that part of the problem is methodological; too many studies do not conform to good principles of prevention and intervention research. An important future direction is that interventions be designed with random assignments to treatment and control conditions, manualized treatments, careful attention to fidelity and dosage, multiple outcome measures, and longitudinal follow-up. The KiVa program that we introduce in our intervention section has many of these qualities and is showing promising results in Finnish schools (Kärnä et al. 2011). Strong school-based interventions should also address mediating and moderating mechanisms (Why does the treatment work, and for whom?). Our review identifies important social-cognitive mediators, such as attributions for victimization, and moderators, such as chronicity of abuse and the ethnic diversity of one's school, that could be included and examined in the next generation of school-based interventions.

Although interventions that take a whole-school approach are here to stay, we do not want to lose sight of the plight of the victims and a more nuanced approach to intervention that better acknowledges their plight. We conclude with three examples of what such an approach might entail. First, we know that school transitions are risky times for most youths, but especially for victim-prone youths whose negative experiences might spike during those times. Preventive interventions that offer victims special support to navigate these turbulent transitions would be worthwhile. The buffering effect of even one friendship is well documented in the victimization literature, and these underutilized findings could be incorporated into a preventive approach. Second, most schoolwide interventions or even targeted interventions for bullies focus on changing direct forms of physical aggression and verbal aggression such as name-calling and insults. Our review also underscores that indirect forms of victimization such as social ostracism and cybertactics are particularly insidious because they can go undetected for long periods. A challenge for interventionists is to figure out a way to incorporate cyberbullying and other more covert forms of harassment that are not easily detected. Third, the social hierarchy literature reminds us to what extent popular and dominant youths control peer norms and the degree to which bystanders are unwilling to stand up to the bully or come to the aid of the victim. Intervention approaches that can harness the influence of these powerful youths toward more prosocial goals and norms are especially needed (for a recent example of such an approach, see Paluck & Shepherd 2012). It may not be necessary to take a top-down approach to schoolwide intervention if we can penetrate social norms and raise collective responsibility by working directly with the youth who most directly shape peer norms.

IMPLICATIONS FOR INTERVENTION

Popular and dominant bullies control the peer norms and the degree to which bystanders are unwilling to come to the aid of the victim. It may be necessary to penetrate social norms and raise collective responsibility by working directly with the youths who most directly shape peer norms.

SUMMARY POINTS

1. Bullying perpetration and victimization are more unstable than stable, yet little is known about what accounts for the discontinuous trajectories of bullies or victims.
2. Bullying is likely to be motivated by social dominance that peaks at times of social reorganization associated with environmental (e.g., school) transitions.
3. The social prominence of bullies and their tendency to blame others partly explain their (overly) positive self-views, whereas bystander reinforcement explains why it is difficult to intervene with bullying behaviors.
4. Victims' reactions or responses to bullying (internalizing problems giving rise to submissive responses versus externalizing behaviors giving rise to hostile retaliation) may partly account for the continuous victim trajectories.
5. Unless youths have friends or are well accepted by their peers, individual risk factors (e.g., obesity, disabilities, LGBT status) that indicate a deviation from the group norm increase the likelihood of being bullied.
6. When victims of bullying deviate from the group norms, they are particularly vulnerable because of their self-blaming attributions.
7. Peer victimization predicts increased adjustment difficulties and health problems over time; social-cognitive mechanisms (specifically attributions about one's plight as a victim) as well as physiological mechanisms, including neuroendocrine reactions to stress and neural mechanisms in response to social pain, can help explain emotional and physical health problems.
8. Fidelity of implementation is a challenge facing schoolwide antibullying interventions, whereas targeted intervention effects are difficult to sustain.

FUTURE ISSUES

1. A multisite, multinational longitudinal literature on the trajectories of victims of bullying is needed to explain how the experiences of victimization fluctuate over time, how some children recover from their plight, and what the undisputed long-term consequences of peer abuse are.
2. Investigators should connect research on bullying with studies conducted on discrimination of potentially stigmatized groups based on sex, race, ethnicity or national origin, disability, sexual orientation or gender identity, and religion to understand the similarities among them and the unique features and consequences of each.

3. School contextual factors (e.g., ethnic composition of schools, organizational and instructional practices) that can protect youths from bullying and alleviate the social or physical pain associated with victimization experiences should be examined.
4. Researchers should further develop rigorously evaluated interventions in light of the most current research evidence on bullying and victimization that take into account the discrete features of contexts (e.g., school or online) in which bullying and victimization unfold and try to target the most insidious forms of bullying that are difficult for outsiders to detect.

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LITERATURE CITED

Adler PA, Adler P. 1998. *Peer Power: Preadolescent Culture and Identity*. New Brunswick, NJ: Rutgers Univ. Press

Archer J, Coyne SM. 2005. An integrated review of indirect, relational, and social aggression. *Personal. Soc. Psychol. Rev.* 9:212–30

Archer J. 2004. Sex differences in aggression in real-world settings: a meta-analytic review. *Rev. Gen. Psychol.* 8:291–322

Arseneault L, Walsh E, Trzesniewski K, Newcombe R, Caspi A, Moffitt TE. 2006. Bullying victimization uniquely contributes to adjustment problems in young children: a nationally representative cohort study. *Pediatrics* 118:130–38

Artz S. 2005. To die for: violent adolescent girls' search for male attention. In *The Development and Treatment of Girlhood Aggression*, ed. D Pepler, K Madsen, C Webster, K Levene, pp. 135–60. Mahwah, NJ: Erlbaum

Baldry AC, Farrington DP. 2007. Effectiveness of programs to prevent school bullying. *Vict. Offenders* 2:183–204

Bellmore A, Witkow M, Graham S, Juvonen J. 2004. Beyond the individual: the impact of ethnic diversity and behavioral norms on victims' adjustment. *Dev. Psychol.* 40:1159–72

Benner AD, Graham S. 2013. The antecedents and consequences of racial/ethnic discrimination during adolescence: Does the source of discrimination matter? *Dev. Psychol.* 49:1602–13

Bettencourt A, Farrell A, Liu W, Sullivan T. 2012. Stability and change in patterns of peer victimization and aggression during adolescence. *J. Clin. Child Adolesc.* 27:1–13

Björkqvist K, Österman K, Kaukiainen A. 2000. Social intelligence – empathy = aggression? *Aggress. Viol. Behav.* 5:191–200

Björkqvist K, Österman K, Lagerspetz KMJ. 1994. Sex differences in covert aggression among adults. *Aggress. Behav.* 20:27–33

Boivin M, Dodge KA, Coie JD. 1995. Individual-group behavioral similarity and peer status in experimental play groups of boys: the social misfit revisited. *J. Personal. Soc. Psychol.* 69:269–79

Boulton MJ, Trueman M, Flemington I. 2002. Associations between secondary school pupils' definitions of bullying, attitudes towards bullying, and tendencies to engage in bullying: age and sex differences. *Educ. Stud.* 28:353–70

Bradshaw CP, Sawyer AL, O'Brennan LM. 2009. A social disorganization perspective on bullying-related attitudes and behaviors: the influence of school context. *Am. J. Commun. Psychol.* 43:204–20

Brame B, Nagin DS, Tremblay RE. 2001. Developmental trajectories of physical aggression from school entry to late adolescence. *J. Child Psychol. Psychiatry* 42:503–12

Broidy LM, Nagin DS, Tremblay RE, Bates JE, Brame B, et al. 2003. Developmental trajectories of childhood disruptive behaviors and adolescent delinquency: a six-site, cross-national study. *Dev. Psychol.* 39:222–45

Buhs ES, Ladd GW, Herald SL. 2006. Peer exclusion and victimization: processes that mediate the relation between peer group rejection and children's classroom engagement and achievement? *J. Educ. Psychol.* 98:1–13

Burk LR, Armstrong JM, Park J-H, Zahn-Waxler C, Klein MH, Essex MJ. 2010. Stability of early identified aggressive victim status in elementary school and associations with later mental health problems and functional impairments. *J. Abnorm. Child Psychol.* 39:225–38

Cairns RB, Cairns BD. 1994. *Lifelines and Risks: Pathways of Youth in Our Time*. New York: Cambridge Univ. Press. 218 pp.

Camodeca M, Goossens FA, Terwogt MM, Schuengel C. 2002. Bullying and victimization among school-age children: stability and links to proactive and reactive aggression. *Soc. Dev.* 11:332–45

Presents a definitive review of research on gender differences in various forms of aggression.

Card NA, Stucky BD, Sawalani GM, Little TD. 2008. Direct and indirect aggression during childhood and adolescence: a meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Dev.* 79:1185–229

Cillessen AHN, Borch C. 2006. Developmental trajectories of adolescent popularity: a growth curve modelling analysis. *J. Adolesc.* 29:935–59

Cillessen AHN, Mayeux L. 2004. From censure to reinforcement: developmental changes in the association between aggression and social status. *Child Dev.* 75:147–63

Conduct Probl. Prev. Res. Group. 2011. The effects of the Fast Track preventive intervention on the development of conduct disorder across childhood. *Child Dev.* 82:331–45

Copeland WE, Wolke D, Angold A, Costello EJ. 2009. Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. *JAMA* 70:419–26

Coyne SM, Nelson DA, Underwood M. 2011. Aggression in children. In *The Wiley-Blackwell Handbook of Childhood Cognitive Development*, ed. PK Smith, CH Hart, pp. 491–509. Oxford, UK: Wiley. 2nd ed.

Crick NR, Dodge KA. 1994. A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychol Bull.* 115:74–101

Crick NR, Grotpeter JK. 1995. Relational aggression, gender, and social-psychological adjustment. *Child Dev.* 66:710–22

Crick NR, Ostrov JM, Kawabata Y. 2007. Relational aggression and gender: an overview. In *The Cambridge Handbook of Violent Behavior and Aggression*, ed. DJ Flannery, AT Vazsonyi, ID Waldman, DJ Flannery, AT Vazsonyi, ID Waldman, pp. 245–59. Cambridge, UK: Cambridge Univ. Press

Cunningham C, Vaillancourt T, Rimas H, Deal K, Cunninghm L, et al. 2009. Modeling the bullying prevention program preferences of educators: a discrete choice conjoint experiment. *J. Abnorm. Child Psychol.* 37:929–43

De Castro BO, Veerman JW, Koops W, Bosch JD, Monshouwer HJ. 2002. Hostile attribution of intent and aggressive behavior: a meta-analysis. *Child Dev.* 73:916–34

Dodge KA, Coie JD, Lynam D. 2006. Aggression and antisocial behavior in youth. In *Handbook of Child Psychology: Social, Emotional, and Personality Development*, ed. W Damon, RL Lerner, N Eisenberg, pp. 710–88. Hoboken, NJ: Wiley. 6th ed.

Dodge KA, Dishion TJ, Lansford JE. 2006. *Deviant Peer Influence in Programs for Youth*. New York: Guilford

Dodge KA. 1993. Social-cognitive mechanisms in the development of conduct disorder and depression. *Annu. Rev. Psychol.* 44:559–84

Eder D. 1985. The cycle of popularity: interpersonal relations among female adolescents. *Sociol. Educ.* 58:154–65

Egan SK, Perry DG. 1998. Does low self-regard invite victimization? *Dev. Psychol.* 34:299–309

Eisenberger NI, Lieberman MD, Williams KD. 2003. Does rejection hurt? An fMRI study of social exclusion. *Science* 5643:290–92

Eisenberger NI. 2012. The pain of social disconnection: examining the shared neural underpinnings of physical and social pain. *Neuroscience* 13:421–34

Espelage DL, Bosworth K, Simon TR. 2001. Short-term stability and prospective correlates of bullying in middle-school students: an examination of potential demographic, psychosocial, and environmental influences. *Violence Vict.* 16:411–26

Espinoza G, Gonzales NA, Fuligni AJ. 2013. Daily school peer victimization experiences among Mexican American adolescents: associations with psychosocial, physical and school Adjustment. *J. Youth Adolesc.* In press

Feshbach ND. 1969. Sex differences in children's modes of aggressive responses toward outsiders. *Merrill Palmer Q.* 15:249–58

Flay BR, Biglan A, Boruch RF, González Castro F, Gottfredson D, Kellam S, et al. 2005. Standards of evidence: criteria for efficacy, effectiveness, and dissemination. *Prev. Sci.* 6:151–75

Fox CL, Boulton MJ. 2006. Longitudinal associations between submissive/nonassertive social behavior and different types of peer victimization. *Violence Vict.* 21:383–400

Frey KS, Hirschstein MK, Edstrom LV, Snell JL. 2009. Observed reductions in school bullying, nonbullying aggression, and destructive bystander behavior: a longitudinal evaluation. *J. Educ. Psychol.* 101:466–81

Gini G, Albiero P, Benelli B, Altoè G. 2007. Does empathy predict adolescents' bullying and defending behavior? *Aggress. Behav.* 33:467–76

Gini G, Pozzoli T. 2009. Association between bullying and psychosomatic problems: a meta-analysis. *Pediatrics* 123:1059–65

Gottfredson DC. 2001. *Schools and Delinquency*. Cambridge, UK: Cambridge Univ. Press

Graham S, Bellmore A, Nishina A, Juvonen J. 2009a. "It must be *me*": ethnic diversity and attributions for victimization in middle school. *J. Youth Adolesc.* 38:487–99

Graham S, Juvonen J. 1998. Self-blame and peer victimization in middle school: an attributional analysis. *Dev. Psychol.* 34:587–38

Graham S, Taylor AZ, Ho AY. 2009b. Race and ethnicity in peer relationship research. In *Handbook of Peer Interactions, Relationships, and Groups*, ed. KH Rubin, WM Bukowski, B Laursen, pp. 294–413. New York: Guilford

Graham S. 2006. Peer victimization in school: exploring the ethnic context. *Curr. Dir. Psychol. Sci.* 15:317–20

Hanish LD, Guerra NG. 2000. Predictors of peer victimization among urban youth. *Soc. Dev.* 9:521–43

Hanish LD, Guerra NG. 2002. A longitudinal analysis of patterns of adjustment following peer victimization. *Dev. Psychopathol.* 14:69–89

Hawker DSJ, Boulton MJ. 2000. Twenty years' research on peer victimization and psychosocial maladjustment: a meta-analytic review of cross-sectional studies. *J. Child Psychol. Psychiatry* 41:441–55

Hawley P. 1999. The ontogenesis of social dominance: a strategy-based evolutionary perspective. *Dev. Rev.* 19:97–132

Hinde RA. 1974. *Biological Bases of Human Social Behaviour*. New York: McGraw-Hill

Hodges EVE, Boivin M, Vitaro F, Bukowski WM. 1999. The power of friendship: protection against an escalating cycle of peer victimization. *Dev. Psychol.* 35:94–101

Hodges EVE, Perry DG. 1999. Personal and interpersonal antecedents and consequences of victimization by peers. *J. Personal. Soc. Psychol.* 76:677–85

Hudley C, Graham S. 1993. An attributional intervention with African American boys labeled as aggressive. *Child Dev.* 64:124–38

Hymel S, Bowker A, Woody E. 1993. Aggressive versus withdrawn unpopular children: variations in peer and self-perceptions in multiple domains. *Child Dev.* 64:879–96

Janoff-Bulman R. 1979. Characterological and behavioral self-blame: inquiries into depression and rape. *J. Personal. Soc. Psychol.* 35:1798–809

Jimerson SR, Swearer SM, Espelage DL. 2009. *Handbook of Bullying in Schools: An International Perspective*. New York: Routledge

Jolliffe D, Farrington DP. 2006. Examining the relationship between low empathy and bullying. *Aggress. Behav.* 32:540–50

Juvonen J, Galván A. 2008. Peer influence in involuntary social groups: lessons from research on bullying. In *Understanding Peer Influence in Children and Adolescents*, ed. MJ Prinstein, KA Dodge, pp. 225–44. New York: Guilford

Juvonen J, Graham S, Schuster MA. 2003. Bullying among young adolescents: the strong, the weak, and the troubled. *Pediatrics* 112:1231–37

Juvonen J, Graham S. 2001. *Peer Harassment in School: The Plight of the Vulnerable and Victimized*. New York: Guilford

Represents one of the first edited volumes by American researchers on peer victimization in schools.

Juvonen J, Nishina A, Graham S. 2000. Peer harassment, psychological adjustment, and school functioning in early adolescence. *J. Educ. Psychol.* 92:349–59
Juvonen J, Nishina A, Graham S. 2006. Ethnic diversity and perceptions of safety in urban middle schools. *Psychol. Sci.* 17:393–400
Juvonen J, Wang Y, Espinoza G. 2011. Bullying experiences and compromised academic performance across middle school grades. *J. Early Adolesc.* 31:152–73
Juvonen J, Wang Y, Espinoza G. 2013. Physical aggression, spreading of rumors, and social prominence in early adolescence: reciprocal effects supporting gender similarities? *J. Early Adolesc.* In press
Kärnä A, Voeten M, Little T, Poskiparta E, Kaljonen A, Salmivalli C. 2011. A large scale evaluation of the KiVa anti-bullying program: grades 4–6. *Child Dev.* 82:311–30
Katz-Wise SL, Hyde JS. 2012. Victimization experiences of lesbian, gay, and bisexual individuals: a meta-analysis. *J. Sex Res.* 49:142–67
Knack JM, Jensen-Campbell LA, Baum A. 2011. Worse than sticks and stones? Bullying is associated with altered HPA axis functioning and poorer health. *Brain Cogn.* 77:183–90
Kochel KP, Ladd GW, Rudolph KD. 2012. Longitudinal associations among youth depressive symptoms, peer victimization, and low peer acceptance: an interpersonal process perspective. *Child Dev.* 83:637–50
Kochenderfer BJ, Ladd GW. 1997. Victimized children's responses to peers' aggression: behaviors associated with reduced versus continued victimization. *Dev. Psychopathol.* 9:59–73
Kochenderfer-Ladd B, Wardrop JL. 2001. Chronicity and instability of children's peer victimization experiences as predictors of loneliness and social satisfaction trajectories. *Child Dev.* 72:134–51
Kowalski RM, Morgan CA, Limber SP. 2012. Traditional bullying as a potential warning sign of cyberbullying. *Sch. Psychol. Int.* 33:505–19
LaFontana KM, Cillessen AHN. 2010. Developmental changes in the priority of perceived status in childhood and adolescence. *Soc. Dev.* 19:130–47
Lagerspetz KMJ, Björkqvist K, Berts M, King E. 1982. Group aggression among school children in three schools. *Scand. J. Psychol.* 23:45–52
Lagerspetz KMJ, Björkqvist K, Peltonen T. 1988. Is indirect aggression typical of females? Gender differences in aggressiveness in 11- to 12-year-old children. *Aggress. Behav.* 14:403–14
Leadbeater B, Hoglund W, Woods T. 2003. Changing contexts? The effects of a primary prevention program on classroom levels of peer relational and physical victimization. *J. Community Psychol.* 31:397–418
Leadbeater BJ, Sukhawathanakul P. 2011. Multi-component programs for reducing peer victimization in early elementary school: a longitudinal evaluation of WITS primary program. *J. Community Psychol.* 39:606–20
Limber SP. 2011. Development, evaluation, and future directions of the Olweus bullying prevention program. *J. Sch. Violence* 10:71–87
Little T, Henrich C, Jones S, Hawley P. 2003. Disentangling the "whys" from the "whats" of aggressive behaviour. *Int. Behav. Dev.* 27:122–33
Lochman JE, Wells KC. 2004. The coping power program for preadolescent boys and their parents: outcome effects at the 1-year follow up. *J. Consult. Clin. Psychol.* 72:571–78
Loeber R, Hay D. 1997. Key issues in the development of aggression and violence from childhood to early adulthood. *Annu. Rev. Psychol.* 48:371–410
Masten CL, Eisenberger NI, Borofsky LA, McNealy K, Pfeifer JH, Dapretto M. 2011. Subgenual anterior cingulate responses to peer rejection: a marker of adolescents' risk for depression. *Dev. Pathopsychol.* 23:283–92
Merrell K, Isava D. 2008. How effective are school bullying intervention programs? A meta-analysis of intervention research. *Sch. Psychol. Q.* 23:26–42
Merten DE. 1997. The meaning of meanness: popularity, competition, and conflict among junior high school girls. *Sociol. Educ.* 70:175–91
Mertens SB, Flowers N. 2003. Middle school practices improve student achievement in high poverty schools. *Middle Sch. J.* 35:33–43
Mesch GS. 2009. Parental mediation, online activities, and cyberbullying. *Cyber Psychol. Behav.* 12:387–93
Nadeem E, Graham S. 2005. Early puberty, peer victimization, and internalizing symptoms in ethnic minority adolescents. *J. Early Adolesc.* 25:197–222

Nakamoto J, Schwartz D. 2010. Is peer victimization associated with academic achievement? A meta-analytic review. *Soc. Dev.* 19:221–42

Nansel TR, Overpeck M, Pilla RS, Ruan W, Simons-Morton B, Scheidt P. 2001. Bullying behaviors among US youth: prevalence and association with psychosocial adjustment. *JAMA* 285:2094–100

Nishina A, Juvonen J, Witkow MR. 2005. Sticks and stones may break my bones, but names will make me feel sick: the psychosocial, somatic, and scholastic consequences of peer harassment. *J. Clin. Child Adolesc.* 34:37–48

Nishina A, Juvonen J. 2005. Daily reports of witnessing and experiencing peer harassment in middle school. *Child Dev.* 76:435–50

Nylund K, Bellmore A, Nishina A, Graham S. 2007. Subtypes, severity, and structural stability of peer victimization: What does latent class analysis say? *Child Dev.* 78:1706–22

O'Connell P, Pepler D, Craig W. 1999. Peer involvement in bullying: insights and challenges for intervention. *J. Adolesc.* 22:437–52

Ojanen T, Grönroos M, Salmivalli C. 2005. An interpersonal circumplex model of children's social goals: links with peer-reported behavior and sociometric status. *Dev. Psychol.* 41:699–710

Olweus D. 1978. *Aggression in the Schools: Bullies and Whipping Boys*. New York: Hemisphere Publ.

Olweus D. 1993. *Bullying at School: What We Know and What We Can Do*. Oxford, UK/Cambridge, Mass.: Blackwell

Describes the first successful whole-school bullying intervention.

Paluck LE, Shepherd H. 2012. The salience of social referents: a field experiment on collective norms and harassment behavior in a school social network. *J. Personal. Soc. Psychol.* 103:899–915

Parke RD, Slaby RG. 1983. The development of aggression. *Handb. Child Psychol.* 4:547–641

Parkhurst JT, Hopmeyer A. 1998. Sociometric popularity and peer-perceived popularity: two distinct dimensions of peer status. *J. Early Adolesc.* 18:125–44

Patchin JW, Hinduja S. 2006. Bullies move beyond the schoolyard a preliminary look at cyberbullying. *Youth Violence Juv. Justice* 4:148–69

Payne AA, Gottfredson DC. 2004. Schools and bullying: school factors related to bullying and school-based interventions. In *Bullying: Implications for the Classroom*, ed. CE Sander, GD Phye, pp. 159–76. San Diego: Elsevier

Pearce MJ, Boergers J, Prinstein MJ. 2002. Adolescent obesity, overt and relational peer victimization, and romantic relationships. *Obesity* 10:386–93

Pellegrini AD, Bartini M, Brooks F. 1999. School bullies, victims, and aggressive victims: factors relating to group affiliation and victimization in early adolescence. *J. Educ. Psychol.* 91:216–24

Pellegrini AD, Long JD. 2002. A longitudinal study of bullying, dominance, and victimization during the transition from primary school through secondary school. *Br. J. Dev. Psychol.* 20:259–80

Perren S, Ettekal I, Ladd G. 2013. The impact of peer victimization on later maladjustment: mediating and moderating effects of hostile and self-blaming attributions. *J. Child Psychol. Psychiatry* 54:46–55

Perry DG, Williard JC, Perry LC. 1990. Peers' perceptions of the consequences that victimized children provide aggressors. *Child Dev.* 61:1310–25

Prinstein MJ, Cheah CSL, Guyer AE. 2005. Peer victimization, cue interpretation, and internalizing symptoms: preliminary concurrent and longitudinal findings for children and adolescents. *J. Clin. Child Adolesc.* 34:11–24

Prinstein MJ, Cillessen AH. 2003. Forms and functions of adolescent peer aggression associated with high levels of peer status. *Merrill Palmer Q.* 49:310–42

Reijntjes A, Kamphuis JH, Prinzie P, Telch MJ. 2010. Peer victimization and internalizing problems in children: a meta-analysis of longitudinal studies. *Child Abuse Negl.* 34:244–52

Reynolds BM, Juvonen J. 2010. The role of early maturation, perceived popularity, and rumors in the emergence of internalizing symptoms among adolescent girls. *J. Youth Adolesc.* 40:1407–22

Rigby K, Johnson B. 2006. Expressed readiness of Australian schoolchildren to act as bystanders in support of children who are being bullied. *Educ. Psychol.* 26:425–40

Rivers I, Smith PK. 1994. Types of bullying behaviour and their correlates. *Aggress. Behav.*20:359–68

Rodkin PC, Farmer TW, Pearl R, Acker RV. 2006. They're cool: social status and peer group supports for aggressive boys and girls. *Soc. Dev.* 15:175–204

Rudolph KD, Troop-Gordon W, Hessel ET, Schmidt JD. 2011. A latent growth curve analysis of early and increasing peer victimization as predictors of mental health across elementary school. *J. Clin. Child Adolesc. Psychol.* 40:111–22

Ryan W, Smith JD. 2009. Antibullying programs in schools: How effective are evaluation practices? *Prev Sci.* 10:248–59

Salmivalli C, Isaacs J. 2005. Prospective relations among victimization, rejection, friendlessness, and children's self- and peer-perceptions. *Child Dev.* 76:1161–71

Salmivalli C, Lagerspetz K, Björkqvist K, Österman K, Kaukiainen A. 1998. Bullying as a group process: participant roles and their relations to social status within the group. *Aggress. Behav.* 22:1–15

Salmivalli C, Ojanen T, Haanpää J, Peets K. 2005. "I'm OK but you're not" and other peer-relational schemas: explaining individual differences in children's social goals. *Dev. Psychol.* 41: 363–75

Presents a current review of research on the multiple roles involved in bullying episodes.

Salmivalli C. 2010. Bullying and the peer group: a review. *Aggress. Viol. Behav.* 15:112–20

Scholte RHJ, Engels RCME, Overbeek G, Kemp RAT, Haselager GJT. 2007. Stability in bullying and victimization and its association with social adjustment in childhood and adolescence. *J. Abnorm. Child Psychol.* 35:217–28

Schwartz D, Dodge KA, Coie JD. 1993. The emergence of chronic peer victimization in boys' play groups. *Child Dev.* 64:1755–72

Sijtsema JJ, Veenstra R, Lindenberg S, Salmivalli C. 2009. Empirical test of bullies' status goals: assessing direct goals, aggression, and prestige. *Aggress. Behav.* 35:57–67

Slonnje R, Smith PK, Frisen A. 2013. The nature of cyberbullying, and strategies for prevention. *Comput. Hum. Behav.* 29:26–32

Smith J, Schneider B, Smith P, Ananiadou K. 2004. The effectiveness of whole-school antibullying programs: a synthesis of evaluation research. *Sch. Psychol. Rev.* 33:547–60

Smith P, Sharp S. 1994. *School Bullying: Insights and Perspectives*. New York: Routledge

Describes successful bullying interventions from around the world.

Smith PK, Pepler D, Rigby K. 2004. *Bullying in Schools: How Successful Can Interventions Be?* Cambridge, UK: Cambridge Univ. Press

Son E, Parish SL, Peterson NA. 2012. National prevalence of peer victimization among young children with disabilities in the United States. *Child. Youth Serv. Rev.* 34:1540–45

Stassen Berger K. 2007. Update on bullying at school: science forgotten? *Dev. Rev.* 27:90–126

Stormshak EA, Bierman KL, Bruschi C, Dodge KA, Coie JD. 1999. The relation between behavior problems and peer preference in different classroom contexts. *Child Dev.* 70:169–82

Sutton J, Smith PK, Swettenham J. 1999. Bullying and "theory of mind": a critique of the "social skills deficit" view of anti-social behaviour. *Soc. Dev.* 8:117–27

Thompson K, Homestead ER. 2004. 30 years of advocating for young adolescents: middle school students and parents through the 1970s, 1980s, and 1990s. *Middle Sch. J.* 35:56–56

Toomey RB, Ryan C, Diaz RM, Card NA, Russell ST. 2010. Gender-nonconforming lesbian, gay, bisexual, and transgender youth: school victimization and young adult psychosocial adjustment. *Dev. Psychol.* 46:1580–89

Underwood MK. 2003. *Social Aggression Among Girls*. New York: Guilford

US Comm. Civ. Rights. 2011. *Peer-to-Peer Violence + Bullying: Examining the Federal Response*. Washington, DC: US Comm. Civ. Rights

Vreeman RC, Carroll AE. 2007. A systematic review of school-based interventions to prevent bullying. *Arch. Pediatr. Adolesc. Med.* 161:78–88

Weiner B. 1995. *Judgments of Responsibility: A Foundation for a Theory of Social Conduct*. New York: Guilford

Wilson T, Damiani M, Shelton N. 2002. Improving the academic performance of college students with brief attributional interventions. In *Improving Academic Achievement: Impact of Psychological Factors on Education*, ed. J Aronson, pp. 91–110. New York: Academic

Winsper C, Lereya T, Zanarini M, Wolke D. 2012. Involvement in bullying and suicide-related behavior at 11 years: a prospective birth cohort study. *J. Am. Acad. Child Adolesc. Psychiatry* 51:271–82

Wright JC, Giammarino M, Parad HW. 1986. Social status in small groups: individual-group similarity and the social "misfit." *J. Personal. Soc. Psychol.* 50:523–36

Xie H, Swift DJ, Cairns BD, Cairns RB. 2002. Aggressive behaviors in social interaction and developmental adaptation: a narrative analysis of interpersonal conflicts during early adolescence. *Soc. Dev.* 11: 205–24

Ybarra ML, Mitchell KJ. 2004. Online aggressor/targets, aggressors, and targets: a comparison of associated youth characteristics. *J. Child Psychol. Psychiatry* 45:1308–16

Yeung Thompson RS, Leadbeater BJ. 2013. Peer victimization and internalizing symptoms from adolescence into young adulthood: building strength through emotional support. *J. Res. Adolesc.* 23:290–303

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Bullying in schools: the state of knowledge and effective interventions

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ABSTRACT

During the school years, bullying is one of the most common expressions of violence in the peer context. Research on bullying started more than forty years ago, when the phenomenon was defined as 'aggressive, intentional acts carried out by a group or an individual repeatedly and over time against a victim who cannot easily defend him- or herself'. Three criteria are relevant in order to define aggressive behaviour as bullying: (1) repetition, (2) intentionality and (3) an imbalance of power. Given these characteristics, bullying is often defined as systematic abuse of power by peers. It is recognised globally as a complex and serious problem. In the present paper, we discuss the prevalence, age and gender differences, and various types of bullying, as well as why it happens and how long it lasts, starting from the large surveys carried out in western countries and to a lower extent in low- and middle-income countries. The prevalence rates vary widely across studies; therefore, specific attention will be devoted to the definition, time reference period and frequency criterion. We will also focus on risk factors as well as short- and long-term outcomes of bullying and victimisation. Finally, a section will be dedicated to review what is known about effective prevention of bullying.

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Violence has been recognised as a relevant and serious problem by several international agencies. In 1996, the World Health Assembly adopted a resolution declaring violence a leading worldwide public health problem (WHA 49.25) and called upon Member States to give urgent consideration to the problem of violence. In the school context, peer bullying is the most common form of violence among children and youths. Bullying compromises children's rights, including the right to education as requested by the Convention on the Rights of the Child (The United Nations 1989). It presents special risks for vulnerable children, such as children with disabilities; refugees, or children affected by migration; children who are excluded; children who belong to a minority group, or simply children that differ from the peer group.

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What is bullying?

Research on bullying started more than 40 years ago (Olweus, 1973, 1978) and defined this behaviour as 'aggressive, intentional acts carried out by a group or an individual repeatedly and over time against a victim who cannot easily defend him or herself' (Olweus, 1993, p. 48). Despite some debate over the definition, most researchers agree that bullying involves the intent to harm and an imbalance of power between the aggressor and the victim, and it takes place repeatedly (Farrington, 1993; Olweus, 1993). Bullying involves a dynamic interaction between the perpetrator and the victim. The bully increases in power, and the victim loses power. As a result, it is difficult for the victim to respond or to cope with the problem (Menesini et al. 2012; Swearer & Hymel, 2015). Imbalance of power can be derived from physical strength, social status in the group, or from group size (e.g. a group targeting a single person). Power may also be achieved through knowing a person's vulnerabilities (e.g. appearance, learning problem, family situation, personal characteristics) and using this knowledge to harm him or her.

Bullying comprises verbal attacks (e.g. name calling, threats), physical behaviours (e.g. hitting, kicking, damaging victim's property), and relational/social aggression (e.g. social exclusion, rumour spreading) (Monks & Smith, 2006; Olweus, 1993; Smith, 2014) up to the most recent forms of attacks through Internet and new technologies (also referred to as cyberbullying).

Prevalence

There is a wide variation in prevalence rates of bullying across studies, partially due to differences in measurement and/or operationalisation of the bullying construct. Such inconsistencies have strongly influenced rate estimation, and scholars have called for greater consensus in definition and measurement (Menesini & Nocentini, 2009).

In a recent review, Juvonen and Graham (2014) report that approximately 20–25% of youth are directly involved in bullying as perpetrators, victims, or both. Large-scale studies conducted in Western countries suggest that 4–9% of youths frequently engage in bullying behaviours and that 9–25% of school-age children are bullied. A smaller subgroup of youth who both bully and are bullied (bully/victims) has also been identified. In a recent meta-analysis on bullying and cyberbullying prevalence across contexts (Modecki et al., 2014) with an overall sample of 335,519 youth (12–18 years), the authors estimated a mean prevalence of 35% for traditional bullying (both perpetration and victimisation roles) and 15% for cyberbullying involvement.

Contextual and cultural factors on prevalence estimation

Besides scientific research done in numerous countries, data on prevalence can be derived from large cross-national surveys carried out by NGOs, state governments, or other organisations. Smith, Robinson, and Marchi (2016) used four surveys for a global comparison on bullying and victimisation: EU Kids Online Survey (www.eukidsonline.net), Global School Health Survey (GSHS) (www.who.int/chp/gshs/factsheets/en/index.html), Trends in International Mathematics and Science Study (TIMSS) (http://timssandpirls.bc.edu/timss2011/international-results-mathematics.html) and Health Behaviour in School-aged

Children (HBSC), (http://www.hbsc.org/). They found a very low agreement (from small to zero) in terms of correlations across surveys, raising concerns about using cross-national datasets to make judgements on the rates of bullying and victimisation in different countries. In another contribution, Sittichai and Smith (2015) reviewed studies from 10 ASEAN countries, making use of two sets of comparative data: (1) large-scale surveys (GSHS and TIMSS), and (2) papers reported by research scholars. They came to the conclusion that there are important cultural and linguistic differences between eastern and western countries in terms of who does the bullying (friends in the same class or strangers), where it happens (classroom, playground), and types of bullying (social exclusion, extortion). In addition, definitions of bullying-like phenomena show linguistic variation and may be influenced by what is viewed as legitimate from a cultural point of view. Despite these differences, they concluded that bullying-like behaviours are fairly frequent in the 10 countries, showing comparable prevalence rates to those found in western countries (around 10%).

Whereas extensive research has been conducted on bullying and victimisation in Western and Eastern high-income countries, far less research has been done in low- and middle-income countries (Zych, Ortega, & Del Rey, 2015).

Results from Latin America show a high prevalence of bullying, with 40–50% of teens in Peru and Colombia reporting that they bully others (Oliveros, Figueroa, & Mayorga, 2009). A recent study from Lister et al. (2015) on victimisation among Peruvian adolescents provided data from an ongoing prospective study involving a cohort of 12,000 children (the Young Lives – YL). Being bullied showed figures of 47.3% at the age of 8; of 30.4% at the age of 12, and of 21.9% at the age of 15. Two studies from Nicaragua showed the involvement of 35% of secondary school students, 124% as victims, 109% as bullies and 117% as bully-victims (Del Rey & Ortega, 2008).

As for Africa, Greeff and Grobler (2008) found a percentage of 564% of South African students reporting to be bullied. Another recent study was carried out in Algeria involving a sample of 1452 school children aged 8, 10 and 12 years (Tiliouine, 2015). The findings showed a level of involvement of approximately 25–35%, including direct and indirect forms of bullying.

Age and gender differences

Several studies suggest that the prevalence and forms of bullying are different across age groups, even though the findings are not straightforward. In a meta-analysis of 153 studies, Cook, Williams, Guerra, Kim and Sadek (2010) found that the effect size of age was 0.09 on bully role, 0.01 on bully/victim role; and –0.01 on victim role, indicating an overall stability of victim and bully-victim roles over time and a slight increase of bullying behaviour with age. Bullying peaks during middle school years (i.e. 12–15 years), and tends to decrease by the end of high school (Hymel & Swearer, 2015). With respect to the forms of bullying, with increasing age there appears to be a shift from physical bullying to indirect and relational bullying (Rivers & Smith, 1994).

It is commonly reported that boys are more likely to be involved in bullying others than are girls (HBSC survey; Pepler, Jiang, Craig, & Connolly, 2008), although some studies have found little difference. In their meta-analysis of 153 studies, Cook et al. (2010) found a correlation of gender (boys) with the bully role of .18, with the bully/victim role of .10, and with the victim role of .06, indicating a higher prevalence of boys for all three roles (although the gender difference for the victim role is not large). Most studies found that

boys are more likely to be involved in physical forms of victimisation, while bullying among girls is more likely to be either relational or verbal (Besag, 2006; Crick & Grotpeter, 1995).

Prejudice-related bullying

Recent reviews have called for more studies on discriminative, or so-called prejudice-related bullying (Juvonen & Graham, 2014). The risk for bullying and victimization is not equal across student groups; a number of studies indicate that students with disabilities or suffering from obesity, or the ones belonging to ethnic or sexual minorities, are at greater risk for being victimised than their peers. Farmer et al. (2012) found that female students who received special education services were 3.9 times more likely to be victims and 4.8 times more likely to be bully-victims than their peers without disabilities. Similar results were also found in USA by Blake, Lund, Zhou, and Benz (2012).

To address the role of ethnicity in different contexts, one study examined sixth-grade students' experiences of vulnerability at school, defined as perceived victimisation, feeling unsafe and feeling lonely. The students were from 99 classrooms in 10 middle schools that varied with respect to ethnic diversity (Juvonen, Nishina, & Graham, 2006). Greater ethnic diversity was related to a lower sense of vulnerability among different ethnic groups. The authors argued that power relations may be more balanced in ethnically diverse schools with multiple ethnic groups. A recent meta-analysis of Vitoroulis and Vaillancourt (2015) focused on ethnic group differences in peer victimisation and suggested that ethnic minority status alone was not strongly associated with a higher level of peer victimisation. Thus, although ethnic minority status poses a risk for victimisation, its effect seems to depend on the context.

Many studies on the incidence of homophobic bullying are limited to single-item measures of sexual minority status, and do not measure dimensions of sexual orientation (i.e. identity as well as behaviour). In addition, even in large population-based samples, the prevalence of sexual minorities is quite low, and often different types of sexual identities and preferences are combined into a single category for statistical analyses. Despite these limitations, some data are impressive; for example, a survey run by LGBT associations involving more than 7000 students, aged 13 to 21 years, showed that nearly 9 out of 10 LGBT students experience harassment at school (Kosciw, Greytak, Bartkiewicz, Boesen, & Palmer, 2012). In addition, homophobic teasing or name-calling is a commonly reported experience, particularly by students who identify themselves as gay, lesbian, bisexual, or transgender, among these students 50–80% have experienced it (Espelage, Hong, Rao, & Thornberg, 2015; Russell, Toomey, Ryan, & Diaz, 2014). In conclusion, the problem of prejudice-related bullying appears highly relevant, affecting minority groups seriously.

Risk factors

Individual-level risk factors for bullying and victimisation

Bullies

In his seminal work, Olweus (1978, p. 136) described the 'aggressive personality pattern' of bullies as a driving force behind their mean behaviour. As bullying is a form of aggressive behaviour, it is not surprising that an individual's general tendency to aggress (trait

aggression) is associated with bullying. Having attitudes and cognitions that favour aggression and low levels of empathy towards other people are associated with both general aggression and bullying (e.g. Van Noorden, Bukowski, Haselager, & Cillessen, 2016).

Some theoretical accounts view bullies as individuals who lack social skills, have a low self-esteem, deficiencies in social information processing, low social standing in the peer group, and other adjustment problems. Others view bullying as functional, adaptive behaviour associated with benefits. Empirical studies have not always succeeded in clarifying this issue, partly due to the failure to acknowledge the heterogeneity of children and adolescents engaging in bullying. Some of them are victimised themselves (so-called bully-victims) whereas others can be considered 'pure' (non-victimised) bullies. Bully-victims are typically highly maladjusted in comparison to pure bullies. To keep this distinction clear, we discuss bullies, victims and bully-victims separately.

There used to be a rather common belief that low self-esteem leads to aggression, including bullying. Although negative self-related cognitions are (weakly) related to bullying, they do not predict a greater likelihood of being a pure, non-victimised bully (Cook et al., 2010). There is little support for the aggression – low self-esteem hypothesis in general (Baumeister, Bushman, & Campbell, 2000). Instead, recent evidence suggests that narcissism, or a sense of grandiosity and entitlement, as well as callous-emotional traits (characterised by lack of empathy and shame) are associated with bullying (Fanti & Kimonis, 2012; Reijntjes et al., 2016).

The belief that bullies are socially incompetent was challenged by Sutton, Smith, and Swettenham (1999), who found that 7–10-year-old bullies scored relatively high in tasks designed to assess understanding of others' cognitions and emotions. Accordingly, Peeters, Cillessen, and Scholte (2010) identified three subtypes of bullies, a popular-socially intelligent group, a popular moderate group, and an unpopular-less socially intelligent group; the study underlines the heterogeneity of children and adolescents involved in bullying. Overall, there is a need to understand better the heterogeneity of students bullying their peers and their differing motivations to do so (Rodkin, Espelage, & Hanish, 2015).

Research guided by the social cognitive framework has found that bullies are characterised by thought processes that support the use of aggression. Bullies feel confident about using aggression, expect positive outcomes for aggression (e.g. peer approval), view aggression as an accepted way of behaving, and have an overall positive view on the use of aggression (Toblin, Schwartz, Gorman, & Abou-ezzeddine, 2005). A recent meta-analysis (Gini, Pozzoli, & Hymel, 2014) provides empirical evidence of bullies using several moral disengagement mechanisms to self-justify their negative behaviour.

Whether such tendencies should be regarded as deficiencies or merely as differences in social-cognitive processing styles, has been debated in the literature. Traditionally, social competence has been seen as a behaviour that is socially accepted and associated with being liked by others. However, it can be also defined as an ability to be successful at achieving one's goals. According to the latter view, children who successfully achieve their goals, either by using prosocial or coercive strategies, could be seen as socially competent. Some studies suggest that many (pure) bullies are so-called bistrategic controllers, who use both prosocial and coercive strategies to get what they want (Olthof & Goossens, 2008; Olthof, Goossens, Vermande, Aleva, & Van der Meulen, 2011; Rodkin et al., 2015).

Bullies value dominance (Olthof et al., 2011; Sijtsema, Veenstra, Lindenberg, & Salmivalli, 2009) and they often acquire it (Olthof et al., 2011; Pellegrini & Long, 2002). Even if they are

not necessarily personally liked by many classmates, bullies may be perceived as popular, powerful, and 'cool' among their peers (Caravita, DiBlasio, & Salmivalli, 2009; Reijntjes et al., 2016). Moreover, bullies are often central members of their peer networks and have friends. Adolescent bullies like others who engage in similar behaviours (Sentse, Kiuru, Veenstra, & Salmivalli, 2014), and affiliate with them and can thereby provide reinforcement for each other's coercive behaviour.

Regarding family influence, bullies tend to perceive their parents as authoritarian, punitive and unsupportive (Baldry & Farrington, 2000), and they report less family cohesiveness than other children (Smith, 2014). In a meta-analysis by Cook et al. (2010) family factors were, on average, only weakly related to bullying; however, several family factors such as parental conflict, monitoring and family SES were examined together rather than separately.

Victims of bullying

Victimisation is associated with a number of internalising problems such as depression, anxiety and low self-esteem (Cook et al., 2010; Hawker & Boulton, 2000). Victimisation is also related to numerous interpersonal difficulties such as peer rejection, low peer acceptance, having few or no friends, and negative friendship quality (Cook et al., 2010; Hawker & Boulton, 2000). Also, children with externalising problems and low levels of prosocial behaviour are more likely to be victimised (Card, 2003; see the section on bully-victims). Children with internalising (or externalising) problems are more likely to become victimised if they also face interpersonal difficulties (Hodges, Boivin, Vitaro, & Bukowski, 1999; Hodges & Perry, 1999).

Many risk factors for being bullied can be understood in the light of the bullies' characteristics and goals: children who are unassertive and insecure can elicit aggression-encouraging cognitions in potential bullies. Such characteristics may also make a child a suitable target for someone aiming at status enhancement. By choosing victims who are submissive, insecure about themselves (Salmivalli & Isaacs, 2005), physically weak (Hodges & Perry, 1999), and rejected by the peer group (Hodges & Perry, 1999), bullies can signal their power to the rest of the group without having to be afraid of confrontation or losing affection of other peers (Veenstra, Lindenberg, Munniksma, & Dijkstra, 2010).

Having protective friends moderates the association between risk factors and victimisation. Thus, children who are shy and anxious have a higher probability of being victimised if they have friends who are physically weak and/or disliked by other peers, as compared to the children who have friends and who are strong and/or liked by others (Hodges, Malone, & Perry, 1997). Yet, although victimised children can benefit from having friends who are strong and who can protect them from bullies, in reality, victimised children tend to hang out with other victimised peers (Sentse, Dijkstra, Salmivalli, & Cillessen, 2013).

Many children who are victimised by peers are also victimised in other contexts, including their home (poly-victimisation, see Finkelhor, Ormrod, & Turner, 2007). In contrast, some studies have found that victims view their home environment as rather positive, but also overprotective. A meta-analysis by Lereya, Samara, and Wolke (2013) found support for both overprotection and abuse/neglect in the family: the former was more strongly related to being a pure victim, whereas the latter was more strongly associated with the bully-victim status.

Bully-victims: a distinct group

Bully-victims are a distinct, albeit a rather small group of children and adolescents. They are highly rejected by their peers and show both externalising and internalising problems. They often come from the most adverse home environments, characterised by maltreatment and neglectful parenting (Cook et al., 2010; Lereya et al., 2013). Bully-victims score high on reactive aggression (besides scoring high on proactive aggression). They also show a different socio-cognitive profile compared to pure bullies (e.g. Toblin et al., 2005).

Classroom-level risk factors

Classrooms of students, as well as whole schools, vary in rates of bullying. As variation between different classrooms is much larger than variation between schools, we focus on the former. Classroom-level risk factors may be sought from demographic factors (such as class size), peer group dynamics, or teacher characteristics.

Demographic factors do not seem to explain classroom-level differences in bullying well. For instance, there is no clear evidence of class size being related to the prevalence of bullies or victims in the class. When an association has been found, it has often been contrary to the common expectation: more bullying has been found in smaller rather than in bigger classrooms. Several other demographic candidates have failed to explain differences between classrooms as well (e.g. the proportion of boys in a classroom, the proportion of immigrants in a classroom), or the findings have been controversial. Classroom differences can be better explained by factors related to peer group dynamics or teacher characteristics (for a review, see Saarento, Boulton, & Salmivalli, 2015).

Classroom hierarchy is associated with bullying behaviour: there is more bullying in highly hierarchical classrooms, where peer status (such as popularity) or power (who typically decides about things) are centred upon few individuals rather than being evenly distributed. In a recent study (Garandeau, Lee, & Salmivalli, 2014), it was found that classroom hierarchy leads to an increase in bullying over time, rather than bullying leading to increased hierarchy. A non-hierarchical classroom, on the other hand, is not a favourable environment for bullying to flourish.

Furthermore, classroom norms explain why students in some classrooms are more likely to be involved in bullying. Probullying norms can be reflected in low levels of antibullying attitudes, in positive expectations regarding the social outcomes of probullying actions and negative expectations of the social outcomes of provictim actions – each of these factors is associated with students' higher risk of bullying involvement in a classroom (Nocentini, Menesini, & Salmivalli, 2013). Classroom norms can also be reflected in the behaviours of students when witnessing the acts of bullying. As the reactions of peers in bullying situations provide direct feedback to the bullies, they have important implications for the emergence and maintenance of bullying. The frequency of bullying perpetration is indeed higher in classrooms where reinforcing the bullies' behaviour is common and defending the victimised classmates is rare, implying that bullying is socially rewarded (Salmivalli, Voeten, & Poskiparta, 2011).

From the point of view of students at risk for becoming the targets of bullying, recent research has shown that the association between individual risk factors (such as social anxiety and peer rejection) and victimisation varies across classrooms, suggesting that individual vulnerabilities are more likely to lead to victimisation when the classroom context allows that to happen. The likelihood that vulnerable children become the targets of bullying is

exacerbated in classrooms characterised by high levels of reinforcement of the bully and low levels of defence of the victim (Kärnä, Voeten, Poskiparta, & Salmivalli, 2010) by the peer bystanders.

Finally, students' perceptions regarding teacher attitudes towards bullying are associated with the level of bullying problems in a classroom. A study examining the mediators of the KiVa antibullying programme (Saarento et al., 2015) found that changes in student perceptions of their teachers' bullying-related attitudes mediated the effects of the programme on bullying. During the year when the KiVa programme was implemented, students started to perceive their teachers' attitudes as more disapproving of bullying, and consequently, their bullying behaviour was reduced. This is strong evidence for the importance of teachers communicating their disapproval of bullying to students.

Health consequences for bullying

Bullying brings negative health consequences for both bullies and victims, and it can have a negative impact on the bystanders as well (Wolke & Lereya, 2015). Several longitudinal studies from different countries, along with systematic reviews and meta-analyses, have demonstrated the relationship between school bullying or the experience of being victimised and later health outcomes. These associations hold even when controlling for other childhood risk factors (Arseneault, Bowes, & Shakoor, 2010).

In the past three decades, a significant effort has been put forth by researchers analysing the effects of bullying and victimization on physical, psychological, relational and general wellbeing. The main results show that adolescents who are bullied miss more school and show signs of poor school achievement (Nakamoto & Schwartz, 2009), report higher loneliness and poorer health (Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006), and greater levels of anxiety and depression than their non-victimised peers (Juvonen & Graham, 2014). These negative outcomes are also related to the severity of the victimisation experience. Van der Plog, Steglich, Salmivalli, and Veenstra (2015) found that victims of frequent and multiple victimisation, and victims who were victimised by several bullies, suffered more than those whose experiences were less frequent or perpetrated by fewer peers. Reijntjes, Kamphuis, Prinzie, and Telch (2010) analysed the role of internalising problems and their relationship to bullying. They concluded that such problems appear to be both antecedents and consequences of peer victimisation, constituting a 'vicious cycle' that contributes to the elevated stability of peer victimisation. Studies have also linked victimisation to suicidal ideation (Holt et al., 2015; Klomek, Sourander, & Elonheimo, 2015). As Arseneault et al. (2010) underscored in their review, being bullied is associated, in the short-term, with severe symptoms of mental health problems and, furthermore, has long-lasting effects that can persist until late adolescence. McDougall and Vaillancourt (2015) in recent systematic review underscored the necessity to use a complex and multifactorial model to understand direct and indirect links connecting peer victimisation experiences and later adult outcomes. Finally, Wolke and Lereya (2015), reviewing studies of genetically identical monozygotic twins who lived in the same households but were discordant for experiences of bullying, confirmed the dramatic consequences of being a victim of bullying over and above other personal and contextual factors.

Active bullying has also relevant impact on individual life. In a meta-analysis of 28 longitudinal studies, Ttofi, Farrington, Lösel, and Loeber (2011b) concluded that bullying

perpetration is a strong and a specific risk factor for later criminal offending and psychotic symptoms. Klomek et al. (2015) confirmed this pattern and proposed a dose effect, in which more frequent bullying involvement in childhood is more strongly associated with adult adversities. The same authors concluded that bullying perpetration is followed by an increased risk of delinquency whereas victimisation is followed by an increased risk of depression.

Bully-victims, victims and bullies had a significantly higher risk for psychosomatic problems than non-involved age-mates (Gini & Pozzoli, 2015), and victimisation is a major childhood risk factor that uniquely contributes to later depression, even controlling for many other major childhood risks (Ttofi, Farrington, Lösel, & Loeber, 2011a).

The authors of the studies cited above brought up the importance of carrying out effective anti-bullying programmes that would have a high benefit-cost ratio in terms of preventing early crime, suicide, internalising symptoms and other psychological problems. Many authors proposed that such interventions should be viewed as a form of early intervention for public health.

Effective interventions

The amount of research on antibullying interventions is significant, with numerous scientifically evaluated school-based programmes. In their meta-analysis, Farrington and Ttofi (2009) concluded that such programmes are often effective, reaching an average decrease of 20–23% for bullying others and of 17–20% for being bullied. However, the effects vary considerably across programmes; they are also weaker when programmes are evaluated with more stringent designs, such as randomised controlled trials (Langford et al., 2015; Ttofi & Farrington, 2011). It should be noted that some programmes do *not* lead to positive outcomes, some have never been evaluated, and some have been evaluated so poorly that no conclusions can be drawn regarding their effects. Evans and colleagues (Evans, Fraser, & Cotter, 2014) reported that up to 45% of the studies showed no programme effects on bullying perpetration and about 30% showed no programme effects on victimisation. Which programmes work best, or what are the effective ingredients of these programmes, are urgent questions.

Whole-school programmes are often complex, consisting of various components targeted at different levels of influence (individual students, parents, classrooms, whole schools) and including a variety of methods. The different components are typically evaluated in combination, rather than separately. Consequently, the contribution of each individual component to the overall effects of a given programme is unknown. It is possible that a programme reaches the best effects when all components are used together, but it is also conceivable that some components are responsible for the good outcomes whereas some others contribute little, or nothing to the effects. From the public health perspective, it is necessary to assess interventions in terms of their cost-effectiveness.

The effective ingredients of bullying prevention programmes were investigated by Ttofi and Farrington (2011). Their conclusion, based on between-programmes evaluation, was that the intensity (such as number of hours) and duration (number of days/months) of programmes is related to their effectiveness. This suggests that programmes need to be long-lasting and intensive in order to have the desired effects. The authors identified two additional

elements that were related to programme effectiveness, namely parent training/parent meetings, and disciplinary methods (referring to sanctions within a warm framework).

The mobilisation of bystanders, or the silence of the majority witnessing bullying, are key to success. Research has demonstrated that peer witnesses' responses are crucial to inhibit or fuel bullying. Further, some of the highly effective programmes, such as the KiVa antibullying programme developed in Finland, rely on enhancing bystanders' awareness, empathy and self-efficacy to support victimised peers, instead of reinforcing the bullies' behaviour (Kärnä et al., 2011). Although the inclusion of the element 'work with peers' was not found to strengthen the effects of antibullying programmes in the analysis by Ttofi and Farrington (2011), in their coding work with peers it was defined as 'formal engagement of peers in tackling bullying' (including the utilisation of formally assigned peer mediators, or peer supporters), rather than awareness-raising about the role of *all* peers and formulation of rules for bystander intervention in classrooms. On a theoretical as well as empirical basis, the latter type of approach is highly recommended (Salmivalli, 2010). Formal peer helpers intervening in bullying has, based on current evidence, little effect on ongoing bullying. It should be noted, however, that assigning peers as *educators* (involving them in awareness-raising) has been found effective in reducing bullying among adolescents (NoTrap! intervention, see Palladino, Nocentini, & Menesini, 2015).

There is variation between schools and between individual teachers in how they implement prevention programmes. Even programmes that were designed to be intensive can be implemented more or less intensively, depending on the resources and commitment in the schools. Also, teachers might adapt the programmes and change some critical parts; in other words, they can decide not to implement the programme as it was designed to be implemented. There is evidence that better implementation fidelity is associated with better outcomes (such as greater reductions in students' experiences of being bullied, see Haataja, Boulton, Voeten, & Salmivalli, 2014).

In summary, whole-school programmes to prevent bullying are often successful. Their effects vary, however; some programmes show consistent positive effects whereas others have little or no evidence of effectiveness. What explains the divergent effects? Programmes should be intensive and long-lasting, and they should be implemented with fidelity. Involving parents seems to strengthen the effects, as well as the use of disciplinary practices with bullies. Raising awareness among students about the role of the whole group has an impact on maintaining bullying, and enhancing antibullying norms and responses within classrooms is crucial. It is also highly important that teachers clearly communicate their antibullying attitudes to students.

In several countries, it is legally required that schools have an anti-bullying policy. This obligation is desirable, but it should be remembered that having *any kind of policy* in place might not be enough; interventions that have been found to be effective through rigorous evaluations should be utilised. Schools should be provided with guidance regarding most effective practices and programmes. We agree with the suggestion by Farrington and Ttofi (2009) that a system of accrediting effective anti-bullying programmes should be developed in order to ensure that programmes adopted by schools contain elements that have been proved to be effective in high-quality evaluations.

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References

Arseneault, L., Bowes, L., & Shakoor, S. (2010). Bullying victimization in youths and mental health problems: 'Much ado about nothing'? *Psychological Medicine, 40*, 717–729.

Baldry, A. C., & Farrington, D. P. (2000). Bullies and delinquents: Personal characteristics and parental styles. *Journal of Community and Applied Social Psychology, 10*, 17–31.

Baumeister, R. F., Bushman, B. J., & Campbell, W. K. (2000). Self-esteem, narcissism, and aggression: Does violence result from low self-esteem or from threatened egotism? *Current Directions in Psychological Science, 9*, 26–29.

Besag, V. E. (2006). *Understanding girls' friendships, fights and feuds: A practical approach to girls' bullying*. New York, NY: Open University Press.

Blake, J. J., Lund, E. M., Zhou, O., & Benz, M. R. (2012). National prevalence rates of bully victimization among students with disabilities in the United States. *School Psychology Quarterly, 27*, 210–222.

Caravita, S., DiBlasio, P., & Salmivalli, C. (2009). Unique and interactive effects of empathy and social status on inovlvement in bullying. *Social Development, 18*, 140–163.

Card, N. (2003, April 24–27). Victims of peer aggression: A meta-analytic review. In N. Card & A. Nishina, *Whipping boys and other victims of peer aggression: Twenty-five years of research, now where do we go?* Innovative poster symposium presented at the biennial meeting of the society for research on child development, Tampa, FL.

Cook, C., Williams, K. R., Guerra, N. G., Kim, T., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School Psychology Quarterly, 25*, 65–83.

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710–722.

Del Rey, R., & Ortega, R. (2008). Bullying en los países pobres: prevalencia y coexistencia con otras formas de violencia [Bullying in poor countries: Prevalence and coexistence with other violence types]. *International Journal of Psychology and Psychological Therapy, 8*, 39–50.

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

Evans, C., Fraser, M., & Cotter, K. (2014). The effectiveness of school-based bullying prevention programs: A systematic review. *Aggression and Violent Behavior, 19*, 532–544.

Fanti, K. A., & Kimonis, E. (2012). Bullying and victimization: The role of conduct problems and psychopathic traits. *Journal of Research on Adolescence, 22*, 617–631.

Farmer, T. W., Petrin, R., Brooks, D. S., Hamm, J. V., Lambert, K., & Gravelle, M. (2012). Bullying involvement and the school adjustment of rural students with and without disabilities. *Journal of Emotional and Behavioral Disorders, 20*, 19–37.

Farrington, D. F. (1993). Understanding and preventing bullying. *Crime and Justice, 17*, 381–458.

Farrington, D., & Ttofi, M. (2009). School-based programs to reduce bullying and victimization. *Campbell Systematic Reviews, 6*. The Campbell Collaboration.

Fekkes, M., Pijpers, I. M. F., Fredriks, M. A., Vogels, T., & Verloove-Vanhorick, P. S. (2006). Do bullied children get ill or do ill children get bullied? A prospective cohort study on the relationship between bullying and health-related symptoms. *Pediatrics, 117*, 1568–1574.
Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007). Poly-victimization: A neglected component in child victimization. *Child Abuse & Neglect, 31*, 7–26.
Garandeau, C., Lee, I., & Salmivalli, C. (2014). Inequality matters: Classroom status hierarchy and adolescents' bullying. *Journal of Youth and Adolescence, 43*, 1123–1133.
Gini, G., & Pozzoli, T. (2015). Association between bullying and psychosomatic problems: A meta-analysis. *Pediatrics, 123*, 1059–1065.
Gini, G., Pozzoli, T., & Hymel, S. (2014). Moral disengagement among children and youth: A meta-analytic review of links to aggressive behavior. *Aggressive Behavior, 40*, 56–68.
Greeff, P., & Grobler, A. A. (2008). Bullying during the intermediate school phase: A South African study. *Childhood, 15*, 127–144.
Haataja, A., Boulton, A., Voeten, M., & Salmivalli, C. (2014). The KiVa antibullying curriculum and outcome: Does fidelity matter? *Journal of School Psychology, 52*, 479–493.
Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: a meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry, 41*, 441–455. doi:10.1111/1469-7610.00629
Hodges, E. V. E., Boivin, M., Vitaro, F., & Bukowski, W. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology, 35*, 94–101.
Hodges, E. V. E., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimization in the peer group. *Developmental Psychology, 33*, 1032–1039.
Hodges, E. V. E., & Perry, D. G. (1999). Personal and interpersonal antecedents andconsequences of victimization by peers. *Journal of Personality and Social Psychology, 76*, 677–685.
Holt, M. K., Vivolo, K. A. M., Polanin, J. R., Holland, K. M., DeGue, S., Matjasko, J. L., … Reid, G. (2015). Bullying and suicidal ideation and behaviors: A meta-analysis. *Pediatrics, 135*, e496–e509.
Hymel, S., & Swearer, S. M. (2015). Four decades of research on school bullying: An introduction. *American Psychologist, 70*, 293–299.
Juvonen, J., & Graham, S. (2014). Bullying in schools: The power of bullies and the plight of victims. *Annual Review of Psychology, 65*, 159–185.
Juvonen, J., Nishina, A., & Graham, S. (2006). Ethnic diversity and perceptions of safety in urban middle schools. *Psychological Science, 17*, 393–400.
Kärnä, A., Voeten, M., Poskiparta, E., & Salmivalli, C. (2010). Vulnerable children in varying classroom contexts: Bystanders' behaviors moderate the effects of risk factors on victimization. *Merrill-Palmer Quarterly, 56*, 261–282.
Kärnä, A., Voeten, M., Little, T., Poskiparta, E., Kaljonen, A., & Salmivalli, C. (2011). A large scale evaluation of the KiVa anti-bullying program: Grades 4-6. *Child Development*, *82*, 311–320.
Klomek, A. B., Sourander, A., & Elonheimo, H. (2015). Bullying by peers in childhood and effects on psychopathology, suicidality, and criminality in adulthood. *The Lancet, 2*, 930–941.
Kosciw, J. G., Greytak, E. A., Bartkiewicz, M. J., Boesen, M. J., & Palmer, N. A. (2012). *The 2011 national school climate survey: The experiences of lesbian, gay, bisexual and transgender youth in our nation's schools*. New York, NY: GLSEN.
Langford, R., Bonell, C., Jones, H., Pouliou, T., Murphy, S., Waters, E., … Campbell, R. (2015). The world health organization's health promoting schools framework: A Cochrane systematic review and meta-analysis. *BMC Public Health, 15*, 130. doi: 10.1186/s12889-015-1360-y
Lereya, S. T., Samara, M., & Wolke, D. (2013). Parenting behavior and the risk of becoming a victim and a bully/victim: A meta-analysis study. *Child Abuse & Neglect, 37*, 1091–1108.
Lister, C. E., Ray, M. M., Vance, D. L., Joshua, H. W., Parley, C. H., & Benjamin, T. C. (2015). Victimization among Peruvian adolescents. *Journal of School Health, 85*(7): 413–496.
McDougall, P., & Vaillancourt, T. (2015). Long-term adult outcomes of peer victimization in childhood and adolescence: Pathways to adjustment and maladjustment. *American Psychologist, 70*, 300–310.
Menesini, E., & Nocentini, A. (2009). Cyberbullying definition and measurement. *Zeitschrift für Psychologie, 217*, 230–232.

Menesini, E., Nocentini, A., Palladino, B. E., Frisén, A., Berne, S., Ortega, … Smith, P. K. (2012). Cyberbullying Definition Among Adolescents: A Comparison Across Six European Countries. Cyberpsychology. *Behavior, And Social Networking, 15*, 455–463. doi:10.1089/cyber.2012.0040

Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., & Runions, K. C. (2014, October). Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. *Journal of Adolescent Health, 55*, 602–611.

Monks, C., & Smith, P. K. (2006). Definitions of bullying: Age differences in understanding of the term, and the role of experience. *British Journal of Developmental Psychology, 24*, 801–821.

Nakamoto, N., & Schwartz, D. (2009). Is peer victimization associated with academic achievement? A meta-analytic review. *Social Development, 19*, 221–242.

Nocentini, A., Menesini, E., & Salmivalli, C. (2013). Level and change of bullying behavior during high school: A multilevel growth curve analysis. *Journal of Adolescence, 36*, 495–505.

Oliveros, M., Figueroa, L., & Mayorga, G. (2009). Intimidacion en colegios estatales de secundaria del Peru' [Bullying in state high schools in Perù]. *Revista Peruana de Pediatría, 62*, 68–78.

Olthof, T., & Goossens, F. (2008). Bullying and the need to belong: Early adolescents' bullying-related behavior and the acceptance they desire and receive from particular classmates. *Social Development, 17*, 24–46.

Olthof, T., Goossens, F. A., Vermande, M. M., Aleva, E. A., & Van der Meulen, M. (2011). Bullying as strategic behavior: Relations with desired and acquired dominance in the peer group. *Journal of School Psychology, 49*, 339–359.

Olweus, D. (1973). *Hackkycklingar och översittare: forskning om skolmobbning* [Aggression in the schools: Bullies and whipping boys]. Stockholm: Almqvist & Wiksell.

Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys*. New York, NY: Hemisphere Publishing.

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

Palladino, B., Nocentini, A., & Menesini, E. (2015). Evidence-based intervention against bullying and cyberbullying: Evaluation of the Notrap! program in two independent trials. *Aggressive Behavior*, 194–206. Early online.

Peeters, M., Cillessen, A. H. N., & Scholte, R. H. J. (2010). Clueless or powerful? Identifying subtypes of bullies in adolescence. *Journal of Youth and Adolescence, 39*, 1041–1052.

Pellegrini, A. D., & Long, J. D. (2002). A longitudinal study of bullying, dominance, and victimization during the transition from primary school through secondary school. *British Journal of Developmental Psychology, 20*, 259–280.

Pepler, D., Jiang, D., Craig, W., & Connolly, J. (2008). Developmental trajectories of bullying and associated factors. *Child Development, 79*, 325–338.

Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010). Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse & Neglect, 34*, 244–252. doi:10.1016/j.chiabu.2009.07.009

Reijntjes, A., Vermande, M., Thomaes, S., Goossens, F., Olthof, T., Aleva, L., & Van der Meulen, M. (2016). Narcissism, bullying, and social dominance in youth: A longitudinal analysis. *Journal of Abnormal Child Psychology, 44*, 63–74.

Rivers, I., & Smith, P. K. (1994). Types of bullying behaviour and their correlates. *Aggressive Behavior, 20*, 359–368.

Rodkin, P. C., Espelage, D. L., & Hanish, L. D. (2015). A relational framework for understanding bullying developmental antecedents and outcomes. *American Psychologist, 70*, 311–321.

Russell, S. T., Toomey, R. B., Ryan, C., & Diaz, R. M. (2014). Being out at school: The implications for school victimization and young adult adjustment. *American Journal of Orthopsychiatry, 84*, 635–643.

Saarento, S., Boulton, A., & Salmivalli, C. (2015). Reducing bullying and victimization: Student- and classroom-level mechanisms of change. *Journal of Abnormal Child Psychology, 43*, 61–76.

Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior, 15*, 112–120.

Salmivalli, C., & Isaacs, J. (2005). Prospective relations among victimization, rejection, friendlessness, and children's self- and peer-perceptions. *Child Development, 76*, 1161–1171.

Salmivalli, C., Voeten, M., & Poskiparta, E. (2011). Bystanders matter: Associations between reinforcing, defending, and the frequency of bullying behavior in classrooms. *Journal of Clinical Child & Adolescent Psychology, 40*, 668–676.
Sentse, M., Dijkstra, J. K., Salmivalli, C., & Cillessen, A. H. N. (2013). The dynamics of friendships and victimization in adolescence: A longitudinal social network perspective. *Aggressive Behavior, 39*, 229–238.
Sentse, M., Kiuru, N., Veenstra, R., & Salmivalli, C. (2014). A social network approach to the interplay between adolescents' bullying and likeability over time. *Journal of Youth and Adolescence, 43*, 1409–1420. doi:10.1007/s10964-014-0129-4
Sijtsema, J., Veenstra, R., Lindenberg, S., & Salmivalli, C. (2009). An empirical test of bullies' status goals: Assessing direct goals, aggression, and prestige. *Aggressive Behavior, 35*, 57–67.
Sittichai, R., & Smith, P. K. (2015). Bullying in south-east Asian countries: A review. *Aggression and Violent Behavior, 23*, 22–35.
Smith, P. K. (2014). *Understanding school bullying: Its nature and prevention strategies*. London: Sage.
Smith, P. K., Robinson, S., & Marchi, B. (2016). Cross-national data on victims of bullying: What is really being measured?. *International Journal of Developmental Science, 10*, 9–19.
Sutton, J., Smith, P. K., & Swettenham, J. (1999). Social cognition and bullying: Social inadequacy or skilled manipulation? *British Journal of Developmental Psychology, 17*, 435–450.
Swearer, S. M., & Hymel, S. (2015). Understanding the psychology of bullying: Moving toward a social-ecological diathesis–stress model. *American Psychologist, 70*, 344–353.
Tiliouine, H. (2015). School bullying victimisation and subjective well-being in Algeria. *Child Indicators Research, 8*, 133–150.
Toblin, R. L., Schwartz, D., Gorman, A. H., & Abou-ezzeddine, T. (2005). Social-cognitive and behavioral attributes of aggressive victims of bullying. *Journal of Applied Developmental Psychology, 26*, 329–346.
Ttofi, M. M., & Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology, 7*, 27–56. doi:10.1007/s11292-010-9109-1
Ttofi, M. M., Farrington, D. P., Lösel, F., & Loeber, R. (2011a). Do the victims of school bullies tend to become depressed later in life? A systematic review and meta-analysis of longitudinal studies. *Journal of Aggression, Conflict and Peace Research, 3*, 63–73. doi:10.1108/17596591111132873
Ttofi, M. M., Farrington, D. P., Lösel, F., & Loeber, R. (2011b). The predictive efficiency of school bullying versus later offending: A systematic/meta-analytic review of longitudinal studies. *Criminal Behaviour and Mental Health, 21*, 80–89. doi:10.1002/cbm
Van der Plog, R., Steglich, C., Salmivalli, C., & Veenstra, R. (2015). The intensity of victimization: Associations with children's psychosocial well-being and social standing in the classroom. *PLoS ONE*. doi:10.1371/journal.pone.0141490.
Van Noorden, T. H. J., Bukowski, W. M., Haselager, G. J. T., & Cillessen, A. H. N. (2016). Disentangling the frequency and severity of bullying and victimization in the association with empathy. *Social Development, 25*, 176–192.
Veenstra, R., Lindenberg, S., Munniksma, A., & Dijkstra, J. K. (2010). The complex relation between bullying, victimization, acceptance, and rejection: Giving special attention to status, affection, and sex differences. *Child Development, 81*, 480–486. doi:10.1111/j.1467-8624.2009.01411
Vitoroulis, I., & Vaillancourt, T. (2015). Meta-analytic results of ethnic group differences in peer victimization. *Aggressive Behavior, 41*, 149–170.
Wolke, D., & Lereya, S. T. (2015). Long-term effects of bullying. *Archives of Disease in Childhood, 100*, 879–885. doi:10.1136/archdischild-2014-306667
Zych, I., Ortega, R., & Del Rey, R. (2015, September–October). Scientific research on bullying and cyberbullying: Where have we been and where are we going. *Aggression and Violent Behavior, 24*, 188–198.

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ORIGINAL ARTICLE

Rethinking School-Based Bullying Prevention Through the Lens of Social and Emotional Learning: a Bioecological Perspective

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Abstract
This article makes the case for shifting the national focus from bullying prevention to the systemic integration of evidence-based practices of social and emotional learning (SEL) into US school programs and policies. Several meta-analyses demonstrate that SEL is a promising approach for reducing a range of disruptive behaviors in schools. The data also show that SEL enhances school engagement and climate, interpersonal relationships, well-being, and academic achievement. We critically analyze existing approaches to bullying prevention in the USA and, from a bioecological perspective, describe their limitations, in addition to the importance of emotions in the organization of children's development. We discuss why schools should address the social and emotional development of children and adults in order to decrease harmful behaviors, form positive relationships, support psychological health, and offer more effective education. The bioecological perspective provides a framework for successfully integrating whole-school, evidence-based approaches to SEL, including statewide adoption of SEL standards and increased focus on school climate.

Keywords Bullying prevention · Social and emotional learning · SEL · Emotional intelligence · Education policy

Research throughout the last decade has established that contrary to conventional wisdom, bullying[1] is not a normal rite-of-passage preparing children for the harsh realities of adulthood. It can be a traumatic experience with adverse consequences in all areas of a child's life, persisting well into adulthood (Wolke et al. 2013).

Bullying prevention policies have been adopted throughout the USA, state by state (see U.S. Department of Health and Human Services 2017a). These policies have focused public attention on the importance of preventing violence and aggression, supporting positive youth development, and improving the school climate. However, data from the U.S. Department of Education shows that bullying rates remained stable in the last decade[2] (Lessne and Yanez 2016), and research on bullying prevention programs shows that their effects range from contraindicated to modestly positive.

Among the potential reasons for the mixed effects may be: (1) a mechanistic emphasis on campaigns, assessment, reporting, and consequences in traditional bullying prevention programs; (2) the lack of a developmental perspective; and (3) an emphasis on intervention, rather than the promotion of skills and capacities that support psychological health, interpersonal relationships, and a positive school climate. In addition, focusing on a narrow definition of bullying omits other harmful behaviors, such as violence, aggression, conflicts, micro-aggressions, and rudeness.

Prevention requires a shift in all levels of a child's ecosystem. At the macro level, we need to examine the commitment the USA is willing to make to children's healthy social and emotional development. At the mid-level, we must invest in developing skilled adults with proximal relations to children.

[1] Bullying is a repetitious, intentionally aggressive pattern of behavior involving a power imbalance. It may inflict physical, psychological, social, or educational harm. It can be physical or verbal and may occur face-to-face or via technology (Gladden et al. 2014).

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[2] The most recent survey by the U.S. Department of Education (Lessne and Yanez 2016) showed a decrease in overall bullying, but middle school rates stayed the same. Other negative indicators such as verbal abuse of teachers, sexual harassment, and student fear decreased slightly.

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At the micro-level, we need to address children's individual needs, including those who engage in bullying behavior, as well as the targets of, and witnesses to bullying.

The goal of this article is to propose a shift in US policy focus, from bullying prevention to the systemic integration of evidence-based practices of social and emotional learning (SEL) into school programs and policies. SEL involves the teaching of skills, including self-awareness, self-management, social awareness, responsible decision-making, and relationship management (CASEL 2015). A meta-analysis of 213 school-based SEL programs involving 270,034 kindergarten through high school students reported significant positive effects of SEL programs on students' social and emotional skills (mean effect size (ES) = .57), attitudes toward self and others (ES = 0.23), and social behaviors (ES = 0.24). In addition, significant reductions occurred in conduct problems (ES = 0.22) and emotional distress (ES = 0.24). (Conduct problems included bullying and a range of other disruptive behaviors.) Academic performance, assessed in a subset of studies involving 135,396 students, significantly improved an average of 11 percentile points (ES = 0.27). These significant effects continued an average of at least one and one-half years according to a subset of 33 studies, though the effect sizes diminished over time (EF = .32 to .11) (Durlak et al. 2011). A second major review of five meta-analyses of universal school-based SEL programs also showed modest promise for promoting positive skills and reducing behavioral risk. Examining 300 studies and involving more than 300,000 students, the review showed that SEL programming significantly reduced measures of aggression and disruptive behavior, though effect sizes were modest (ES = 0.21 to 0.26). Intervention effects were comparable, regardless of gender, ethnicity, or school setting. Socioeconomic level did not make a difference, or slightly favored those from a lower economic class; age was a moderator in only one of the five reviews (Domitrovich et al. 2017). A meta-analysis of 82 SEL studies showed that the positive effects of SEL on social and emotional skills (ES = 0.23) and disruptive behaviors including bullying (ES = 0.14) remained small but significant at a mean two-year follow-up (Taylor et al. 2017). Indeed, a meta-analysis of 18 studies showed that: self-oriented personal competencies were protective against becoming a victim of bullying; social competence and academic performance were protective against becoming a bully; and positive peer interactions were protective against becoming a bully/victim (Zych et al. 2018). In addition, a cost-benefit analysis of six SEL programs found them to be good investments, with $11 saved for every $1 spent (Belfield et al. 2015). In other words, while SEL shows compelling promise for cultivating positive social and emotional skills, it also confers modest, but significant positive impact on a wide range of behavioral issues and academic performance, making it a cost-effective approach supporting students' psychological health.

In this article, we begin with a critical analysis of current bullying prevention programs (BPP) and policies throughout the USA, and describe their limitations from a bioecological perspective. Next, we present a case for addressing the social and emotional skills of children and adults in order to decrease bullying, form positive relationships, and provide effective teaching and learning. Finally, we employ the bioecological perspective to present a framework and recommendations for successfully integrating whole-school, evidence-based approaches to SEL. Recommendations include statewide adoption of SEL standards, an increased focus on school climate, SEL training dedicated to developing educator and family member skills to facilitate co-construction, modeling, and delivery of effective SEL practices; and implementation of developmentally and culturally responsive SEL interventions for children and youth.

Bullying Prevention Programs: Mechanisms of Change and Outcomes

In the last decade, every state in the USA has passed legislation outlawing bullying or provided school districts with model policies designed to prevent it. Laws and policies vary widely, yet the majority focus on definitions, sanctions, referrals, reporting, and recording (Sacco et al. 2012; U.S. Department of Health and Human Services 2017a).

Bullying rates began to decrease in the early 1990s, when BPPs were initiated, but since then, the rates have remained largely stable. The most recent national survey reported a slight decrease in overall bullying, but bullying among middle schoolers remained stubbornly consistent (see Zhang et al. 2016). And, bullying incidents are likely underreported; one evaluation found that 64% of students who experienced bullying did not report it (Petrosino et al. 2010).

Approximately one decade ago, six major reviews or meta-analyses of the effectiveness of BPPs drew cautionary conclusions: effects ranged from iatrogenic (bullying increased) (e.g., Baldry and Farrington 2007; Vreeman and Carroll 2007; Smith et al. 2004; Ttofi and Farrington 2011), to negligible or "too small to be practically significant" (e.g., Ferguson et al. 2007; Merrell et al. 2008; Smith et al. 2004), to small positive effects (e.g., Vreeman and Carroll 2007). Baldry and Farrington (2007) found that eight of the 16 studies they included produced desirable effect sizes (a 10 % or greater reduction in bullying), but mostly in other countries. Among the US studies, one showed a 6% reduction in bullying; the other revealed a 1% increase in bullying behavior.

Additional meta-analyses have found more positive effects of anti-bullying programs. One meta-analysis including 44 evaluations found programs effective for reducing bullying by 20–23% (odds ratio (OR) = 1.36), and victimization by 17–20% (OR = 1.29) (Farrington and Ttofi 2009; Ttofi and Farrington 2011). A second study of 100 evaluations concluded that programs reduced perpetration by 19–20% (OR =

1.209–1.324) and victimization by 15–16% (OR = 1.244–1.248) (Gaffney et al. 2018a). A third meta-analysis of six anti-bullying programs showed that programs were effective in reducing victimization by 17% (OR = 0.83) (Langford et al. 2015). The most promising features of effective programming include schoolwide approaches combined with targeted interventions; a public health, three-tiered model (response to intervention model); procedures ensuring higher dosage, greater fidelity, and sustainability; multiple activities engaging many stakeholders at multiple levels; parent training; and consistent supervision, classroom management, and discipline (Bradshaw 2015; Cohen et al. 2015).

Numerous BPPs are currently used with varied mechanisms of change. Earlier programs tended to rely on punishment, consequences, or classic behavior management; more recent initiatives teach social cognition, rely on the peer group, focus on relationship repair, add a component of SEL, or attempt school-wide climate change. Many programs rely on mechanisms of change that are activated after-the-fact; hence, they are based on intervention, rather than prevention. Only programs that proactively build skills, teach replacement behaviors, and focus on creating a positive school climate should be considered preventative.

Examples of popular approaches, their mechanisms of change, and the evidence for their effectiveness follow. It should be noted that some programs specifically address bullying, while others address childhood aggression in general. We include the entire continuum, since the degree to which the etiologies, prognoses, or targeted interventions overlap is not well understood, yet schools are charged with addressing the full range of problematic behaviors.

Operant Conditioning and Information Dissemination The first widely used initiative was the Olweus Bullying Prevention Program (OBPP) and its offshoots. The mechanisms of change are primarily school-wide information dissemination about a new no-bullying stance at the systems level and improved supervision, identification, and punishment/consequences at the individual level (Olweus and Limber 2010b). In the New National Initiative project, Olweus (2005) reports that bullying reduced 42% among boys and 48% among girls, and victimization decreased 32% and 35% for boys and girls, respectively. Though successful in Norway where it originated, research efforts with elementary and middle school students in Seattle, South Carolina, and Philadelphia in the USA failed to yield significant results (see Olweus and Limber 2010a).

Positive Behavioral Intervention and Support (PBIS) uses behavior modification to reward good behavior and impose consequences for unwanted behavior. In addition, individualized interventions are created for at-risk students. Behavioral analysis approaches often employ an elaborate system for tracking behavior and communicating throughout the educational setting (Bradshaw et al. 2015; Sugai et al. 2011). A four-year, randomized control trial of PBIS of more than 12,000 elementary children in 37 Maryland public schools found it effective for reducing general disciplinary problems among high-risk students (ES = 0.12 to 0.39) (Bradshaw et al. 2015). PBIS had some impact on bullying behavior among younger children, but this result was based on teacher reports that tend to underrepresent bullying (Waasdorp et al. 2012). Calling the program "disempowering" and "authoritarian," Cohen et al. (2015) critique PBIS for being too focused on disciplinary problems, and failing to focus enough on building positive skills, relationships, and environments.

Social Cognitive Processing Another approach focuses on at-risk children, rather than the whole school, and is based on childhood aggression and social cognition research. These programs teach social information processing skills, such as how to accurately appraise intentions, assess goals, and choose constructive behavioral responses. For example, the Fast Track program teaches elementary school children social information processing and problem-solving skills, emotional understanding, and self-control in short weekly meetings. In a ten-year study with approximately 900 at-risk kindergarten children, Fast Track significantly reduced conduct problems among the most high-risk children (ES = 0.2 to 0.4) (Lochman and Wells (2004); delinquent offenses reduced 27%; and participants were 39% more likely never to be arrested as a juvenile, and 34% more likely to never be arrested as an adult (Conduct Problems Prevention Research Group 2011; Sorensen and Dodge 2015). The Coping Power Program for at-risk boys entering middle school showed short-term reductions in delinquency and substance use (ES = 0.25 and 0.31, respectively), and improvements in school behavior (ES = 0.38) (Lochman and Wells 2004). One multi-site investigation of social cognitive models for violence prevention among more than 5500 middle school students showed mixed results, with increased aggression in some cases (Simon et al. 2009). One program aimed at reducing hostile attribution bias among 20 aggressive third- to fifth-grade boys showed significant reductions in bias, and in the endorsement of hostile retaliation following a 12-lesson intervention. However, the assessments were hypothetical scenarios presented in a laboratory setting, and while teachers rated the boys as less aggressive after treatment, they still accounted for the largest proportion of office referrals. In addition, bias was not reduced to levels comparable to nonaggressive peers (Hudley and Graham 1993).

None of the above social cognitive processing interventions specifically assessed bullying behavior. Critics of these approaches point out that bullies may not be deficient in social information processing. In fact, they can be quite skilled at theory of mind, reading social dynamics, and exploiting people and situations (see Sutton et al. 1999). In addition, social cognitive approaches frequently overlook the victims of

aggression who often need help with self-blaming attributions and heightened rejection sensitivity (Juvonen and Graham 2014; Zimmer-Gembeck 2016).

One suggested prevention for potential victims of bullying is based on implicit theories of personality (Dweck 2006). Yeager et al. (2011) showed that ninth- and tenth-grade students who were targets of bullying and held a fixed mindset (e.g., "I'm a loser," "I must not be a likable person") were more likely to want to get revenge than students with a growth mindset (e.g., "people can change"). A randomized field study showed that a six-session mindset intervention with ninth- and tenth-grade students was effective in reducing vengeful desires (ES = 0.48), vengeful intentions (ES = 0.44), and vengeful behaviors (ES = 0.47). It also increased prosocial responses in the intervention group compared to controls (ES = 0.86) (Yeager et al. 2013). The study did not address participants other than potential bully-victims, and the ecological validity of a growth mindset approach to bullying prevention has not been fully explored.

Psychodynamic Interventions Children experiment with their growing sense of personal power. This process can include developing a sense of agency and self-efficacy, attempting to influence others, trying to control resources or the thoughts and actions of others, and inflicting harm through bullying, aggression, and violence. Psychodynamic interventions treat bullying as one symptom of a dysfunctional approach to expressing power in the school environment (Fonagy et al. 2009). For example, in one study of 10,000 third- through ninth-grade students, 10–20% experienced a "vicarious thrill" when watching someone being bullied (Twemlow et al. 2001). Schools demonstrate their orientation to power through their approach to discipline, use of coercion, and definitions of academic achievement. Psychodynamic interventions create new "mental models" about power for school administrators, principals, and students.

Two programs utilize a psychodynamic approach. The School Psychiatric Consultation Model offers outside psychiatric consulting to high-needs children with disruptive behavior problems. The Creating Peaceful School Learning Environment (CAPSLE) uses multiple strategies, including training teachers to replace punitive discipline with relationship-based strategies, adult mentoring, respectful problem-resolution training, and student martial arts training. A three-year intervention study showed that CAPSLE positively impacted peer reports of aggression (ES = 0.20) and victimization (ES = 0.20), as well as achievement scores among third- to fifth-graders (ES not reported), but the School Psychiatric Consultation Model, alone, did not (Fonagy et al. 2009). Again, bullying behavior was not individually specified.

Peer-to-Peer Interventions Peer-mediated strategies in which the perpetrator and victim attend the same meeting for corrective action can be ineffective, or worse, can backfire, and may be clinically contraindicated. Several meta-analyses and reviews draw cautious conclusions about peer-based approaches. For example, a review of 19 randomized control trial studies showed that grouping high-risk children or youth together for treatment yielded adverse effects across a wide variety of settings (e.g., schools, classrooms, group homes, wilderness camps), for a wide range of problems (e.g., behavior disorders, aggression, substance abuse, eating disorders), and a wide variety of ages (e.g., kindergartners to college freshmen) (Dodge et al. 2006). Though bullying behavior was not specifically identified in that review, another study showed that the presence of bullying prevention programs was negatively related to peer victimization (OR = 1.24) (Jeong and Lee 2013). Another meta-analysis reported that "work with peers" was associated with a nonsignificant increase in bullying and a significant increase in victimization (OR = 1.13) (Ttofi and Farrington 2011). Dodge et al. (2006) recommend the rigorous evaluation of all interventions for peer aggregation effects.

Two popular peer-focused bullying intervention approaches are restorative justice (RJ) and bystander intervention. RJ uses peer- and community-group processes to repair relationship harm. RJ practices have been adopted rapidly by schools in the last two years in reaction to the punishments, sanctions, school expulsions, and school-to-prison pipelines that disproportionately target African-American children by nearly four-to-one (U. S. Department of Education 2016). Anecdotal reports suggest some positive impact on expulsions and suspensions, school climate, and some disciplinary problems, but the adoption rate appears far ahead of an evidence base (Fronius et al. 2016; Song and Swearer 2016).

A bystander intervention approach to bullying presumes that everyone in the social context has the ability and responsibility to disable bullying. A meta-analysis of more than 9000 New Zealand high school students found that when students take action against bullying, it is more effective than when teachers are responsible (Denny et al. 2015). A randomized control trial of Finland's successful KiVa anti-bullying program showed stronger effect sizes for bullying and victimization in lower grades (OR = 1.33 to 1.53) than grades seven through nine (OR = 1.13 and 1.21 for victimization and bullying, respectively). KiVa's success has not been replicated in US schools (Kärnä et al. 2013).

However, standing up to bullying is not appropriate for everyone. Successful bystander intervention requires taking risks and is associated with a sense of high self-efficacy, high empathy for victims, moral engagement, and high social status (Thornberg and Jungert 2013). Even among adults, the ability to intervene is correlated with altruism, extraversion, peer acceptance, emotion regulation, and autonomous sense of self (Moisuc et al. 2018).

In sum, increased monitoring, rule-making, punishment and operant conditioning, and social information-processing, as well

as peer-to-peer, psychodynamic, and bystander interventions, have not created a reliable impact on bullying behavior, and some have even been counter-productive. In the next section, we provide a bioecological perspective to explore possible reasons why these approaches may be ineffective, and why SEL as a universal primary prevention is promising.

From Bullying Prevention to Evidence-Based Social and Emotional Learning: a Bioecological Perspective

Numerous reviews of BPPs have examined the ecology of implementation and critical roles of micro- and mesosystems for making BPPs work, such as classroom climate, peer group dynamics, teacher-student relationships, and home-school links (e.g., Espelage and De La Rue 2012; Swearer and Doll 2001). These reviews were based on Bronfenbrenner's (1979) earliest formulation of the ecological model of human development. However, Bronfenbrenner (2005) "reassessed, revised, extended," and even "regretted and renounced" parts of the earlier model (p. 106). Here, he added the developing individual (Person), the period of historical and developmental time (Time), and interpersonal relationships (Process) to the better-known environmental settings (Contexts). Notably, Bronfenbrenner called proximal processes, or one-to-one relationships the "primary engines of development." Their power, however, remains "a function of the characteristics of the developing Person, of the immediate and more remote environmental contexts, and time periods, in which the proximal processes take place" (Bronfenbrenner and Morris 2006, p. 795). In other words, developmental outcomes arise through the joint characteristics of the developing person and the environment, in which relationships play a critical delivery role. This updated model is the Process-Person-Context-Time (PPCT) model; to obtain a truly bioecological interpretation, all four elements should be present.

In this section, we review Bronfenbrenner's four properties of Person, Process, Context, and Time, and their implications for bullying prevention. A consideration of proximal processes is interwoven throughout the discussions of Person and Contexts. We also offer a rationale for a paradigm shift that would place SEL at the center of bullying prevention.

The Developing Person

> The characteristics of the person at a given time in his or her life are a joint function of the characteristics of the person and of the environment over the course of that person's life up to that time (Bronfenbrenner 2005, p. 108).

Beginning in utero, emotions and their contexts are important organizers of developmental systems. A pregnant woman's emotions can affect the growth of the fetus' stress regulation physiology through epigenetic changes that have behavioral, emotional, and cognitive consequences into childhood (Monk et al. 2012), and physical health consequences in adulthood (Godfrey and Barker 2001). Quality of care for newborns continues to shape their stress regulation system well into adolescence (Curley and Champagne 2016). The infant's quality of attachment with caregivers impacts self-regulation and exploration of the environment, a foundation for cognitive and intellectual growth. Attachment quality has consequences for academic achievement, as well as social, emotional, and cognitive development into adolescence and early adulthood (Sroufe et al. 2009). Numerous life course studies link childhood emotional health and social competence to positive adult outcomes, such as education, employment, mental and physical health, and life satisfaction (e.g. Heckman et al. 2006; Moffitt et al. 2011). The reverse also is well-documented; early childhood adversity predicts poor social and emotional developmental as well as health outcomes (see Shonkoff et al. 2012). In sum, emotions are deeply interwoven with human development.

Early environments are impactful and require less effort and cost to effect change than remedial efforts later in life (Center on the Developing Child 2007), emphasizing the importance of early positive scaffolding. This section highlights key social and emotional developmental capabilities by age and shows how some SEL programs support these emerging competencies, while reducing problematic behaviors. Currently, 11 states are creating developmental benchmarks for SEL (Dusenbury and Weissberg 2017).

Early Childhood, Ages 0–5 Infants vary in their ability to self-regulate (auto-regulate) or regulate with the help of another person (Schore 2015). By age 2, these differences are predictive of later autonomy and adjustment (Eisenberg et al. 2004; Lawson and Ruff 2004). With increasing language facility, preschoolers are better able to name feelings, as well as their causes and consequences. The hallmark of preschoolers' emotional development is the rapid growth of neural structures supporting advances in executive function, in addition to behavioral and emotional regulation (Diamond 2013).

The roots of prosocial development appear in infancy. A rudimentary capacity for empathy is evident in newborns, and during the first two years of life, concern for others, prosocial helping behavior, and an understanding of others' motivations, intentions, and states gradually increase (Eisenberg et al. 2015). By preschool age, young children respond more to others' feelings (Denham et al. 2011).

Numerous SEL programs for young children facilitate the development of emotional and social skills, create positive classroom climates, and reduce aggression (see McClelland

et al. 2017, and casel.org for reviews). For example, based on neurological developmental processes, Promoting Alternative Thinking and Learning Strategies (PATHS) teaches SEL constructs like emotion recognition, self-control, and interpersonal problem-solving. PATH has positive effects on internalizing and externalizing behavior problems as mediated by enhanced inhibitory control and verbal fluency (Riggs et al. 2006).

RULER is an empirically based approach to SEL based on emotional intelligence (Mayer and Salovey 1997) and Ecological Systems Theories (Bronfenbrenner and Morris 2006). RULER teaches preschool to high school students and adults the skills to recognize, understand, label, express, and regulate emotions (Brackett et al. 2015) through four sequential, developmentally scaled "Anchor Tools." For example, the Mood Meter enables educators and students to check in with their bodies and minds to identify and name their emotional experiences and learn effective strategies to manage them. RULER's "Feeling Words Curriculum" integrates SEL into the standard curriculum and teaches emotion concepts through storytelling, character analysis, engaging families, and cooperative learning exercises focused on emotion regulation. In one evaluation, 3- to 5-year olds in RULER classrooms showed a greater knowledge of emotions, including recognizing and naming emotions, compared to children in control classrooms (ES = 0.52, 1.39, respectively) (Nathanson et al. 2016).

Elementary School, Ages 6–10 Social and emotional skills develop in tandem with cognitive ability. For example, school-age children increasingly differentiate internal from external experiences and can gradually intersect multiple cognitive dimensions. Similarly, children come to understand that their internal thoughts, not just external events, can create their feelings (Flavell et al. 2001), and they use external problem-solving and internal coping strategies to manage emotions (Saarni 2000). They start to understand mixed and multiple simultaneous emotions, and self-conscious emotions like shame and guilt (Tracy et al. 2005; Zajdel et al. 2013), in addition to gaining a more nuanced vocabulary (Harter 1999). They learn display rules and are better able to mask emotions (Misailidi 2006). Their ability to take others' feelings into account improves (McDowell and Parke 2000).

Many SEL programs have demonstrated effectiveness in elementary schools, though the emphasis is more on social skills than emotional development. For example, the 4Rs (Reading, Writing, Respect, and Resolution) uses literature to teach pre-k through fifth-grade students about interpersonal relationships and conflict resolution. Target outcomes include handling anger, listening actively, cooperating, being assertive, celebrating differences, reducing bias, and building community (Brown et al. 2010). The 4Rs has been effective for improving hostile attributional bias, aggressive interpersonal negotiation strategies, ADHD, and depressive symptoms in children. In addition, students at greater behavioral risk (aggression and conduct disorder) showed higher improvements in math and reading achievement scores (ES = 0.56 and 0.60, respectively) compared to students with lower baseline behavioral risk (ES = 0.14 and 0.06, respectively) (Jones et al. 2011). Similarly, PATHS reduces aggressive behavior and conduct problems and improves social information processing, prosocial behavior, and academic engagement. It is effective for children with disabilities, and those children in more disadvantaged schools. (Effect sizes were mild to moderate, ranging from .1 to .4) (Bierman et al. 2010; Crean and Johnson 2013).

Early Adolescence, Ages 11–15 In puberty, sex hormone changes impact brain structure and function (Casey and Caudle 2013). Reward circuitry and social-affective circuitry are remodeled, accompanied by changes in dopamine, serotonin, and testosterone, making affective and social processes highly salient. This social reorientation increases the need to belong, activates concerns about status, and stimulates identity formation (Crone and Dahl 2012; Yeager et al. 2017). While these changes prepare teens to transition into adulthood, they also make them more emotional; more sensitive to belonging, social inclusion-exclusion, and peer evaluation; more stress-sensitive; and more reward- and sensation-seeking (Crone and Dahl 2012; Yeager et al. 2017). During this stage, bullying peaks, and psychiatric disorders emerge.

Often, this is also when programs once effective with younger students no longer work, with the break point around the eighth-grade (Yeager et al. 2015). The rise in testosterone (in boys and girls) fuels status- and respect-seeking, making them especially sensitive to threats to their agency and autonomy (Yeager et al. 2017). Autonomy threat can be triggered by the manipulation of rewards, punishments, imposed goals, surveillance, or choice constraints (Ryan and Deci 2000). Thus, programs that are overly prescriptive or disrespect teens may trigger their disengagement. However, programs that leverage teen agency, interest in relationships, and desire for prestige and social competence will be more effective.

At the upper elementary and middle school levels, students in RULER classrooms take an active role in their learning by conducting real-world experiments about emotion themes and concepts. In one study of fifth- and sixth-graders, compared with control classrooms, students in RULER classrooms achieved higher end-of-year academic performance, as well as higher teacher-rated social and emotional competence ($eta^2 = 0.05$ and 0.04, respectively) (Brackett et al. 2012). But implementation quality is a moderator. In a separate study, RULER classrooms with the highest quality implementation resulted in students with greater emotional intelligence (E = 0.16), social competence (ES = 0.23), and conflict resolution skills (ES = 0.19) after one year (Reyes et al. 2012).

Used in the eighth-grade, Second Step is designed to facilitate emotion regulation and reduce aggression and violence (Committee for Children 2008). Improvements were shown in anger management, impulse control, empathy, social competence, prosocial goals and behaviors, and externalization of behaviors and hyperactivity (ES ranged from 0.039 to 0.249) (Edwards et al. 2005). A randomized controlled trial of Second Step in 61 schools from five districts found the program most effective among students with the least social and emotional competence and greater conduct problems and aggression, based on teacher reports (Low et al. 2015).

High School, Ages 16–18 Older teenagers' psychological tasks include greater autonomy and identity formation, formation of affiliative peer groups, and exploration of romance, competencies, and commitments to beliefs, goals, and activities. Effective high school programs align with youths' desire to "matter," and to be respected, accountable, and autonomous. According to Yeager (2017), "These programs do this both in how they talk to young people—by offering opportunities for authentic choice and input—and in what they teach—e.g., by helping young people envision a desirable future…." (Yeager 2017, p. 79). Effective programs engage youths' emerging value systems and support their genuine desire to understand how the real world works (Yeager 2017; Yeager et al. 2017). For example, the SEL program, Facing History and Ourselves, incorporates into curricula discussions about social justice, racism, religious intolerance, and other themes. The program demonstrated numerous benefits for high school students, such as improved empathy, greater maturity in social conflicts, reduced racist attitudes, and fewer conduct problems (Facing History and Ourselves 2015).

Children Are Different Developmental scientists refer to temperament (Goldsmith et al. 1987), inhibition and shyness (Kagan et al. 1988), biological sensitivity to context (Boyce and Ellis 2005), or differential susceptibility (Belsky and Pluess 2009) to explain how individual children respond differently in similar environments. For example, children with low-reactive phenotypes may thrive in most any condition, shy children may be fearful in social situations, and sensitive children may be more easily overwhelmed by stimulation. Biologically sensitive children often experience more harm in adverse circumstances, while also reacting more positively in supportive environments (Boyce and Ellis 2005).

A program with a singular mechanism of change extrinsic to the child, like those that employ operant conditioning, zero-tolerance, or punishment as behavior change levers, may be ineffective simply because it fails to acknowledge individual differences. For example, research shows that children bully for diverse reasons, including social status (Pellegrini 2002), social control (Merten 1997), poor modeling (Espelage et al. 2000), marginalization (e.g. Warburton et al. 2006), or even sadism (Jacobson 2012). Targets of bullying also vary. Most recently, the top reason given for being bullied was physical appearance (Lessne and Yanez 2016). Other victimized children may be withdrawn, inhibited, and passive. Some children fight back, and others are inclined to ignore the bullying or seek support (Waasdorp and Bradshaw 2011). Witnesses also vary. Some may be popular and find it easy to intervene as an upstander, but children who are sensitive, introverted, withdrawn, or anxious may have difficulty becoming an upstander or speaking up in a restorative justice circle. A shy child may be able to befriend a victim later, but a socially withdrawn or anxious child is more likely to be victimized by helping (Rubin et al. 2006). Groups also have different stressors (e.g., poverty, trauma, discrimination); thus, prevention practices should be sensitive to the individual and context, as well as using an equity lens (Simmons et al. 2018).

SEL programs vary in the degree to which they accommodate individual differences. Some programs teach one or two emotion regulation strategies (e.g., mindfulness or deep breathing), while others offer more granulated strategies. For example, an outgoing child might seek out a friend to deal with stress; an introverted child might read a book, listen to music, or regroup in solitude. Personality traits are neither hindrances nor boosters—they are guides toward helpful strategies. RULER supports students in discovering approaches that work best for each one, allowing strategies to be emotion- and context-specific, personalized, and culturally responsive. This requires unconventional flexibility in the classroom environment.

In sum, many BPPs tend to omit "the Person." In contrast, a bioecological approach to embedding SEL would acknowledge emotional development as central to human life, be specific to developmental processes, begin early in life, and facilitate differentiation for unique contexts and individuals. Most SEL programs foster students' academic, social, and emotional growth, while supporting children to learn positive replacement behaviors for aggression, power assertion, and bullying.

Context: Microsystem

> A microsystem is a pattern of activities, social roles, and interpersonal relations experienced by the developing person in a given face-to-face setting… (Bronfenbrenner 2005, p. 147).

Primary caregivers and the family setting have the most prominent role in co-constructing children's early development, but as children grow, other microsystems, such as teachers, neighborhoods, and peers, become increasingly influential.

The Family Research has established that certain parenting practices are linked to positive child outcomes, while others are linked to challenges such as aggression, school bullying, and victimization.

Parenting for a secure attachment (Sroufe et al. 2009) and authoritative parenting (Baumrind 1978) are associated with lower behavioral risk and positive child outcomes, including increased prosocial behavior and improved social skills; healthier friendships and closer relationships; autonomy and self-agency; self-esteem; responsibility, creativity, and leadership; and achievement and academic success. Specific caregiving behaviors, or proximal processes, contribute to sculpting an infant's stress reactivity and emotion regulation. Sensitive caregiving and serve-and-return interactions help to organize hierarchical neural circuitry that processes, communicates, and regulates social and emotional information. Effective caregivers modulate their own emotions to avoid inducing excessively high or low levels of arousal in their infants, and they accurately read their baby's signals to upregulate pleasant feelings and downregulate unpleasant feelings. Parents' emotions also create a family atmosphere that provides a background of well-being for children's development (Schore 2015). Later, proximal processes co-construct children's emotional knowledge and behaviors, like emotion vocabulary and regulation, as well as empathy and prosocial tendencies. For example, children's emotional understanding and vocabulary are associated with parents' emotion skills (Fivush and Haden 2005; Laible and Thompson 2002). Caregivers also teach children to manage their feelings internally and externally; navigate social interactions; manage conflict; and continue to cultivate positive emotions, empathy, and prosocial tendencies (Eisenberg et al. 2013).

By contrast, family violence and parenting practices that are overly controlling, harsh, or lacking in discipline or supervision are associated with bullying perpetration. Victimization is associated with negative family interactions, or child maltreatment that creates rejection sensitivity, low confidence, and poor self-esteem in children (see Hong and Espelage 2012). Perpetration of aggression and victimization by siblings also increases the chances of bullying perpetration and victimization at school. However, the quality of parenting mediates sibling relationships. When parents use harsh practices with children, sibling aggression increases; when parents use positive practices, sibling aggression decreases (see Tippett and Wolke 2015).

Effective bullying prevention and the co-construction of positive replacement behaviors should involve the entire family. Numerous evidence-based interventions improve parenting practices and child outcomes (see Teti et al. 2017), from universal parenting education programs that teach authoritative parenting to time-limited, structured counseling with parents at risk for violence (e.g., Cowan et al. 2009). It is noteworthy that focusing on the co-parents' relationship can be more effective than teaching parenting skills (Cowan and Cowan 2015). SEL interventions like RULER offer developmentally and culturally informed practices enabling parents to learn the same SEL skills their children learn in schools.

Teachers Teachers can knowingly or unknowingly enable bullying. Studies have shown that teachers miss most incidents of bullying (Swearer and Cary 2003). Some fail to help students when asked (Twemlow et al. 2006), bully students themselves (Twemlow et al. 2006), reinforce gender-based and sexual orientation–based bullying (Kosciw et al. 2012), or show a lack of empathy toward victims (Tettegah and Anderson 2007). They can overreact by confusing normal developmental conflicts with bullying, or over relying on harsh interventions, especially with preschool children (Gilliam 2005) and African-American boys (Gilliam et al. 2016).

Teachers with higher SEL have better relationships with their students. They display more positive emotions toward students and have higher job satisfaction (Brackett et al. 2010). They also create a more emotionally supportive learning environment and have fewer problems with classroom management (Brown et al. 2010). They use more strategies that cultivate creativity, choice, and autonomy (Jones et al. 2013). A study of 36 first-grade teachers showed that when teachers were more emotionally supportive of students, children were less aggressive and had greater behavioral self-control. Interestingly, behavior management was not related to student self-control (Merritt et al. 2012).

Neighborhoods Neighborhoods that are unsafe or lack parental supervision frequently have schools with higher rates of bullying, violence, and school suspensions (see Swearer and Hymel 2015). Numerous neighborhood-level interventions (e.g., community gardens, social vigilance, graffiti reduction efforts) improve quality of life, yet community and school interventions rarely engage directly with each other (Shonkoff and Phillips 2000). Neighborhoods are unique, complex systems, making a one-size-fits-all approach as inappropriate as it is for individuals. For example, in a study of the Coping Power program, parent support developed more successfully in the more advantaged neighborhoods, but children's aggression reduced more in neighborhoods with poorer social organization (Lochman et al. 2013).

Peers Peer relationships become increasingly salient with development and they track changes in cognitive, neurological, emotional, and social growth. To prevent peer maltreatment, it is helpful for educators to understand the normal developmental trajectory of peer relationships and specific issues that arise during sensitive periods. Some examples follow.

Most toddlers experiment with aggression, so caregiving requires positive tactics like redirection and teaching constructive, alternative communication strategies. In early childhood,

young children's play, though rich in emotional and social exploration, vacillates between solitary, parallel, and cooperative modes (Meyers and Berk 2014; Rubin et al. 1983). However, a long day with large groups of children in a structured setting can challenge a child's self-control, since their executive function and emotion regulation are just emerging. However, preschool aggression is very responsive to positive social problem-solving strategies (Vaughn et al. 2003). Persistent aggression at this age is predictive of later adjustment problems (Crick et al. 2006).

In elementary school, children sort themselves into stable friendship groups based on the psychological qualities of mutuality, reciprocity, interests, sensitivities, and trust. This sorting is ripe for skills development as new relationships are formed and others are reorganized (Cairns et al. 1998; Hartup and Abecassis 2002). Children demonstrate prevailing attitudes about power, privilege, dominance, and status, and some begin to use aggressive tactics toward low-status peers, socially awkward children, and those who simply appear "different" (Buhs et al. 2010). This is an important period for children's emerging moral development, perspective-taking abilities, and internalization of social rules; it offers valuable opportunities to teach emotional awareness and interpersonal skills.

With the onset of puberty and its significant social reorientation, peer dynamics are highly salient for better and worse. On the one hand, teens can be more inclusive, sensitive to others, community-minded, and idealistic (see Twenge 2017). On the other hand, the presence of peers can degrade attention, decision-making, and performance (Blakemore and Robbins 2012). The intensity and range of young teens' emotions change, e.g., they show heightened responses to others' facial expressions (Thomas et al. 2007), and an increase in self-conscious emotions like humiliation, pride, and guilt (Burnett et al. 2009). Teens' social groups become more complex (see Brown and Larson 2009), and aggression, dating violence, and physical, relational, and online bullying peak in middle school (e.g., Card et al. 2008). Thus, middle school is a critical period to address issues of power and respect, as well as healthy relationship skills and decision-making. Later, high school students navigate a deepening sense of self in the context of relationships, raising relevant questions about individuality, identity, intimacy, and autonomy.

Numerous SEL programs have shown modest promise for improving peer-to-peer relationships. For preschoolers, programs like PATHS (Bierman et al. 2010), Incredible Years Training Series (Webster-Stratton et al. 2008), Tools of the Mind (Barnett et al. 2008), and RULER (Nathanson et al. 2016) demonstrate small-to-modest effectiveness for developing preschoolers' emotional, social, problem-solving, and conflict resolution skills, along with reducing conduct problems and improving pre-academic skills.

Children's social relationships increase dramatically in elementary school. A systematic review of 11 SEL programs for elementary school showed "robust" effects on SEL skills, and small, "but important" effects on aggression, depression, and academic outcomes (Jones et al. 2017, p. 62). A randomized controlled trial of RULER showed that it created stronger emotional climates and better relationships in the classroom compared with the control schools (Rivers et al. 2013). Steps to Respect (STR) reduced observed bullying (Frey et al. 2005) and other forms of aggression, while improving students' social skills (Shetgiri et al. 2015). Other programs like MindUP improved empathy and perspective-taking. PATHS reduced hostile attribution biases and the use of aggression in social conflicts, and 4Rs improved social processes in classrooms (Brown et al. 2011).

More research is needed regarding the effectiveness of SEL programs in improving teen social skills and reducing aggression, bullying, and harmful behavior. The Second Step program positively impacted homophobic name-calling and sexual harassment in one of two states tested, but did not show the desired declines in bullying, physical aggression, and victimization (Espelage et al. 2015). Promising programs focus on group-level dynamics such as changing social norms, training influential adults, and increasing respect in schools (Yeager 2017; Yeager et al. 2017). Efforts to improve social problem-solving and mindsets about others are also promising (Yeager et al. 2018).

Context: Mesosystem

> The mesosystem is comprised of "the linkages and processes taking place between two or more settings containing the developing person…a system of microsystems" (Bronfenbrenner 2005, p. 148).

Bronfenbrenner cautioned that a breakdown of mesosystem connections risks making schools "breeding grounds of alienation" (Bronfenbrenner 1979, p. 231). Children have better outcomes when their mesosystem connections are continually and densely linked, especially through personal relationships. Developmentally supportive mesosystems have common goals, positive orientations, emotional and trusting relationships, bi-directional communication, and an evolving balance of power in favor of the child. Three mesosystems relevant for bullying reduction and the cultivation of SEL are school climate, home-school partnerships, and mental health partnerships.

School Climate A school's climate reflects its "heart and soul" (Freiberg and Stein 1999, p. 11) and its "quality and character" (National School Climate Center n.d.). School climate can be operationalized in a variety of ways, e.g., as the

sum of students', parents', and educators' experiences of the norms, values, relationships, pedagogy, and even the organizational structures they encounter; or the quality of teaching, learning, and relationships. In practice, though, it often simply refers to safety. Schools with a positive climate foster healthy development among all students, while a negative school climate is associated with higher rates of student bullying, aggression, victimization, and lack of feeling safe (Cohen et al. 2015).

Social norming in schools can be achieved in a variety of ways and can modify a school's culture so *desired* behaviors and feelings are positively identified and cultivated. BPP and SEL research shows that stakeholder support at every level is critical, and student input is essential to leverage peer dynamics and create positive peer pressure (Hinduja 2018). The Italian anti-bullying program, No Trap!, leverages peer educators to affect norms, behaviors, and climate to reduce traditional bullying and cyberbullying, though to our knowledge this has not been replicated in the USA (Palladino et al. 2016). Though elements of school climate vary among different institutions, the following are important considerations:

- Norms about feelings and relationships: Traditionally, schools communicate lists of unwanted behaviors, but they do not cultivate replacement behaviors or strategies. An embedded SEL approach leads with its explicit value on feelings, and strategies for intra- and interpersonal emotion regulation.
- Norms about power: The peer social fabric includes complex power dynamics involving popularity, rejection, discrimination, social scripts, crowds, cliques, teams, clubs, social mobility, inclusion, exclusion, and more. Individual children occupy roles varying by status, influence, and prognosis. For example, *popular prosocial* children are socially competent, friendly, and admired and have good social problem-solving skills. Although *neglected* children have low rates of interactions and may be shy, they are also socially skilled, satisfied with their social life, and not at developmental risk (see Newcomb et al. 1993). *Popular antisocial* children with social power and high status who behave poorly and have the power to lead others astray, along with rejected aggressive/withdrawn and controversial children, are at risk for poor outcomes and in need of support (Dijkstra et al. 2009; Lieberman 2013). Power is also held unequally between groups of children, based on gender, class, ethnicity, sexual orientation, etc. For example, a recent survey of 80,000 students in grades 5 through 12 across 24 states found that a majority of students rated their school climate negatively, and most felt that discipline was especially unfair for African-American students (García 2016).
- Norms about media: Video games and pornography saturate teen culture and detrimentally skew cognition, beliefs, feelings, physiologies, and behaviors of children, depending on their exposure (American Psychological Association 2007; American Psychological Association 2015). Cyberbullying (and research on it) is a recent phenomenon, though there is a significant overlap between online and offline bullying (Olweus and Limber 2018). The most recent meta-analysis of 24 published studies showed that anti-cyberbullying programs reduced perpetration by 10–15% (OR = 1.233), and vicitimization by 14% (OR = 1.233) (Gaffney et al. 2018b). More effective programs address social skills training; use peer educators; share information about wise internet use among teachers, staff, and families (Espelage and Hong 2017); confer clear consequences; support student resilience (Hinduja and Patchin 2017); and improve school climate (Patchin and Hinduja 2012).

Almost all school leaders believe school climate is important. Eighty percent of teachers who consider negative school climate a problem view SEL as the preferred solution. Reforming school climate involves forming a council of students, parents, and teachers to lead a bottom-up process responding to the specific needs of a school (Cohen et al. 2015).

Home-School Partnerships Traditional BPPs are more effective when policies are communicated to parents (Ttofi and Farrington 2011), and the same is true for SEL programming. When parents are educated about, and involved in their children's SEL, children benefit (Albright and Weissberg 2010). This is especially true when the relationship involves two-way communication between home and school, when families are involved in activities at home and school, and when the activities are child-centered, constructive, clear, concrete, continuous, and proactive.

In the RULER approach, for example, families, like classrooms, are encouraged to create a "charter" in which family members decide together how they want to feel in the family and identify behaviors that will cultivate those feelings (Brackett 2019). Children are also assigned homework with their families, such as interviewing parents or other significant adults about their experiences with different feeling words (e.g., alienation, elation). This fosters sharing and psychological closeness and contributes to a shared emotion vocabulary at home.

Mental Health Partnerships Students who are bullied or witness bullying are frequently advised to seek help from a safe adult; thus, mental health practitioners with expertise in child development should be available at schools. Pediatricians, nurses, and psychologists receive continuing education in bullying prevention and intervention, and are well-positioned to screen for bullying and victimization during routine physicals, especially for students with diagnoses or qualities known to be at greater risk for bullying (e.g., LGBTQ students, students with disabilities). However, families of students who

experience bullying report that coordination of services between schools, families, and health practitioners is often lacking. Barriers include inaction by school personnel, poor investigation procedures, inadequate follow-up with parents, and inadequate screening and counseling by medical providers (García 2016).

Context: Exosystem

> The exosystem comprises the linkages and processes taking place between two or more settings, at least one of which does not contain the developing person, but in which events occur that influence processes within the immediate setting that does contain that person (e.g., for a child, the relationship between the home and the parents' workplace….) (Bronfenbrenner 2005, p. 148).

Exosystems are settings that do not involve the child directly, but whose effects penetrate the microsystems. Exosystems relevant to bullying prevention include policies and laws, teacher training, and parent workplaces.

Policy and Laws Anti-bullying policies in the USA were adopted following the Columbine High School massacre in 1999. They were predominantly piecemeal, biased in favor of schools, and punitive rather than preventative. An analysis of 166 school-based bullying suits showed that among adjudicated cases, the final rulings favored schools over families (see Cornell and Limber 2015). School policies emphasize the careful definition of the term bullying, awareness of school training, reporting, investigating, and disciplining. One-third of states recommend counseling for involved students (Cornell and Limber 2015; U.S. Department of Health and Human Services 2017b), but they are increasingly taking a law-enforcement approach, applying criminal sanctions for cyberbullying, harassment, and bullying (Levick and Moon 2010). Meaningful bullying prevention policies should arise from collaborations between developmental scientists, educators, and lawmakers.

Other kinds of policies are also important. For example, bullying is more common in schools with greater income inequality (Due et al. 2009). Some policies concentrate violence, school violence, and bullying into particular neighborhoods, a kind of "social apartheid" that is devastating for youth (see Spike 2015). Even the nation's political climate can permeate schools. In the last presidential election, a poll of 2000 school leaders nationwide showed a rise in school-based aggression against students whose cultures were also verbal targets of national political candidates (Costello 2016).

Parents' Work Adult bullying in the US workplace mirrors school-based bullying. Approximately 37% of adults say they have experienced workplace bullying, 44% have witnessed bullying (Namie et al. 2014), and similar to school absenteeism, 80% of workers said they would rather work alone because of hostile work environments (Mental Health America n.d.). Workplace bullying is also associated with suicidal ideation (Nielsen et al. 2015).

The prevalence of adult bullying may explain the belief that bullying is normal, and the hope that "standing up to it" in childhood might somehow prepare one for adulthood. However, the continuity suggests that it is not a childhood problem; it is a human problem. Therefore, the expectation that children alone can fix the problem is misplaced. A comprehensive approach to prevention would also address the embedded problem of adult bullying.

Teacher Preparation

A majority of teachers feel unprepared to deal with classroom bullying (Flower et al. 2017). Teachers traditionally receive little pre-service training in classroom management (Mason and Downing 2014). They are unlikely to interfere between students (Mason and Downing 2014), or they base their disciplinary strategies on the discipline they experienced in their families of origin (Kaplan 1992).

A review of 70 articles (1985–2014) showed seven areas of SEL functioning in which teachers wanted more support, including burnout, their students' feelings, and their own SEL skills (Uitto et al. 2015). Numerous SEL programs emphasize teacher training, especially teachers' SEL skills and classroom routines (Jones et al. 2013). For example, RULER training begins with building teacher, leader, and staff member emotional intelligence skills prior to student programming (Nathanson et al. 2016). When teachers use SEL programs, they feel better (Domitrovich et al. 2016), and their social and emotional competencies improve (see Schonert-Reichl 2017).

However, there is a growing disconnect between the offerings of teacher training programs in colleges and universities, and what teachers are expected to know about SEL in the classroom. A survey of teacher certification requirements throughout the USA showed that all states require some teacher SEL competencies, like social awareness and relationship skills, but few require personal emotional skills such as building teacher's own emotion regulation skills. Slightly more than one-half require student SEL (Schonert-Reichl et al. 2017).

Context: Macrosystem

> The macrosystem consists of the overarching pattern of micro-, meso-, and exosystems characteristic of a given

> culture, subculture, or other broader social context… with particular reference to the developmentally instigative belief systems, resources, hazards, lifestyles, opportunity structures, life course options and patterns of social interchange that are embedded in each of these systems… (Bronfenbrenner 2005, p. 149–150).

More than one decade ago, Bronfenbrenner criticized the USA for its "national neglect of children," a stance "so deep and pervasive as to threaten the future of our nation…" (Bronfenbrenner 2005, p. 211). In order to make true progress on bullying prevention, the USA needs to change its mindset about children in some important ways.

Prioritize Children's Well-being The USA is singular among industrialized nations in its poor treatment of children: It ranks 26 of 29 rich countries on UNICEF's measures of overall child well-being. US teens have lower life satisfaction compared to teens in other wealthy nations, and they rank 27 of 28 nations in their quality of relationships with peers and parents (UNICEF Office of Research 2013). Childhood bullying in the USA ranks in the middle among most international comparisons (Musu-Gillette 2017). Stress, depression, anxiety, and psychopathology among US teens are at an all-time high, and have increased steadily in the last six years (Center for Collegiate Mental Health 2016; Twenge 2017). The USA ranks in the middle of other OECD countries on teen suicides (The Organisation for Economic Co-operation and Development Family Database 2017), but the incidences are increasing (Curtin et al. 2017). When a country's youth trail the world on measures of school achievement, but are among the world leaders on youth risk, "it's time to admit that something is wrong with the way that country is raising its young people" (Steinberg 2014, p. 1).

Enact Evidence-Based Policies That Support Children's Well-being The USA lags worldwide in enacting policies that support families and children. It is the only UN member nation that refused to ratify the UN Convention on the Rights of the Child (UNCRC), and one of the world's few developed countries without a comprehensive family policy. The USA lacks paid parental leave (Addati et al. 2014), support and standards for early childcare (OECD 2017), and measures to combat child poverty, despite increasing evidence of its link to adverse brain development and self-regulatory processes (Evans and Kim 2013). The UNCRC and the U.S. Department of Education stipulate that students have the right to a safe educational environment (U.S. Department of Education 2001), yet children in the USA are frequently forced to return to the site of their abuse day after day (Dwyer 2006).

Drop a "Spare the Rod" Orientation and Co-Construct Positive Behaviors The USA has a long history of employing harsh practices toward children (Pinker 2011). Corporal punishment in schools remains legal in 19 states, and in 2014, an estimated 838 children were hit each day in public schools (The Children's Defense Fund 2014). About ten years ago, two-thirds of US parents reported spanking their toddlers (Regaldo et al. 2004), and 85% of teenagers reported that they had been hit (Bender et al. 2007). Globally, 53 nations have banned spanking at home and corporal punishment in schools (Global Initiative 2015). The tide is finally beginning to turn in the USA. A recent study showed a decline in spanking of kindergarteners by almost one-half across all socioeconomic levels (Ryan et al. 2016).

Invest in Prevention The 19th US Surgeon General, Vivek Murthy, observed that the USA prefers to spend more money on responding to social ills, rather than preventing them (Murthy 2017). The federal government spends less on children now than 30 years ago, and the USA ranks ahead of only Mexico and Turkey in spending on children (Hoynes and Whitmore Schanzenbach 2018). The USA incarcerates more youth than any other developed nation, thus reducing the likelihood of high school graduation and increasing the probability of later criminal involvement (Aizer and Doyle 2013). Spending on incarceration over the last 40 years increased at three times the rate of K-12 educational spending (Stullich et al. 2016). Nearly every forecaster, from economists (e.g., Deming 2015; Heckman et al. 2006) to futurists (Prince and Swanson 2017), including the World Economic Forum (Soffel 2016), calls for the development of SEL skills in young people in order to prepare them for future workplaces. As mentioned, the price tag for bullying is extremely high, but the cost savings of implementing an SEL program is $11 for every $1 spent on students, schools, and communities (Belfield et al. 2015).

Chronosystem/Historical Time

> The life course of individuals is embedded in and shaped by the historical times and events they experience over their lifetime (Bronfenbrenner and Morris 2006, p. 821).

Historically, the dominant view of children was to consider them property—inherently evil, ill-behaved, and in need of subjugation in order to become functioning adults. Maltreatment was normalized and legal. Child abuse was not outlawed in the USA until 1974 (Malousek et al. 2016), and as late as the 1980s, surgeries were performed on infants without anesthesia or pain medication (Johnston and Strada 1986). In 1928, the President of the American Psychological

Association, John B. Watson, warned that love is dangerous for children (Watson 1928). True empathy for children is a "late historical achievement" (deMause 2002, p. viii).

As recent as the twentieth and twenty-first centuries, science has shown conclusively that children grow best with loving care and acknowledgement that their feelings matter. Bowlby's work on attachment (1969), Harlow's research on the power of comfort (1959), and Rutter's work on failure to thrive among institutionalized children deprived of caregiving (Rutter et al. 2007) show how crucial warmth, responsive care, and children's feelings are to their long-term outcomes. The direct study of children's emotions began in the late twentieth century (e.g., Lewis 2013; Harris 1989; Saarni 1999; Campos et al. 1989), and charted the development, differentiation, and relevance of children's emotions. As methodologies improved, research revealed the emotional, social, and cognitive biases in pre-verbal infants, and how environmental conditions can amplify these tendencies (Bloom 2013). The growing field of developmental affective neuroscience confirms the relationships between early experience, emotions, and brain and nervous system development. The Collaborative for Academic and Social and Emotional Learning (CASEL), a policy and advocacy organization, was established in 1994 to support research, policy, and evidence-based practices to make social and emotional learning an integral part of children's education. The history of childhood, then, is bending away from power-assertive approaches, and toward helping children to flourish with emotionally positive, evidence-based practices.

Summary and Recommendations

Bullying has often been called a problem in the peer relationship network (Salmivalli 2010), but Bronfenbrenner's bioecological model of human development shows that it is rooted in multiple levels of the human ecology. While previous ecological analyses focused predominantly on school-level dynamics, this examination adds important levels of the developing person, and the larger exo-, macro-, and chronosystems where intervention efforts must also take place. Such a bioecological analysis leads to several recommendations.

First, the USA needs to decide to take the needs of children seriously. Our poor international standing suggests that the declining mental health of our students is due, at least in part, to the choices we make as a nation. The USA should make children's well-being central to policy decisions. This is fiscally beneficial and more sustainable for the society and the economy.

Second, we must acknowledge that emotions and feelings matter. Research across multiple fields increasingly places the emotion system at the heart of development. Evidence shows that the environment has a role in shaping children's emotion systems, and in turn, altering the life course into adulthood, and that SEL can be taught effectively in schools (Aspen Institute 2018).

Third, schools should take on the responsibility of intentionally co-constructing children's emotional and social lives from pre-k through the 12th-grade. Even in its nascent state, the research on a universal approach to SEL suggests that it can boost a school's "immune system" by improving some aspects of children's mental health and learning, preventing some problems from occurring, and helping a classroom or school to function more efficiently and positively.

Fourth, an SEL approach should balance the development of *personal* emotional and *interpersonal* social skills. SEL should not be a Trojan horse for increasing classroom management and social control, but should focus on authentically cultivating the positive, full development of the child and the adult educator, including caregivers. This requires reframing classroom management from emphasizing behavioral control to cultivating psychological health. Two reviews of SEL programs for preschool and elementary school show that many more programs focus on social skills, social problem-solving, conflict resolution, academic skills, and conduct issues, rather than improving individual emotion skills (CASEL 2013; Jones et al. 2017). Emotional intelligence in children and adults enhances their thinking and learning, relationships, decision-making, and mental and physical health (Brackett et al. 2016). Personal emotional skills are also fundamental to developing agency and autonomy required for resilience, so when bullying or other stressful life events occur, ill effects can be mitigated (Hinduja and Patchin 2017).

Fifth, the adoption of a universal SEL approach should occur in the context of a tiered public health model. This means that in addition to universal SEL education in tier 1, schools should coordinate with more skilled local mental health professionals for tier 2 and tier 3 interventions for at-risk children and families. At tier 1, a universal SEL approach will promote the skills that foster intra- and interpersonal well-being and will address normal challenges and difficult feelings and behaviors that arise in children that do not require outside intervention. These issues may include managing unpleasant feelings and impulses, friction from changing friendships, accidentally hurting someone's feelings, and experimenting with power, micro-aggressions, manipulations, and humiliations. However, once bullying, harassment, or school violence occurs, a more differentiated response is required at a tier 2 or tier 3 level of intervention. This broader focus will require coordination between previously separate practitioners, teachers, and educational leaders.

Sixth, adult development should be prioritized before child development. Children's development is co-constructed and scaffolded through interactions with others, and proximal processes with others are the "engines of development." Children

can learn some SEL skills in a didactic, de-contextualized format, but they also need to have the lived experience of emotional and social skill building via real-time relationships. Therefore, adults need to be competent in their own emotional and social skills, including self-awareness, interpersonal problem-solving, and conflict resolution in order to model the skills, and co-construct skills in others. Therefore, SEL should be incorporated upstream into pre-service teacher training, as well as ongoing professional development. It also should be infused district-wide and embodied by everyone from leaders to transportation staff. Families (including siblings) should have access to ongoing training and support, but this component needs further research, as it has not been well-explored in any SEL program.

Seventh, programs should be developmentally wise. This means not simply scaling a one-size-fits-all to different ages, but tailoring curriculum to the salient emotional and social issues that arise during sensitive developmental phases, and basing pedagogy on cognitive, emotional, social, and moral development accordingly. This may mean that programs are qualitatively different at different ages. Programs should also be flexible and specific to allow diverse individuals and communities to adapt different but relevant means to the same ends. Programs may have a didactic component, but at a minimum SEL goals and skills should be continually enacted and refined in the everyday, lived experience of school life.

Eighth, SEL approaches need to be culturally sensitive. SEL practices developed and implemented within a Western culture may not sufficiently address cultural subgroups and might alienate students from different backgrounds (CASEL 2013). For example, more than 160 different languages are spoken by students and their families in New York City public schools, and norms related to social and emotional skills vary greatly by culture. This includes the rules related to social interactions and relationships that vary according to race, ethnicity, language, and religion (see Simmons et al. 2018; Aspen Institute 2018).

Ninth, more research is needed on the intersection of bullying prevention and SEL program implementation. For example, limited research exists on effective practices that promote school leader, teacher, and parent buy-in for SEL programming as a method to decrease bullying. More research also is necessary on the key ingredients of high-quality implementation of SEL practices to prevent bullying, aggression, and other negative behaviors. This only can be established with a comprehensive research agenda focusing on SEL practices, SEL program fidelity, long-term sustainability in schools and districts, and demonstrated impact on bullying behavior and other key outcomes such as improved school climate.

Schools cannot do this alone. Systems outside the schools, particularly in the meso-, exo-, and macro-systems, need to align with these developmental goals for children. This may mean that schools become a "hub" of meso-system networks including education for families, coaches, teachers, and more, as well as navigators for local professionals and social services for tiers 2 and 3 care. It may mean changing university education department curricula to develop teachers as whole people. It may mean fostering adult emotional skill competence in workplaces, and raising awareness about workplace bullying, aggression, and harassment. It may mean providing extra resources to neighborhoods and communities in need. It may mean changing mindsets about how children grow and develop—that they become better adults through positively cultivating their capabilities, rather than harshly punishing their imperfections. It may mean improving harmful cultures of masculinity, feminine objectification, "differentness," and violence-saturated media. And it may mean paying attention to the unintended consequences of US macro-level policies that contribute to rising inequality, as well as other policies undermining the ability of families and educators to tend to the "gardens" in which our children grow. Bronfenbrenner pointed out that "There is no more critical indicator of the future of a society than the character, competence, and integrity of its youth" (Bronfenbrenner 1996, p.1).

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References

Addati, L., Cassirer, N., & Gilchrist, K. (2014). Maternity and paternity at work: Law and practice across the world. In *International Labour Organization* Retrieved from https://www.ilo.org/wcmsp5/groups/public/%2D%2D-dgreports/%2D%2D-dcomm/%2D%2D-publ/documents/publication/wcms_242615.pdf.

Aizer, A., & Doyle, J. J. (2013). Juvenile incarceration, human capital and future crime: Evidence from randomly-assigned judges: National Bureau of Economic Research. *The Quarterly Journal of Economics, 130*(2), 759–803.

Albright, M. I., & Weissberg, R. P. (2010). School-family partnerships to promote social and emotional learning. *Handbook of School-Family Partnerships*, 246–265 Retrieved from http://www.casel.org/the-handbook-of-school-family-partnerships-for-promoting-student-competence/.

American Psychological Association (2007). *Report of the APA task force on the sexualization of girls*. Retrieved from https://www.apa.org/pi/women/programs/girls/report-full.pdf.

American Psychological Association (2015). *Stress in America: Paying with our health.* Retrieved from https://www.apa.org/news/press/releases/stress/2014/stress-report.pdf.

Aspen Institute. (2018, January 23). How learning happens: Supporting students' social, emotional, and academic development. Retrieved from https://www.aspeninstitute.org/publications/learning-happens-supporting-students-social-emotional-academic-development/.

Baldry, A. C., & Farrington, D. P. (2007). Effectiveness of programs to prevent school bullying. *Victims and Offenders, 2*(2), 183–204. https://doi.org/10.1080/15564880701263155.

Barnett, W. S., Jung, K., Yarosz, D. J., Thomas, J., Hornbeck, A., Stechuk, R., & Burns, S. (2008). Educational effects of the tools of the mind curriculum: A randomized trial. *Early Childhood*

Research Quarterly, 23(3), 299–313. https://doi.org/10.1016/j.ecresq.2008.03.001.

Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth & Society, 9*(3), 239–267. https://doi.org/10.1177/0044118X7800900302.

Belfield, C., Bowden, B., Klapp, A., Levin, H., Shand, R., & Zander, S. (2015). The economic value of social and emotional learning. *Journal of Benefit-Cost Analysis, 6*(3), 508–544. https://doi.org/10.1017/bca.2015.55.

Belsky, J., & Pluess, M. (2009). Beyond diathesis stress: Differential susceptibility to environmental influences. *Psychological Bulletin, 135*(6), 885–908. https://doi.org/10.1037/a0017376.

Bender, H. L., Allen, J. P., McElhaney, K. B., Antonishak, J., Moore, C. M., Kelly, H. O. B., & Davis, S. M. (2007). Use of harsh physical discipline and developmental outcomes in adolescence. *Development and Psychopathology, 19*(01), 227–242. https://doi.org/10.1017/S0954579407070125.

Bierman, K. L., Coie, J. D., Dodge, K. A., Greenberg, M. T., Lochman, J. E., McMahon, R. J., & Pinderhughes, E. (2010). The effects of a multiyear universal social–emotional learning program: The role of student and school characteristics. *Journal of Consulting and Clinical Psychology, 78*(2), 156–168. https://doi.org/10.1037/a0018607.

Blakemore, S. J., & Robbins, T. W. (2012). Decision-making in the adolescent brain. *Nature Neuroscience, 15*(9), 1184–1191. https://doi.org/10.1038/nn.3177.

Bloom, P. (2013). *Just babies: The origins of good and evil*. New York, NY: Crown.

Bowlby, J. (1969). *Attachment and loss: Attachment; John Bowlby*. NY, NY: Basic Books.

Boyce, W. T., & Ellis, B. J. (2005). Biological sensitivity to context: I. An evolutionary–developmental theory of the origins and functions of stress reactivity. *Development and Psychopathology, 17*(2), 271–301. https://doi.org/10.1017/S0954579405050145.

Brackett, M. (2019). *Permission to feel: Unlocking the power of emotions to help our kids, ourselves, and our society thrive*. New York: Celadon Books.

Brackett, M. A., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary-school teachers. *Psychology in the Schools, 47*(4), 406–417. https://doi.org/10.1002/pits.20478.

Brackett, M. A., Rivers, S. E., Reyes, M. R., & Salovey, P. (2012). Enhancing academic performance and social and emotional competence with the RULER feeling words curriculum. *Learning and Individual Differences, 22*(2), 218–224. https://doi.org/10.1016/j.lindif.2010.10.002.

Brackett, M. A., Elbertson, N. A., & Rivers, S. E. (2015). *Applying theory to the development of approaches to SEL* (pp. 20–32). Research and Practice: Handbook of Social and Emotional learning.

Brackett, M. A., Rivers, S. E., Bertoli, M. C., & Salovey, P. (2016). Emotional intelligence. In L. Feldman Barrett, M. Lewis, & J. Haviland-Jones (Eds.), *Handbook of emotions* (4th ed., pp. 513–531). New York: Guilford Press.

Bradshaw, C. P. (2015). Translating research to practice in bullying prevention. *American Psychologist, 70*(4), 322–332. https://doi.org/10.1037/a0039114.

Bradshaw, C. P., Waasdorp, T. E., & Leaf, P. J. (2015). Examining variation in the impact of school-wide positive behavioral interventions and supports: Findings from a randomized controlled effectiveness trial. *Journal of Educational Psychology, 107*(2), 546–557. https://doi.org/10.1037/a0037630.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by design and nature*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (1996). *The state of Americans: This generation and the next*. New York, NY: Simon and Schuster.

Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications.

Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology* (pp. 793–828). Hoboken, New Jersey: John Wiley & Sons. https://doi.org/10.1002/9780470147658.chpsy0114.

Brown, B. B., & Larson, J. (2009). Peer relationships in adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (pp. 74–103). Hoboken, New Jersey: John Wiley & Sons. https://doi.org/10.1002/9780470479193.adlpsy002004.

Brown, J. L., Jones, S. M., LaRusso, M. D., & Aber, J. L. (2010). Improving classroom quality: Teacher influences and experimental impacts of the 4rs program. *Journal of Educational Psychology, 102*(1), 153–167.

Brown, E. C., Low, S., Smith, B. H., & Haggerty, K. P. (2011). Outcomes from a school-randomized controlled trial of Steps to Respect: A bullying prevention program. *School Psychology Review, 40*(3), 423–443.

Buhs, E. S., Ladd, G. W., & Herald-Brown, S. L. (2010). Victimization and exclusion: Links to peer rejection, classroom engagement, and achievement. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), *Handbook of bullying in schools: An international perspective* (pp. 163–172). New York: Routledge/Taylor & Francis Group.

Burnett, S., Bird, G., Moll, J., Frith, C., & Blakemore, S. J. (2009). Development during adolescence of the neural processing of social emotion. *Journal of Cognitive Neuroscience, 21*(9), 1736–1750. https://doi.org/10.1162/jocn.2009.21121.

Cairns, R., Xie, H., & Leung, M. C. (1998). The popularity of friendship and the neglect of social networks: Toward a new balance. *New Directions for Child and Adolescent Development, 1998*(81), 25–53. https://doi.org/10.1002/cd.23219988104.

Campos, J. J., Campos, R. G., & Barrett, K. C. (1989). Emergent themes in the study of emotional development and emotion regulation. *Developmental Psychology, 25*(3), 394–402. https://doi.org/10.1037/0012-1649.25.3.394.

Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development, 79*(5), 1185–1229. https://doi.org/10.1111/j.1467-8624.2008.01184.x.

CASEL. (2013). *2013 guide to effective social and emotional learning programs: Preschool and elementary* (school ed.). Chicago, IL: Collaborative for Academic, Social, and Emotional Learning Retrieved from http://casel.org/wp-content/uploads/2016/01/2013-casel-guide-1.pdf.

CASEL. (2015). *2015 guide to effective social and emotional learning programs*. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning Retrieved from https://secondaryguide.casel.org/casel-secondary-guide.pdf.

Casey, B. J., & Caudle, K. (2013). The teenage brain. *Current Directions in Psychological Science, 22*(2), 82–87.

Center for Collegiate Mental Health. (2016, January). 2015 Annual Report (Publication No. STA 15–108).

Center on the Developing Child (2007). *The Science of Early Childhood Development* (In Brief). Retrieved from www.developingchild.harvard.edu.

Children's Defense Fund (2014). *The state of America's children*. Retrieved from http://www.childrensdefense.org/library/state-of-americas-children/gun-violence.html.

Cohen, J., Espelage, D., Twemlow, S., Berkowitz, M., & Comer, J. (2015). Rethinking effective bully and violence prevention efforts: Promoting healthy school climates, positive youth development, and preventing bully-victim-bystander behavior. *International Journal*

of Violence and Schools, 15, 2–40 Retrieved from https://www.researchgate.net/publication/281593701.

Committee for Children. (2008). The second step SEL program. Retrieved from. http://www.cfchildren.org/programs/social-emotional-learning/.

Conduct Problems Prevention Research Group. (2011). The effects of the Fast Track Preventative Intervention on the development of conduct disorder across childhood. *Child Development, 82*(1), 331–345. https://doi.org/10.1111/j.1467-8624.2010.01558.x.

Cornell, D., & Limber, S. P. (2015). Law and policy on the concept of bullying at school. *American Psychologist, 70*(4), 333–343. https://doi.org/10.1037/a0038558.

Costello, M. B. (2016). The Trump effect: The impact of the presidential campaign on our nation's schools. Southern poverty law center. Retrieved from https://www.splcenter.org/20161128/trump-effect-impact-2016-presidential-election-our-nations-schools.

Cowan, C. P., & Cowan, P. A. (2015). Focus on the co-parenting couple: A new approach to encourage father involvement and strengthening parent-child relationships. *International Journal of Birth and Parent Education, 2*(3), 31–35.

Cowan, P. A., Cowan, C. P., Pruett, M. K., Pruett, K., & Wong, J. J. (2009). Promoting fathers' engagement with children: Preventive interventions for low-income families. *Journal of Marriage and Family, 71*(3), 663–679. https://doi.org/10.1111/j.1741-3737.2009.00625.x.

Crean, H. F., & Johnson, D. B. (2013). Promoting Alternative Thinking Strategies (PATHS) and elementary school aged children's aggression: Results from a cluster randomized trial. *American Journal of Community Psychology, 52*(1–2), 56–72. https://doi.org/10.1007/s10464-013-9576-4.

Crick, N. R., Ostrov, J. M., & Werner, N. E. (2006). A longitudinal study of relational aggression, physical aggression, and children's social–psychological adjustment. *Journal of Abnormal Child Psychology, 34*(2), 127–138. https://doi.org/10.1007/s10802-005-9009-4.

Crone, E. A., & Dahl, R. E. (2012). Understanding adolescence as a period of social–affective engagement and goal flexibility. *Nature Reviews Neuroscience, 13*(9), 636–650. https://doi.org/10.1038/nrn3313.

Curley, J. P., & Champagne, F. A. (2016). Influence of maternal care on the developing brain: Mechanisms, temporal dynamics and sensitive periods. *Frontiers in Neuroendocrinology, 40*, 52–66. https://doi.org/10.1016/j.yfrne.2015.11.001.

Curtin, S. C., Hedegaard, H., & Minio, A. (2017). Suicide rates for teens aged 15-19 years, by sex—United States, 1975-2015. *Morbidity and Mortality Weekly Report, 66*(30), 816.

deMause, L. (2002). *The emotional life of nations*. London: Karnac Books.

Deming, D. J. (2015). The growing importance of social skills in the labor market. *The Quarterly Journal of Economics, 132*(4), 1593–1640. https://doi.org/10.3386/w21473.

Denham, S., Warren, H., von Salisch, M., Benga, O., Chin, J. C., & Geangu, E. (2011). Emotions and social development in childhood. In P. K. Smith & C. H. Hart (Eds.), *The Wiley-Blackwell handbook of childhood social development* (2nd ed., pp. 413–433). Hobeken, New Jersey: John Wiley & Sons. https://doi.org/10.1002/9781444390933.ch22.

Denny, S., Peterson, E. R., Stuart, J., Utter, J., Bullen, P., Fleming, T., et al. (2015). Bystander intervention, bullying, and victimization: A multilevel analysis of New Zealand high schools. *Journal of School Violence, 14*(3), 245–272. https://doi.org/10.1080/15388220.2014.910470.

Diamond, A. (2013). Executive functions. *Annual Review of Psychology, 64*, 135–168. https://doi.org/10.1146/annurev-psych-113011-143750.

Dijkstra, J. K., Lindenberg, S., Verhulst, F. C., Ormel, J., & Veenstra, R. (2009). The relation between popularity and aggressive, destructive, and norm-breaking behaviors: Moderating effects of athletic abilities, physical attractiveness, and prosociality. *Journal of Research on Adolescence, 19*(3), 401–413. https://doi.org/10.1111/j.1532-7795.2009.00594.x.

Dodge, K. A., Dishion, T. J., & Lansford, J. E. (2006). Deviant peer influences in intervention and public policy for youth. *Society for Research in Child Development Social Policy Report, 20*(1).

Domitrovich, C. E., Bradshaw, C. P., Berg, J. K., Pas, E. T., Becker, K. D., Musci, R., et al. (2016). How do school-based prevention programs impact teachers? Findings from a randomized trial of an integrated classroom management and social-emotional program. *Prevention Science, 17*(3), 325–337.

Domitrovich, C. E., Durlak, J. A., Staley, K. C., & Weissberg, R. P. (2017). Social-emotional competence: An essential factor for promoting positive adjustment and reducing risk in school children. *Child Development, 88*(2), 408–416. https://doi.org/10.1111/cdev.12739.

Due, P., Merlo, J., Harel-Fisch, Y., Damsgaard, M. T., Soc, M. S., Holstein, B. E., et al. (2009). Socioeconomic inequality in exposure to bullying during adolescence: A comparative, cross-sectional, multilevel study in 35 countries. *American Journal of Public Health, 99*(5), 907–914. https://doi.org/10.2105/AJPH.2008.139303.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*(1), 405–432. https://doi.org/10.1111/j.1467-8624.2010.01564.x.

Dusenbury, L., & Weissberg, R. P. (2017). State efforts to promote social and emotional learning in students. A publication of the collaborative for academic, social, and emotional learning. Retrieved from https://www.casel.org/wp-content/uploads/2017/01/State-Efforts-to-Promote-Social-and-Emotional-Learning-Jan-2017-1-16-17.pdf.

Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York, NY: Random House Incorporated.

Dwyer, J. G. (2006). *The relationship rights of children*. Cambridge: Cambridge University Press.

Edwards, D., Hunt, M. H., Meyers, J., Grogg, K. R., & Jarrett, O. (2005). Acceptability and student outcomes of a violence prevention curriculum. *Journal of Primary Prevention, 26*(5), 401–418.

Eisenberg, N., Spinrad, T. L., Fabes, R. A., Reiser, M., Cumberland, A., Shepard, S. A., et al. (2004). The relations of effortful control and impulsivity to children's resiliency and adjustment. *Child Development, 75*(1), 25–46. https://doi.org/10.1111/j.1467-8624.2004.00652.x.

Eisenberg, N., Spinrad, T. L., & Morris, A. S. (2013). Prosocial development. In P. D. Zelazo (Ed.), *Oxford handbook of developmental psychology: Self and other* (Vol. 2, pp. 300–325). New York, NY: Oxford University Press.

Eisenberg, N., Spinrad, T., & Knafo-Noam, A. (2015). Prosocial development. In M. Lamb & R. Lerner (Eds.), *Handbook of child psychology and developmental science* (Vol. 3). Hoboken, NJ: John Wiley & Sons.

Espelage, D. L., & De La Rue, L. (2012). School bullying: Its nature and ecology. *International Journal of Adolescent Medicine and Health, 24*(1), 3–10. https://doi.org/10.1515/ijamh.2012.002.

Espelage, D. L., & Hong, J. S. (2017). Cyberbullying prevention and intervention efforts: Current knowledge and future directions. *The Canadian Journal of Psychiatry, 62*(6), 374–380. https://doi.org/10.1177/0706743716684793.

Espelage, D. L., Bosworth, K., & Simon, T. R. (2000). Examining the social context of bullying behaviors in early adolescence. *Journal of Counseling & Development, 78*(3), 326–333. https://doi.org/10.1002/j.1556-6676.2000.tb01914.x.

Espelage, D. L., Low, S., Polanin, J. R., & Brown, E. C. (2015). Clinical trial of Second Step© middle-school program: Impact on aggression

& victimization. *Journal of Applied Developmental Psychology, 37*, 52–63. https://doi.org/10.1016/j.appdev.2014.11.007.

Evans, G. W., & Kim, P. (2013). Childhood poverty, chronic stress, self-regulation, and coping. *Child Development Perspectives, 7*(1), 43–48. https://doi.org/10.1111/cdep.12013.

Facing History and Ourselves. (2015, November 6). How do we know it works? Retrieved from https://www.facinghistory.org/sites/default/files/How%20Do%20We%20Know%20It%20Works%20Master%20Eval%20Summary%2011_6_2015.pdf.

Farrington, D. P., & Ttofi, M. M. (2009). School-based programs to reduce bullying and victimization. *The Campbell Collaboration, 6*, 1–148. https://doi.org/10.4073/csr.2009.6.

Ferguson, C. J., San Miguel, C., Kilburn, J. C., & Sanchez, P. (2007). The effectiveness of school-based anti-bullying programs: A meta-analytic review. *Criminal Justice Review, 32*(4), 401–414. https://doi.org/10.1177/0734016807311712.

Fivush, R., & Haden, C. A. (2005). Parent-child reminiscing and the construction of a subjective self. In B. D. Homer & C. S. Tamis-LeMonda (Eds.), *The development of social cognition and communication* (pp. 315–335). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Flavell, J. H., Flavell, E. R., & Green, F. L. (2001). Development of children's understanding of connections between thinking and feeling. *Psychological Science, 12*(5), 430–432. https://doi.org/10.1111/1467-9280.00379.

Flower, A., McKenna, J. W., & Haring, C. D. (2017). Behavior and classroom management: Are teacher preparation programs really preparing our teachers? *Preventing School Failure: Alternative Education for Children and Youth, 61*(2), 163–169. https://doi.org/10.1080/1045988X.2016.1231109.

Fonagy, P., Twemlow, S. W., Vernberg, E. M., Nelson, J. M., Dill, E. J., Little, T. D., & Sargent, J. A. (2009). A cluster randomized controlled trial of child-focused psychiatric consultation and a school systems-focused intervention to reduce aggression. *Journal of Child Psychology and Psychiatry, 50*(5), 607–616. https://doi.org/10.1111/j.1469-7610.2008.02025.x.

Freiberg, H. J., & Stein, T. (1999). Measuring, improving and sustaining healthy learning environments. In H. J. Freiberg (Ed.), *School climate: Measuring, improving and sustaining healthy learning environments* (pp. 11–29). London: Falmer Press.

Frey, K. S., Nolen, S. B., Edstrom, L. V. S., & Hirschstein, M. K. (2005). Effects of a school-based social–emotional competence program: Linking children's goals, attributions, and behavior. *Journal of Applied Developmental Psychology, 26*(2), 171–200. https://doi.org/10.1016/j.appdev.2004.12.002.

Fronius, T., Persson, H., Guckenburg, S., Hurley, N., & Petrosino, A. (2016 February). *Restorative justice in US schools: A research review*. San Francisco, CA: WestEd Justice and Prevention Training Center.

Gaffney, H., Farrington, D. P., Espelage, D. L., & Ttofi, M. M. (2018a). Are cyberbullying intervention and prevention programs effective? A systematic and meta-analytical review. *Aggression and Violent Behavior*. https://doi.org/10.1016/j.avb.2018.07.002.

Gaffney, H., Ttofi, M. M., & Farrington, D. P. (2018b). Evaluating the effectiveness of school-bullying prevention programs: An updated meta-analytical review. *Aggression and Violent Behavior*. https://doi.org/10.1016/j.avb.2018.07.001.

García, T. M. (2016, December 6). Only one-third of students rate their school culture positively. Education Dive. Retrieved from https://www.educationdive.com/news/only-one-third-of-students-rate-their-school-culture-positively/431760/.

Gilliam, W. S. (2005). Prekindergarteners left behind: Expulsion rates in state prekindergarten systems. Foundation for Child Development Policy Brief, 3. Retrieved from http://challengingbehavior.fmhi.usf.edu/explore/policy_docs/prek_expulsion.pdf.

Gilliam, W. S., Maupin, A. N., Reyes, C. R., Accavitti, M., & Shic, F. (2016, September 28). Do early educators' implicit biases regarding sex and race relate to behavior expectations and recommendations of preschool expulsions and suspensions? In *Research Study Brief*. New Haven, CT: Yale Child Study Center.

Gladden, R.M., Vivolo-Kantor, A.M., Hamburger, M.E., & Lumpkin, C.D. (2014). Bullying surveillance among youths: Uniform definitions for public health and recommended data elements, version 1.0. Atlanta, GA: National Center for Injury and Prevention and Control, Centers for Disease Control and Prevention and U.S. Department of Education. Retrieved from https://www.cdc.gov/violenceprevention/pdf/bullying-definitions-final-a.pdf.

Global initiative to end all corporal punishment of children (2015). Retrieved from. http://www.endcorporalpunishment.org/.

Godfrey, K., & Barker, D. (2001). Fetal programming and adult health. *Public Health Nutrition, 4*(2b), 611–624. https://doi.org/10.1079/PHN2001145.

Goldsmith, H. H., Buss, A. H., Plomin, R., Rothbart, M. K., Thomas, A., Chess, S., et al. (1987). Roundtable: What is temperament? Four approaches. *Child Development, 58*(2), 505–529. https://doi.org/10.2307/1130527.

Harlow, H. F. (1959). *Love in infant monkeys*. San Francisco, CA: WH Freeman.

Harris, P. L. (1989). *Children and emotion: The development of psychological understanding*. New York, NY: Basil Blackwell.

Harter, S. (1999). *The construction of the self: A developmental perspective*. New York, NY: Guilford Press.

Hartup, W. W., & Abecassis, M. (2002). Friends and enemies. In I. P. K. Smith & C. H. Hart (Eds.), *Blackwell handbook of childhood social development* (pp. 286–306). Hoboken, NJ: Blackwell Publishing.

Heckman, J. J., Stixrud, J., & Urzua, S. (2006). The effects of cognitive and noncognitive abilities on labor market outcomes and social behavior. *Journal of Labor Economics, 24*(3), 411–482. https://doi.org/10.1086/504455.

Hinduja, S. (2018, June 22). Federal commission on school safety. Cyberbullying Research Center. Retrieved from https://cyberbullying.org/federal-commission-on-school-safety.

Hinduja, S., & Patchin, J. W. (2017). Cultivating youth resilience to prevent bullying and cyberbullying victimization. *Child Abuse & Neglect, 73*, 51–62. https://doi.org/10.1016/j.chiabu.2017.09.010.

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

Hoynes, H. W., & Whitmore Schanzenbach, D. (2018). Safety net investments in children (NBER Working Paper No. 24594). *The National Bureau of Economic Research*. Cambridge, MA. Retrieved from https://www.nber.org/papers/w24594.pdf.

Hudley, C., & Graham, S. (1993). An attributional intervention to reduce peer-directed aggression among African-American boys. *Child Development, 64*(1), 124–138. https://doi.org/10.1111/j.1467-8624.1993.tb02899.x.

Jacobson, R. B. (2012). *Rethinking school bullying: Dominance, identity and school culture* (Vol. 90). London: Routledge Press. https://doi.org/10.4324/9780203069646.

Jeong, S., & Lee, B. H. (2013). A multilevel examination of peer victimization and bullying preventions in schools. *Journal of Criminology, 2013*, 1–10. https://doi.org/10.1155/2013/735397.

Johnston, C. C., & Strada, M. E. (1986). Acute pain response in infants: A multidimensional description. *Pain, 24*(3), 373–382. https://doi.org/10.1016/0304-3959(86)90123-5.

Jones, S. M., Brown, J. L., & Aber, J. L. (2011). Two-year impacts of a universal school-based social-emotional and literacy intervention: An experiment in translational developmental research. *Child Development, 82*(2), 533–554. https://doi.org/10.1111/j.1467-8624.2010.01560.x.

Jones, S. M., Bouffard, S. M., & Weissbourd, R. (2013). Educators' social and emotional skills vital to learning. *Phi Delta Kappan, 94*(8), 62–65. https://doi.org/10.1177/003172171309400815.

Jones, S. M., Barnes, S. P., Bailey, R., & Doolittle, E. J. (2017). Promoting social and emotional competencies in elementary school. *Future of Children, 27*(1), 49–72.

Juvonen, J., & Graham, S. (2014). Bullying in schools: The power of bullies and the plight of victims. *Annual Review of Psychology, 65*, 159–185. https://doi.org/10.1146/annurev-psych-010213-115030.

Kagan, J., Reznick, J. S., & Snidman, N. (1988). Biological bases of childhood shyness. *Science, 240*(4849), 167–171. https://doi.org/10.1126/science.3353713.

Kaplan, C. (1992). Teachers' punishment histories and their selection of disciplinary strategies. *Contemporary Educational Psychology, 17*(3), 258–265. https://doi.org/10.1016/0361-476X(92)90064-6.

Kärnä, A., Voeten, M., Little, T. D., Alanen, E., Poskiparta, E., & Salmivalli, C. (2013). Effectiveness of the KiVa Antibullying Program: Grades 1–3 and 7–9. *Journal of Educational Psychology, 105*(2), 535–551. https://doi.org/10.1037/a0030417.

Kosciw, J. G., Greytak, E. A., Bartkiewicz, M. J., Boesen, M. J., & Palmer, N. A. (2012). The 2011 National School Climate Survey: The experiences of lesbian, gay, bisexual and transgender youth in our nation's schools. New York: GLSEN.

Laible, D. J., & Thompson, R. A. (2002). Mother–child conflict in the toddler years: Lessons in emotion, morality, and relationships. *Child Development, 73*(4), 1187–1203. https://doi.org/10.1111/1467-8624.00466.

Langford, R., Bonell, C., Jones, H., Pouliou, T., Murphy, S., Waters, E., et al. (2015). The World Health Organization's health promoting schools framework: A Cochrane systematic review and meta-analysis. *BMC Public Health, 15*(1), 130. https://doi.org/10.1186/s12889-015-1360-y.

Lawson, K. R., & Ruff, H. A. (2004). Early attention and negative emotionality predict later cognitive and behavioural function. *International Journal of Behavioral Development, 28*(2), 157–165. https://doi.org/10.1080/01650250344000361.

Lessne, D., & Yanez, C. (2016). Student reports of bullying: Results from the 2015 School Crime Supplement to the National Crime Victimization Survey (NCES 2017-015). National Center for Education Statistics. Retrieved from https://nces.ed.gov/pubs2017/2017015.pdf.

Levick, M., & Moon, K. (2010). Prosecuting sexting as child pornography. *Valparaiso University Law Review, 44*(4), 1035–1054.

Lewis, M. (2013). *The rise of consciousness and the development of emotional life*. New York, NY: Guilford Publications.

Lieberman, M. D. (2013). *Social: Why our brains are wired to connect*. Oxford: Oxford University Press.

Lochman, J. E., & Wells, K. C. (2004). The coping power program for preadolescent aggressive boys and their parents: Outcome effects at the 1-year follow-up. *Journal of Consulting and Clinical Psychology, 72*(4), 571–578. https://doi.org/10.1037/0022-006X.72.4.571.

Lochman, J. E., Wells, K. C., Qu, L., & Chen, L. (2013). Three year follow-up of coping power intervention effects: Evidence of neighborhood moderation? *Prevention Science, 14*(4), 364–376. https://doi.org/10.1007/s11121-012-0295-0.

Low, S., Cook, C. R., Smolkowski, K., & Buntain-Ricklefs, J. (2015). Promoting social–emotional competence: An evaluation of the elementary version of second step®. *Journal of School Psychology, 53*(6), 463–477. https://doi.org/10.1016/j.jsp.2015.09.002.

Malousek, J. R., Colburn-Malousek, L. K., & Brown, K. S. (2016). Child abuse in the United States. In C. L. Shehan (Ed.), *The Wiley Blackwell encyclopedia of family studies*. https://doi.org/10.1002/9781119085621.wbefs244.

Mason, S. A., & Downing, B. L. (2014). First year teachers' perception on their self-efficacy in bullying intervention: Teacher preparation programs. In A. Esmail (Ed.), *Alleviating bullying: Conquering the challenge of violent crimes* (pp. 70–87). Lanham, MD: UPA.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3–34). New York, NY: Basic Books.

McClelland, M. M., Tominey, S. L., Schmitt, S. A., & Duncan, R. (2017). SEL interventions in early childhood. *Future of Children, 27*(1), 33–47.

McDowell, D. J., & Parke, R. D. (2000). Differential knowledge of display rules for positive and negative emotions: Influences from parents, influences on peers. *Social Development, 9*(4), 415–432. https://doi.org/10.1111/1467-9507.00136.

Mental Health America. (n.d.). Workplace culture & bullying. Retrieved from http://www.mentalhealthamerica.net/workplace-culture-bullying.

Merrell, K. W., Gueldner, B. A., Ross, S. W., & Isava, D. M. (2008). How effective are school bullying intervention programs? A meta-analysis of intervention research. *School Psychology Quarterly, 23*(1), 26–42. https://doi.org/10.1037/1045-3830.23.1.26.

Merritt, E. G., Wanless, S. B., Rimm-Kaufman, S. E., Cameron, C., & Peugh, J. L. (2012). The contribution of teachers' emotional support to children's social behaviors and self-regulatory skills in first grade. *School Psychology Review, 41*(2), 141–159.

Merten, D. E. (1997). The meaning of meanness: Popularity, competition, and conflict among junior high school girls. *Sociology of Education*, 175–191. https://doi.org/10.2307/2673207.

Meyers, A. B., & Berk, L. E. (2014). Make-believe play and self-regulation. In L. Booker, M. Blaise, & S. Edwards (Eds.), *The SAGE handbook of play and learning in early childhood* (pp. 43–55). London: SAGE Publications Ltd.. https://doi.org/10.4135/9781473907850.

Misailidi, P. (2006). Young children's display rule knowledge: Understanding the distinction between apparent and real emotions and the motives underlying the use of display rules. *Social Behavior and Personality: An International Journal, 34*(10), 1285–1296. https://doi.org/10.2224/sbp.2006.34.10.1285.

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., et al. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences, 108*(7), 2693–2698. https://doi.org/10.1073/pnas.1010076108.

Moisuc, A., Brauer, M., Fonseca, A., Chaurand, N., & Greitemeyer, T. (2018). Individual differences in social control: Who 'speaks up' when witnessing uncivil, discriminatory, and immoral behaviours? *British Journal of Social Psychology*. https://doi.org/10.1111/bjso.12246.

Monk, C., Spicer, J., & Champagne, F. (2012). Linking prenatal maternal adversity to developmental outcomes in infants: The role of epigenetic pathways. *Development and Psychopathology, 24*(4), 1361–1376. https://doi.org/10.1017/S0954579412000764.

Murthy, V. (2017). *One nation under stress: How social connection can heal us*. Retrieved from https://www.commonwealthclub.org/events/2017-05-16/one-nation-under-stress-how-social-connection-can-heal-us.

Musu-Gillette, L. (2017, May 17). International comparisons of school crime and safety. In *National Center for education statistics* Retrieved from https://nces.ed.gov/blogs/nces/post/international-comparisons-of-school-crime-and-safety.

Namie, G., Christensen, D., & Phillips, D. (2014). U.S. workplace bullying survey. Retrieved from http://workplacebullying.org/multi/pdf/WBI-2014-US-Survey.pdf.

Nathanson, L., Rivers, S. E., Flynn, L. M., & Brackett, M. A. (2016). Creating emotionally intelligent schools with RULER. *Emotion Review, 8*(4), 305–310. https://doi.org/10.1177/1754073916650495.

National School Climate Center. (n.d.). Retrieved from https://www.schoolclimate.org/.

Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin, 113*(1), 99–128. https://doi.org/10.1037/0033-2909.113.1.99.

Nielsen, M. B., Nielsen, G. H., Notelaers, G., & Einarsen, S. (2015). Workplace bullying and suicidal ideation: A 3-wave longitudinal Norwegian study. *American Journal of Public Health, 105*(11), e23–e28. https://doi.org/10.2105/AJPH.2015.302855.

OECD. (2017). *Starting strong 2017: Key OECD indicators on early childhood education and care*. Paris: OECD Publishing. https://doi.org/10.1787/9789264276116-en.

Olweus, D. (2005). A useful evaluation design, and effects of the Olweus Bullying Prevention Program. *Psychology, Crime & Law, 11*(4), 389–402. https://doi.org/10.1080/10683160500255471.

Olweus, D., & Limber, S. P. (2010a). Bullying in school: Evaluation and dissemination of the Olweus Bullying Prevention Program. *American Journal of Orthopsychiatry, 80*(1), 124–134. https://doi.org/10.1111/j.1939-0025.2010.01015.x.

Olweus, D., & Limber, S. P. (2010b). Olweus Bullying Prevention Program. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), *The handbook of bullying in schools: An international perspective* (pp. 377–401). New York, NY: Routledge.

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

Palladino, B. E., Nocentini, A., & Menesini, E. (2016). Evidence-based intervention against bullying and cyberbullying: Evaluation of the no trap! Program in two independent trials. *Aggressive Behavior, 42*, 194–206. https://doi.org/10.1002/ab.21636.

Patchin, J. W., & Hinduja, S. (2012). School-based efforts to prevent cyberbullying. *The Prevention Researcher, 19*(3), 7–10.

Pellegrini, A. D. (2002). Bullying, victimization, and sexual harassment during the transition to middle school. *Educational Psychologist, 37*(3), 151–163. https://doi.org/10.1207/S15326985EP3703_2.

Petrosino, A., Guckenburg, S., DeVoe, J., & Hanson, T. (2010, August). What characteristics of bullying, bullying victims, and schools are associated with increased reporting of bullying to school officials? Issues & answers (REL 2010-No. 092). *Regional Educational Laboratory Northeast & Islands*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast and Islands. Retrieved from http://ies.ed.gov/ncee/ edlabs.

Pinker, S. (2011). *The better angels of our nature: Why violence has declined*. New York, NY: Penguin Books.

Prince, K., & Swanson, J. (2017, January 12). The future of learning: Redefining readiness from the inside out. KnowledgeWorks. Retrieved from http://www.knowledgeworks.org/redefining-readinesFs.

Regaldo, M., Sareen, H., Inkelas, M., Wissow, L. S., & Halfon, N. (2004). Parents' discipline of young children: Results from the National Survey of Early Childhood Health. *Pediatrics, 113*(6), 1952–1958.

Reyes, M. R., Brackett, M. A., Rivers, S. E., Elbertson, N. A., & Salovey, P. (2012). The interaction effects of program training, dosage, and implementation quality on targeted student outcomes for the RULER approach to social and emotional learning. *School Psychology Review, 41*(1), 82–99.

Riggs, N. R., Greenberg, M. T., Kusché, C. A., & Pentz, M. A. (2006). The mediational role of neurocognition in the behavioral outcomes of a social-emotional prevention program in elementary school students: Effects of the PATHS curriculum. *Prevention Science, 7*(1), 91–102. https://doi.org/10.1007/s11121-005-0022-1.

Rivers, S. E., Brackett, M. A., Reyes, M. R., Elbertson, N. A., & Salovey, P. (2013, June). Improving the social and emotional climate of classrooms: A clustered randomized controlled trial testing The RULER Approach. *Prevention Science, 14*(1), 77–87. https://doi.org/10.1007/s11121-012-0305-2.

Rubin, K. H., Fein, G. G., & Vandenberg, B. (1983). Play. In P. Mussen (Ed.), *Handbook of child psychology* (Vol. 4, pp. 693–774). Hobeken, New Jersey: John Wiley & Sons, Inc..

Rubin, K. H., Wojslawowicz, J. C., Rose-Krasnor, L., Booth-LaForce, C., & Burgess, K. B. (2006). The best friendships of shy/withdrawn children: Prevalence, stability, and relationship quality. *Journal of Abnormal Child Psychology, 34*(2), 139–153.

Rutter, M., Beckett, C., Castle, J., Colvert, E., Kreppner, J., Mehta, M., et al. (2007). Effects of profound early institutional deprivation: An overview of findings from a UK longitudinal study of Romanian adoptees. *European Journal of Developmental Psychology, 4*(3), 332–350. https://doi.org/10.1080/17405620701401846.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68. https://doi.org/10.1037/0003-066X.55.1.68.

Ryan, R. M., Kalil, A., Ziol-Guest, K. M., & Padilla, C. (2016). Socioeconomic gaps in parents' discipline strategies from 1988 to 2011. *Pediatrics*, e20160720. https://doi.org/10.1542/peds.2016-0720.

Saarni, C. (1999). *The development of emotional competence*. New York, NY: Guilford Press.

Saarni, C. (2000). Emotional competence: A developmental perspective. In R. Bar-On & J. D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace* (pp. 68–91). San Francisco, CA: Jossey-Bass.

Sacco, D.T., Silbaugh, K., Corredor, F., Casey, J., & Doherty, D. (2012, February, 23). An overview of state anti-bullying legislation and other related laws. In d. boyd, & J. Palfrey (Eds.), *The Kinder and Braver World Project: Research series.* Retrieved from http://cyber.harvard.edu/sites/cyber.harvard.edu/files/State_Anti_bullying_Legislation_Overview_0.pdf.

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

Schonert-Reichl, K. A. (2017). Social and emotional learning and teachers. *Future of Children, 27*(1), 137–155.

Schonert-Reichl, K. A., Kitil, M. J., & Hanson-Peterson, J. (2017). To reach the students, teach the teachers: A national scan of teacher preparation and social and emotional learning. In *Collaborative for academic, social, and emotional learning*. Vancouver, B.C.: University of British Columbia Retrieved from http://www.casel.org/wp-content/uploads/2017/02/SEL-TEd-Full-Report-for-CASEL-2017-02-14-R1.pdf.

Schore, A. N. (2015). Plenary address, Australian childhood foundation conference childhood trauma: Understanding the basis of change and recovery early right brain regulation and the relational origins of emotional wellbeing. *Children Australia, 40*(02), 104–113. https://doi.org/10.1017/cha.2015.13.

Shetgiri, R., Espelage, D. L., & Carrol, L. (2015). *Practical strategies for clinical management of bullying*. New York, NY: Springer Publishing Co.. https://doi.org/10.1007/978-3-319-15476-3.

Shonkoff, J. P., & Phillips, D. A. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, D.C.: National Academy Press.

Shonkoff, J. P., Garner, A. S., the Committee on Psychosocial Aspects of Child and Family Health. Committee on Early Childhood, & Adoption, and Dependent Care, and Section on Developmental and Behavioral Pediatrics. (2012). The lifelong effects of early

childhood adversity and toxic stress. *Pediatrics, 129*, e232–e246. https://doi.org/10.1542/peds.2011-2663.

Simmons, D. N., Bracket, M. A., & Adler, N. (2018, June 1). Applying an equity lens to social, emotional, and academic development. The Pennsylvania State University. Retrieved from https://www.rwjf.org/content/dam/farm/reports/issue_briefs/2018/rwjf446338.

Simon, T. R., Ikeda, R. M., Smith, E. P., Reese, L. R. E., Rabiner, D. L., Miller, S., et al. (2009). The ecological effects of universal and selective violence prevention programs for middle school students: A randomized trial. *Journal of Consulting and Clinical Psychology, 77*(3), 526–542. https://doi.org/10.1037/a0014395.

Smith, J. D., Schneider, B. H., Smith, P. K., & Ananiadou, K. (2004). The effectiveness of whole-school antibullying programs: A synthesis of evaluation research. *School Psychology Review, 33*(4), 547–560.

Soffel, J. (2016, March 10). What are the 21st-century skills every student needs? World economic forum. Retrieved from https://www.weforum.org/agenda/2016/03/21st-century-skills-future-jobs-students/.

Song, S. Y., & Swearer, S. M. (2016). The cart before the horse: The challenge and promise of restorative justice consultation in schools. *Journal of Educational and Psychological Consultation*, 1–12. https://doi.org/10.1080/10474412.2016.1246972.

Sorensen, L. C., & Dodge, K. A. (2015). How does the fast track intervention prevent adverse outcomes in young adulthood? *Child Development, 87*(2), 429–445. https://doi.org/10.1111/cdev.12467.

Spike (2015, August 26). Violence and stress in Oakland's neighborhood. Urban Strategies Council. Retrieved from https://urbanstrategies.org/violence-and-stress-in-oaklands-neighborhoods/.

Sroufe, L. A., Egeland, B., Carlson, E. A., & Collins, W. A. (2009). *The development of the person: The Minnesota study of risk and adaptation from birth to adulthood*. New York, NY: Guilford Press.

Steinberg, L. (2014). *Age of opportunity: Lessons from the new science of adolescence*. New York, NY: Houghton Mifflin Harcourt.

Stullich, S., Morgan, I., & Schak, O. (2016, July). State and local expenditures on corrections and education. U.S. Department of Education, Policy and Program Studies Service. Retrieved from https://www2.ed.gov/rschstat/eval/other/expenditures-corrections-education/brief.pdf.

Sugai, G., Horner, R., & Algozzine, B. (2011, April 19). Reducing the effectiveness of bullying behavior in schools 12. OSEP center on positive behavioral interventions and supports. Retrieved from http://www.pbis.org/common/cms/files/pbisresources/PBIS_Bullying_Behavior_Apr19_2011.pdf.

Sutton, J., Smith, P. K., & Swettenham, J. (1999). Bullying and 'theory of mind': A critique of the 'social skills deficit' view of anti-social behaviour. *Social Development, 8*(1), 117–127. https://doi.org/10.1111/1467-9507.00083.

Swearer, S. M., & Cary, P. T. (2003). Perceptions and attitudes toward bullying in middle school youth: A developmental examination across the bully/victim continuum. *Journal of Applied School Psychology, 19*(2), 63–79. https://doi.org/10.1300/J008v19n02_05.

Swearer, S. M., & Doll, B. (2001). Bullying in schools: An ecological framework. *Journal of Emotional Abuse, 2*(2–3), 7–23. https://doi.org/10.1300/J135v02n02_02.

Swearer, S. M., & Hymel, S. (2015). Understanding the psychology of bullying: Moving toward a social-ecological diathesis–stress model. *American Psychologist, 70*(4), 344–353. https://doi.org/10.1037/a0038929.

Taylor, R. D., Oberle, E., Durlak, J. A., & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects. *Child Development, 88*(4), 1156–1171. https://doi.org/10.1111/cdev.12864.

Teti, D. M., Cole, P. M., Cabrera, N., Goodman, S. H., & McLoyd, V. C. (2017). Supporting parents: How six decades of parenting research can inform policy and best practice. *Social Policy Report, 30*(5).

Tettegah, S., & Anderson, C. J. (2007). Pre-service teachers' empathy and cognitions: Statistical analysis of text data by graphical models. *Contemporary Educational Psychology, 32*(1), 48–82. https://doi.org/10.1016/j.cedpsych.2006.10.010.

The Organisation for Economic Co-operation and Development Family Database. (2017, October, 17). *CO4.4: Teenage suicides (15–19 years old).* Retrieved from https://www.oecd.org/els/family/CO_4_4_Teenage-Suicide.pdf.

Thomas, L. A., De Bellis, M. D., Graham, R., & LaBar, K. S. (2007). Development of emotional facial recognition in late childhood and adolescence. *Developmental Science, 10*(5), 547–558. https://doi.org/10.1111/j.1467-7687.2007.00614.x.

Thornberg, R., & Jungert, T. (2013). Bystander behavior in bullying situations: Basic moral sensitivity, moral disengagement and defender self-efficacy. *Journal of Adolescence, 36*(3), 475–483. https://doi.org/10.1016/j.adolescence.2013.02.003.

Tippett, N., & Wolke, D. (2015). Aggression between siblings: Associations with the home environment and peer bullying. *Aggressive Behavior, 41*(1), 14–24. https://doi.org/10.1002/ab.21557.

Tracy, J. L., Robins, R. W., & Lagattuta, K. H. (2005). Can children recognize pride? *Emotion, 5*(3), 251–257. https://doi.org/10.1037/1528-3542.5.3.251.

Ttofi, M. M., & Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology, 7*(1), 27–56. https://doi.org/10.1007/s11292-010-9109-1.

Twemlow, S. W., Fonagy, P., Sacco, F. C., & Jellinek, M. S. (2001). An innovative psychodynamically influenced approach to reduce school violence. *Journal of American Academy of Child and Adolescent Psychiatry, 40*(3), 377–379.

Twemlow, S. W., Fonagy, P., Sacco, F. C., & Brethour, J. R. (2006). Teachers who bully students: A hidden trauma. *International Journal of Social Psychiatry, 52*(3), 187–198. https://doi.org/10.1177/0020764006067234.

Twenge, J. M. (2017). *IGen: Why today's super-connected kids are growing up less rebellious, more tolerant, less happy–and completely unprepared for adulthood–and what that means for the rest of us*. New York, NY: Simon and Schuster.

U. S. Department of Education (2016, November 28). 2013–2014 *Civil rights data collection: A first look.* Retrieved from https://www2.ed.gov/about/offices/list/ocr/docs/2013-14-first-look.pdf

U.S. Department of Education (2001). *No Child Left Behind*. Retrieved from https://www2.ed.gov/nclb/landing.jhtml

U.S. Department of Health and Human Services (2017a, September 8). *Laws & policies*. Retrieved from https://www.stopbullying.gov/laws/index.html.

U.S. Department of Health and Human Services (2017b, September 12). *StopBullying.gov.* Retrieved from https://www.stopbullying.gov.

Uitto, M., Jokikokko, K., & Estola, E. (2015). Virtual special issue on teachers and emotions in teaching and teacher education (TATE) in 1985–2014. *Teaching and Teacher Education, 50*, 124–135. https://doi.org/10.1016/j.tate.2015.05.008.

UNICEF Office of Research. (2013). Child well-being in rich countries: A comparative overview. In *Innocenti report Card 11*. Florence: UNICEF Office of Research Retrieved from https://www.unicef-irc.org/publications/pdf/rc11_eng.pdf.

Vaughn, B. E., Vollenweider, M., Bost, K. K., Azria-Evans, M. R., & Snider, J. B. (2003). Negative interactions and social competence for preschool children in two samples: Reconsidering the interpretation of aggressive behavior for young children. *Merrill-Palmer Quarterly, 49*(3), 245–278. https://doi.org/10.1353/mpq.2003.0017.

Vreeman, R. C., & Carroll, A. E. (2007). A systematic review of school-based interventions to prevent bullying. *Archives of Pediatrics & Adolescent Medicine, 161*(1), 78–88. https://doi.org/10.1001/archpedi.161.1.78.

Waasdorp, T. E., & Bradshaw, C. P. (2011). Examining student responses to frequent bullying: A latent class approach. *Journal of Educational Psychology, 103*(2), 336–352. https://doi.org/10.1037/a0022747.

Waasdorp, T. E., Bradshaw, C. P., & Leaf, P. J. (2012). The impact of Schoolwide Positive Behavioral Interventions and Supports on bullying and peer rejection: A randomized controlled effectiveness trial. *JAMA Pediatrics, 166*(2), 149–156. https://doi.org/10.1001/archpediatrics.2011.755.

Warburton, W. A., Williams, K. D., & Cairns, D. R. (2006). When ostracism leads to aggression: The moderating effects of control deprivation. *Journal of Experimental Social Psychology, 42*(2), 213–220. https://doi.org/10.1016/j.jesp.2005.03.005.

Watson, J. B. (1928). *Psychological care of infant and child*. New York, NY: W W Norton & Co..

Webster-Stratton, C., Jamila Reid, M., & Stoolmiller, M. (2008). Preventing conduct problems and improving school readiness: Evaluation of the incredible years teacher and child training programs in high-risk schools. *Journal of Child Psychology and Psychiatry, 49*(5), 471–488. https://doi.org/10.1111/j.1469-7610.2007.01861.x.

Wolke, D., Copeland, W. E., Angold, A., & Costello, E. J. (2013). Impact of bullying in childhood on adult health, wealth, crime, and social outcomes. *Psychological Science, 24*(10), 1958–1970. https://doi.org/10.1177/0956797613481608.

Yeager, D. S. (2017). Social and emotional learning programs for adolescents. *Future of Children, 27*(1), 73–94.

Yeager, D. S., Trzesniewski, K. H., Tirri, K., Nokelainen, P., & Dweck, C. S. (2011). Adolescents' implicit theories predict desire for vengeance after peer conflicts: Correlational and experimental evidence. *Developmental Psychology, 47*(4), 1090–1107. https://doi.org/10.1037/a0023769.

Yeager, D. S., Trzesniewski, K. H., & Dweck, C. S. (2013). An implicit theories of personality intervention reduces adolescent aggression in response to victimization and exclusion. *Child Development, 84*(3), 970–988. https://doi.org/10.1111/cdev.12003.

Yeager, D. S., Fong, C. J., Lee, H. Y., & Espelage, D. L. (2015). Declines in efficacy of anti-bullying programs among older adolescents: Theory and a three-level meta-analysis. *Journal of Applied Developmental Psychology, 37*, 36–51. https://doi.org/10.1016/j.appdev.2014.11.005.

Yeager, D. S., Lee, H. Y., & Dahl, R. E. (2017). Competence and motivation during adolescence. In A.J. Elliot, C.S. Dweck, & D.S. Yeager (Eds.), Handbook of competence and motivation: Theory and application, 100, pp. 431–448.

Yeager, D. S., Dahl, R. E., & Dweck, C. S. (2018). Why interventions to influence adolescent behavior often fail but could succeed. *Perspectives on Psychological Science, 13*(1), 101–122.

Zajdel, R. T., Bloom, J. M., Fireman, G., & Larsen, J. T. (2013). Children's understanding and experience of mixed emotions: The roles of age, gender, and empathy. *The Journal of Genetic Psychology, 174*(5), 582–603. https://doi.org/10.1080/00221325.2012.732125.

Zhang, A., Musu-Gillette, L., & Oudekerk, B.A. (2016). Indicators of school crime and safety: 2015. (NCES 2016-079/NCJ 249758). Washington, DC.: National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice.

Zimmer-Gembeck, M. J. (2016). Peer rejection, victimization, and relational self-system processes in adolescence: Toward a transactional model of stress, coping, and developing sensitivities. *Child Development Perspectives, 10*(2), 122–127. https://doi.org/10.1111/cdep.12174.

Zych, I., Farrington, D. P., & Ttofi, M. M. (2018). Protective factors against bullying and cyberbullying: A systematic review of meta-analyses. *Aggression and Violent Behavior*. https://doi.org/10.1016/j.avb.2018.06.008.

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Ecological Theory: Preventing Youth Bullying, Aggression, and Victimization

Bronfenbrenner's (1977) classic ecological theory is used as a framework to review the documented risk and protective factors associated with involvement in school-related bullying during childhood and adolescence. Microsystems such as peers (socialization during adolescence), family (violence, lack of parental monitoring), community (exposure to violence), and schools (teacher attitudes, climate) contribute to the rates of bullying perpetrated or experienced by youth. The interaction between components of the microsystem is referred to as the mesosystem, and offers insight into how contexts can exacerbate or buffer experiences for youth who are involved in bullying (e.g., family support can buffer impact of peer victimization). Recommendations are provided for teachers and other adults who work with youth.

In his classic 1977 *American Psychologist* essay, Bronfenbrenner (1977) introduced the ecology of human development model in an attempt to push the field of developmental science forward. He articulated the importance of conducting experimental studies in naturally occurring environments (e.g., schools) alongside controlled laboratory experiments. Over the years, Bronfenbrenner and colleagues offered several reformulations of the ecology model, including the bioecological model (Bronfenbrenner & Morris, 1998) and the introduction of chaos theory into this model (Bronfenbrenner & Evans, 2000). Numerous aggression scholars resonated with this model, recognizing that youth are situated in systems that have direct, indirect, and dynamic influences on development and behavior.

In the area of school bullying and peer victimization, this model has often been called a social-ecological model and focuses on understanding how individual characteristics of children interact with environmental contexts or systems to

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promote or prevent victimization and perpetration (Espelage, 2012; Hong & Espelage, 2012). Structures or locations where children have direct contact are referred to as the *microsystem*; these include peers, family, community, and schools. The interaction between components of the microsystem is referred to as the *mesosystem*. An example of a mesosystem is the interrelations between the family and school, such as parental involvement in their child's school. The *exosystem* is the social context with which the child does not have direct contact, but which affects him or her indirectly through the microsystem. Examples would be teacher or staff perceptions of the school environment and opportunities for professional development around bullying, school violence, or school climate. The *macrosystem* level is commonly regarded as a cultural blueprint, which may determine the social structures and activities in the various levels (Bronfenbrenner, 1977). This level includes organizational, social, cultural, and political contexts, which influence the interactions within other system levels (e.g., state legislation, discipline policies; Bronfenbrenner 1977). The final level of the ecological framework, the *chronosystem* level, includes consistency or change (e.g., historical or life events) of the individual and the environment over the life course (e.g., changes in family structure through divorce, displacement, or death).

Although the social-ecological framework has been applied to child development broadly, its application to school-based bullying has been limited. Thus, in this article I use the social-ecological framework to organize and inform our understanding of bullying perpetration and victimization, but also point to gaps in fully applying this framework.

Individual Characteristics (Microsystem)

Socio-demographic characteristics, such as age, gender, and race/ethnicity, are frequently examined predictors of bullying behavior in school. Many studies report that boys, in general, are more likely to engage in bullying than girls (Espelage, Low, Rao, Hong, & Little, 2014; Nansel et al., 2001; Varjas, Henrich, & Meyers, 2009). During the 1990s, much research supported the notion that girls are socialized to exercise more relational forms of aggression or social bullying, yet boys engage in multiple forms of aggression (Neal, 2007). Despite this, several studies have failed to document significant sex differences in relational aggression or social forms of bullying (Card, Stuckey, Sawalani, & Little, 2008; Crick, Casas, & Mosher, 1997).

What, perhaps, is more important than gender differences is the notion that bullying is a gendered phenomenon where youth are targeted by either same- and other-sex peers in attempts to gain social status (Faris & Felmlee, 2011; Rodkin & Berger, 2008) or to marginalize lesbian, gay, bisexual, and gender-nonconforming youth (Espelage, Aragon, Birkett, & Koenig, 2008; Robinson & Espelage, 2011). Further, developmental trends indicate that bullying is a precursor to the use of homophobic epithets, which is, in turn, associated with sexual harassment during middle school (Espelage, Basile, & Hamburger, 2012; Espelage & De La Rue, 2013) and is associated with teen dating violence in high school (Espelage, Basile, Low, Anderson, & De La Rue, 2014; Miller et al., 2013).

Like gender, race/ethnicity and immigrant status are demographic variables of interest in this research, but findings have differed across studies. Inconsistent findings are likely a result of variability in sample characteristics and narrow definitions of race/ethnicity. For Hispanic/Latino and Asian youth, immigrant status and language/cultural barriers appear be significant predictors for peer victimization in school (Peguro, 2009; Qin, Way, & Rana, 2008). Collectively, the association between race/ethnicity and bullying is complex and appears to be influenced by the racial/ethnic composition of the classroom, school, or community (Juvonen, Nishina, & Graham, 2001).

Health status and psychological functioning can also place youth at risk for experiences of

bullying at school (Cook, Williams, Guerra, Kim, & Sadek, 2010). First, studies report that overweight and obese youth of both genders are at increased risk of peer victimization in school (e.g., Adams & Bukowski, 2008). Second, Fekkes, Pijpers, Fredriks, Vogels, and Verloove-Vanhorick (2006) study found that children with depressive symptoms were significantly more likely to be victimized by their peers than children without a history of depression. Finally, disability status is a significant predictor of peer victimization. Students with disabilities have been consistently overrepresented within the bullying dynamic as bullies, victims, and bully-victims (see Rose, Monda-Amaya, & Espelage, 2011, for literature review).

Family Characteristics (Microsystem)

Consistent parental monitoring has long been recognized as a protective factor (for future victimization or violent perpetration) for youth development (Li, Fiegelman, & Stanton, 2000). Bullies tend to have parents who do not provide adequate supervision or are not actively involved in the lives of their children (Espelage, Bosworth, & Simon, 2000; Georgiou & Fanti, 2010; Low & Espelage, 2013). In other instances, parents may encourage the use of aggressive and retaliatory behaviors. In a recent longitudinal study, exposure to family conflict (sibling aggression, yelling) was associated with greater bully perpetration for a large sample of middle school students (Espelage, Low, Rao, et al., 2013). Further, children who are victims of bullying more often come from families with histories of abuse or inconsistent parenting (Espelage, Low, & De La Rue, 2012; Georgiou & Fanti, 2010).

Supportive familial relations can also buffer the impact of involvement with bully experiences. When victims of bullying have warm relationships with their families, they have more positive outcomes, both emotionally and behaviorally (Bowes, Maughan, Caspi, Moffitt, & Arseneault, 2010; Holt & Espelage, 2007). These positive parent–child interactions provide children with the opportunity to talk about their bullying experiences, and can provide guidance on how to cope with these events. Bowes and colleagues (2010) also found that supportive relationships with siblings could serve to aid in bully-victims' resilience.

Peers (Microsystem)

Bullying and peer victimization rarely takes place in isolated dyadic interactions, but instead often occurs in the presence of other students (Espelage, Holt, & Henkel, 2003). Youth who have friends that bully will bully more (Salmivalli, 2010) and those who have friends who engage in homophobic name-calling will use this language (Birkett & Espelage, 2014). In a recent meta-analysis, Cook and colleagues (2010) found that youth in middle school who bullied other students had greater social status among peers, whereas younger children who bullied were socially rejected. Further, students may serve to perpetuate bullying by actively joining in or passively accepting the bullying behaviors; on the other hand, students can intervene to stop bullying or defend the victim (Espelage, Green, & Polanin, 2012).

Increasingly, school-based bullying prevention programs and social media campaigns are focusing their attention on encouraging bystanders to intervene (e.g., individuals not directly involved in bullying). A growing literature base is emerging that demonstrates the complexity of bystander or defender behaviors. Girls are more likely than boys to intervene on behalf of victims (Gini, Albiero, Benelli, & Altoe, 2008), and youth with high self-efficacy (e.g., perceived ability to intervene), positive attitudes toward the victim, affective empathy, and personal responsibility to intervene (Pozzoli & Gini, 2010) will also intervene. In a recent meta-analysis, researchers found that programs were effective at changing bystander intervening behavior when they included opportunities for youth to discuss reasons why they do not intervene to help victims, develop understanding of others, and

practice effective bystander intervention skills (Polanin, Espelage, & Pigott, 2012).

Interactions Among Microsystems (Mesosystem)

Mesosystem encompasses interrelations among two or more microsystems, each containing the individual (Bronfenbrenner, 1977). These interactions are between and among family, peers, and schools. Relations among students, teachers, and administrators matter. There is no doubt that teachers and school officials can influence students' relationships with their peers and their perceptions of the school environment (Lee, 2009). One study found that teachers' positive involvement in their students' academic and social lives significantly decreased students feeling unsafe in their school (Hong & Eamon, 2011). It is also important to note that students are more willing to seek help from teachers or school officials when teachers intervene in students' peer conflicts (Aceves, Hinshaw, Mendoza-Denton, & Page-Gould, 2009). Finally, in a recent multilevel study of over 4,000 middle school students across 35 schools, students reported less bullying, physical fighting, victimization, and greater willingness to intervene in schools where staff members reported that they felt supported by their administration to address bullying in their classrooms and schools (Espelage, Polanin, & Low, 2014).

Another example of a mesosystem structure is the influence of family functioning on peer friendship selection or the interaction between family characteristics and individual attributes. For example, a longitudinal study of middle school youth found that parental monitoring buffered the effects of community violence exposure on bully perpetration and victimization through reduced involvement in deviant behavior (Low & Espelage, 2014). In contrast, impulsivity exacerbated the effects of community violence exposure on bully perpetration by elevating involvement in deviant behavior. This study demonstrates the utility of the ecology model where multiple systems influence each other.

Exosystem

The exosystem comprises aspects of the environment beyond the immediate system containing the individual, including neighborhoods. Because schools are embedded in neighborhoods, an unsafe neighborhood environment can influence bullying behavior due to inadequate adult supervision or negative peer influences. Despite the documented relation between community violence and externalizing behaviors (i.e., conduct problems, delinquency; Bacchini, Esposity & Affuso, 2009; Espelage et al., 2000), there are relatively few studies that have investigated how bullying is influenced by experiences in environments outside of school, such as neighborhoods. There is strong reason to postulate links with both perpetration and victimization, given the disruption in adaptive peer relations and behavioral control that may be associated with features of community violence exposure (Espelage et al., 2000).

Macrosystem

The macrosystem level is regarded as a cultural blueprint that may determine the social structures and activities that occur in the immediate systems level (Bronfenbrenner, 1977). Bullying, like other forms of aggression, vary across cultures and contexts (McConville & Cornell, 2003). Sociological theorists assert that school norms can perpetuate inequality, alienation, aggression, and oppression among the students in relation to their race/ethnicity, gender, and socioeconomic background (Leach, 2003). Further, as youth bullying becomes understood within the realm of public health, greater attention is being paid to the impact of state laws on school safety especially for LGBT and sexually diverse youth. At the same time, as the problem moves to the national stage, there is potential for the development of legislation that could be harmful to

the mental health of youth involved in bullying. Much more research needs to be conducted as new state laws are passed and implemented. Hatzenbuehler and colleagues (in press) describe innovative policy-level research to help inform bullying interventions that consider the unique geographic characteristics that might predict the prevalence and antecedents to mistreatment of LGBT youth. This is just one example of many where the larger culture and political context can impact bullying rates and prevention efforts.

Chronosystem

The final level of the ecological framework, the chronosystem level, includes consistency or change (e.g., historical/life events) of the individual and the environment over the life course (e.g., family structure changes). Studies have documented that changes in life events (e.g., divorce) can result in negative youth outcomes, such as peer aggression (Breivik & Olweus, 2006). According to Hetherington and Elmore (2003), preadolescent children in divorced or remarried families exhibited higher levels of aggression, noncompliance, disobedience, inappropriate classroom conduct, and decreased level of self-regulation.

Summary

Although more comprehensive studies of the ecological model are emerging in the bully research literature, considerable efforts need to be made to conduct investigations that consider the complex interactions within and across the ecological systems. Most of the research in this area has been conducted in a piecemeal fashion, where many of the studies have focused on only one or two structures within the microsystem. Thus, this is a call for research that pays particular attention to examining the other systems and the interactions among them. Much more research needs to be conducted on the chronosystem. More specifically, changes in family structure, changes in school staff and administration, and changes in neighborhoods could contribute to prevalence and type of bullying or aggression displayed among youth.

Implications for Practice

The research reviewed here supports a multisystem approach to bully prevention. At the most basic level, all adults in schools should participate in professional development opportunities to understand bullying, and how to recognize and intervene to support youth. In addition, staff members and students should work together to gain knowledge and skills to reduce bullying and promote prosocial behaviors. But simply working with staff members and students will not bring about the real changes in bullying behaviors. School staff and administration must partner with others to impact the ecology. First, schools should include parents on their school safety committees and work together to coordinate *parent nights* to involve other parents, providing transportation, babysitting, and food. Newsletters and e-mail blasts should also be used to communicate with parents and community members. Second, many schools have partnered with community agencies and faith-based organizations to address bullying and to make sure youth and their families know where they can seek help. Some schools hold events on the topic of bullying at family recreational centers, museums, and street festivals. Third, school administrators should work closely with local media to highlight their bully-prevention initiatives and to promote community involvement. This would be particularly useful during October of each year, for Bully Awareness Month. Finally, youth leaders should also be actively engaged in bully prevention efforts to create effective bystander intervention.

References

Aceves, M. J., Hinshaw, S. P., Mendoza-Denton, R., & Page-Gould, E. (2009). Seek help from teachers or fight back? Student perceptions of teachers' actions

during conflicts and responses to peer victimization. *Journal of Youth and Adolescence*, *145*, 784–789.

Adams, R. E., & Bukowski, W. M. (2008). Peer victimization as a predictor of depression and body mass index in obese and non-obese adolescents. *Journal of Child Psychology and Psychiatry, 4*9, 858–866.

Bacchini, D., Esposity, G., & Affuso, G. (2009). Social experience and school bullying. *Journal of Community and Applied Social Psychology*, *19*, 17–32.

Birkett, M., & Espelage, D. L. (2014). Homophobic name-calling, peer-groups, and masculinity: The socialization of homophobic behavior in adolescents. *Social Development*.

Bowes, L., Maughan, B., Caspi, A., Moffitt, T. E., & Arseneault, L. (2010). Families promote emotional and behavioural resilience to bullying: Evidence of an environmental effect *Journal of Child Psychology and Psychiatry, 51*(7), 809–817.

Breivik, K., & Olweus, D. (2006). Adolescent's adjustment in four post-divorce family structures: Single mother, stepfather, joint physical custody and single father families. *Journal of Divorce and Remarriage*, *44*, 99–124.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*, 513–531.

Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development, 9*(1), 115–125.

Bronfenbrenner, U., & Morris, P. A. (1998). *The ecology of developmental processes*. Hoboken, NJ: John Wiley & Sons.

Card, N., Stuckey, B., Sawalani, G., & Little, T. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development, 79*, 1185–1229.

Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School Psychology Quarterly, 25*, 65–83.

Crick, N. R., Casas, J. F., & Mosher, M. (1997). Relational and overt aggression in preschool. *Developmental Psychology, 33*, 579–588.

Espelage, D. L. (2012). Bullying prevention: A research dialogue with Dorothy Espelage. *Prevention Researcher, 19*(3), 17–19.

Espelage, D. L., Aragon, S. R., Birkett, M., & Koenig, B. W. (2008). Homophobic teasing, psychological outcomes, and sexual orientation among high school students: What influences do parents and schools have? *School Psychology Review*, *37*, 202–216.

Espelage, D. L., Basile, K. C., & Hamburger, M. E. (2012). Bullying experiences and co-occurring sexual violence perpetration among middle school students: Shared and unique risk factors. *Journal of Adolescent Health*, *50*, 60–65.

Espelage, D. L., Basile, K., Low, S., Anderson, C., & De La Rue, L. (2014, June). *Bullying, sexual harassment, and teen dating violence across middle and high school*. Paper to be presented at the Annual Meeting of the Society for Prevention Research.

Espelage, D. L., Bosworth, K., & Simon, T. R. (2000). Examining the social context of bullying behaviors in early adolescence. *Journal of Counseling and Development*, *78*, 326–333.

Espelage, D. L., & De La Rue, L. (2013). Examining predictors of bullying and sexual violence perpetration among middle school female students. In B. Russell (Ed), *Perceptions of female offenders: How stereotypes and social norms affect criminal justice responses* (pp. 25–46). New York, NY: Springer.

Espelage, D. L., Green, H. D., & Polanin, J. (2012). Willingness to intervene in bullying episodes among middle school students: Individual and peer-group influences. *Journal of Early Adolescence*, *32*, 776–801.

Espelage, D. L., Holt, M. K., & Henkel, R. R. (2003). Examination of peer-group contextual effects on aggression during early adolescence. *Child Development, 74*, 205–220.

Espelage, D. L., Low, S., & De La Rue, L. (2012). Relations between peer victimization subtypes, family violence, and psychological outcomes during adolescence. *Psychology of Violence, 2*, 313–324.

Espelage, D. L., Low, S., Rao, M. A., Hong, J. S., & Little, T. D. (2013). Family violence, bullying, fighting, and substance use among adolescents: A longitudinal transactional model. *Journal of Research on Adolescence, 24*, 337–349. doi: 10.1111/jorg.12060.

Espelage, D. L., Polanin, J. R., & Low, S. K. (2014). Teacher & staff perceptions of school environment as predictors of student aggression, victimization, and willingness to intervene in bullying situations. *School Psychology Quarterly*. doi: 10.1037/spq0000072.

Faris, R., & Felmlee, D. (2011). Status struggles: Network centrality and gender segregation in same- and cross-gender aggression. *American Sociological Review*, *76*, 48–73.

Fekkes, M., Pijpers, F. I. M., Fredriks, A. M., Vogels, T., & Verloove-Vanhorick, S. P. (2006). Do bullied children get ill, or do ill children get bullied? A prospective cohort study on the relationship between bullying and health-related symptoms. *Pediatrics*, *117*, 1568–1574.

Georgiou, S. N., & Fanti, K. A. (2010). A transactional model of bullying and victimization. *Social Psychology of Education, 13*, 295–311.

Gini, G., Pozzoli, T., Borghi, F., & Franzoni, L. (2008). The role of bystanders in students' perception of bullying and sense of safety. *Journal of School Psychology, 46*, 617–638.

Hatzenbuehler, M. L., Hirsch, J., Parker, R., Nathanson, C., & Fairchild, A. (in press). The mental health consequences of antibullying policies. In P. B. Goldblum, D. L. Espelage, J. Chu, & B. Bongar (Eds.), *The Challenge of Youth Suicide and Bullying*. New York, NY: Oxford University Press.

Hetherington, E. M., & Elmore, A. M. (2003). Risk and resilience in children coping with their parents' divorce and remarriage. In S. S. Luthar (Ed.), *Resilience and vulnerability: Adaption in the context of childhood adversities* (pp. 182–212). New York, NY: Cambridge University.

Holt, M. K., & Espelage, D. L. (2007). Perceived social support among bullies, victims, and bully-victims. *Journal of Youth and Adolescence, 36*, 984–994.

Hong, J. S., & Eamon, M. K. (2011). Students' perceptions of unsafe schools: An ecological systems analysis. *Journal of Child and Family Studies, 20*, 863–872.

Hong, J. S., & Espelage, D. L. (2012). A review of research on bullying and peer victimization in school: An ecological systems analysis. *Aggression and Violent Behavior*, *17*, 311–312.

Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology, 92*, 349–359.

Leach, F. (2003). Learning to be violent: The role of the school in developing adolescent gendered behaviour. *Compare*, *33*, 385–400.

Lee, C. H. (2009). Personal and interpersonal correlates of bullying behaviors among Korean middle school students. *Journal of Interpersonal Violence*, *25*, 152–176.

Li, X., Feigelman, S., & Stanton, B. (2000). Perceived parental monitoring and health risk behaviors among urban low-income African-American children and adolescents. *Journal of Adolescent Health, 27*(1), 43–48.

Low, S., & Espelage, D. L. (2013). Differentiating cyber bullying perpetration from other forms of peer aggression: Commonalities across race, individual, and family predictors. *Psychology of Violence*, *3*, 39–52.

Low, S., & Espelage, D. L. (2014). Conduits from community violence exposure to bullying and victimization: Contributions of parental monitoring, impulsivity and deviancy. *Journal of Counseling Psychology, 61*(2), 221–231.

McConville, D. W., & Cornell, D. G. (2003). Aggressive attitudes predict aggressive behavior in middle school students. *Journal of Emotional and Behavioral Disorders*, *11*, 179–187.

Miller, S., Williams, J., Cutbush, S., Gibbs, D., Clinton-Sherrod, M., & Jones, S. (2013). Dating violence, bullying, and sexual harassment: Longitudinal profiles and transitions over time. *Journal of Youth and Adolescence, 42*(4), 607–618.

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association, 285*, 2094–2100.

Neal, J. W. (2007). Why social networks matter: A structural approach to the study of relational forms of aggression in middle childhood and adolescence. *Child and Youth Care Forum, 36*, 195–211.

Peguero, A. A. (2009). Victimizing the children of immigrants: Latino and Asian American student victimization. *Youth and Society*, *41*, 186–208.

Polanin, J., Espelage, D. L., & Pigott, T. D. (2012). A meta-analysis of school-based bullying prevention programs' effects on bystander intervention behavior and empathy attitude. *School Psychology Review, 41*, 47–65.

Pozzoli, T., & Gini, G. (2010). Active defending and passive bystanding behavior in bullying: The role of personal characteristics and perceived pressure. *Journal of Abnormal Child Psychology, 38*(6), 815–827.

Qin, D. B., Way, N., & Rana, M. (2008). The "model minority" and their discontent: Examining peer discrimination and harassment of Chinese American immigrant youth. In H. Yoshikawa & N. Way (Eds.), *Beyond the family: Contexts of immigrant children's development: New Directions for Child*

and Adolescent Development, Number 121 (pp. 27–42). San Francisco, CA: Jossey-Bass.

Robinson, J. P., & Espelage, D. L. (2011). Inequities in educational and psychological outcomes between LGBTQ and straight students in middle and high school. *Educational Researcher*, *40*, 315–330.

Rodkin, P. C., & Berger, C. (2008). Who bullies whom? Social status asymmetries by victim gender. *International Journal of Behavioral Development, 32*, 473–485.

Rose, C. A., Monda-Amaya, L. E., & Espelage, D. L. (2011). Bullying perpetration and victimization in special education: A review of the literature. *Remedial and Special Education, 32*, 114–130.

Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression & Violent Behavior, 15*, 112–120.

Varjas, K., Henrich, C. C., & Meyers, J. (2009). Urban middle school students' perceptions of bullying, cyberbullying, and school safety. *Journal of School Violence, 8*, 159–176.

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Establishing School Counselors as Leaders in Bullying Curriculum Delivery: Evaluation of a Brief, School-Wide Bystander Intervention

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Abstract

The authors evaluated a brief, school-wide, bystander bullying intervention (STAC) designed to establish school counselors as leaders in curriculum delivery. Elementary school students trained in the program reported an increase in perceived knowledge and confidence to act as "defenders," utilizing the STAC strategies when they observed bullying, and a decrease in bullying victimization and perpetration at a 4-month follow-up. We discuss implications for school counselors.

Keywords

bullying, bystander program, elementary school, defenders, STAC

Bullying represents a significant problem in the United States, with national survey data indicating 20.8% of students report being a victim of bullying (U.S. Department of Education, 2017). Bullying is defined as often repeated, unwanted, intentional aggressive behavior that takes place within the context of a relationship with a perceived power imbalance (Brank, Hoetger, & Hazen, 2012; Olweus, 1993). Although the prevalence of bullying peaks in middle school, with 31% of sixth-grade students reporting bully victimization (U.S. Department of Education, 2017), national data indicate that bullying behaviors start as early as elementary school. Specifically, as many as 22% of students in Grades 3–5 report being bullied and 50% report being afraid of being bullied at school (Luxenberg, Limber, & Olweus, 2015).

Bullying in elementary school is associated with multiple problems for both students who are victims of bullying and those who perpetrate bullying. Victims of bullying report psychological problems, such as being withdrawn, depressed, anxious, and avoidant (Cook, Williams, Guerra, Kim, & Sadek, 2010), and victimization is related to increased suicide attempts and completions in adulthood (Klomek et al., 2009). Further, bullying victimization is associated with stomachaches and headaches, attention deficit hyperactivity disorder, cognition problems, conduct problems (Kim et al., 2015), and poor academic achievement (Glew, Fan, Katon, Rivara, & Kernic, 2005). Students who perpetrate bullying also report negative consequences including both externalizing and internalizing behaviors (Cook et al., 2010). Furthermore, students who are involved in bullying as either a victim or perpetrator are at higher risk of psychotic episodes in adolescence (Wolke, Lereya, Fisher, Lewis, & Zammit, 2014). Findings also indicate that students who are bullied in elementary school continue to experience victimization into middle school and are at greater risk of school disengagement (Buhs, Ladd, & Herald, 2006). For these reasons, identifying efficacious antibullying programs for elementary school students is imperative to disrupt patterns of bullying and the associated negative consequences both during elementary school and into adolescence.

School-Based Interventions

Numerous studies support the efficacy of comprehensive, school-wide programs in reducing bullying among elementary school students (Tofti & Farrington, 2011). Comprehensive programs often include training of all students, teachers, staff, administrators, and parents (Menard & Grotpeter, 2014). Although generally effective, these programs require significant resources for training all key school stakeholders (Garrity, Jens, Porter, Sager, & Short-Camilli, 2004), up to 15 hr of classroom instruction (Menard & Grotpeter, 2014), and access to a licensed educational expert (KiVa Antibullying, 2014) who may not always be available. Because comprehensive programs place a high demand on schools, not all schools are able

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to adopt and implement such programs. Thus, identifying brief antibullying programs that can be more easily implemented in the school setting is important.

Results from a meta-analysis examining effective bullying prevention programs indicate that training student bystanders (i.e., those who witness bullying behavior) to intervene in bullying incidents is an important component of school-based bullying reduction programs (Polanin, Espelage, & Pigott, 2012). Researchers estimate that between 60% and 85% of students in elementary school witness bullying as bystanders (Aboud & Miller, 2007). When bystanders respond to bullying instances by intervening or defending victims, bullying behaviors decrease (Hawkins, Pepler, & Craig, 2001; Salmivalli, Voeten, & Poskiparta, 2011). In contrast, when bystanders encourage bullying either directly or indirectly, bullying behaviors increase (Kärnä, Voeten, Poskiparta, & Salmivalli, 2010). Unfortunately, the majority of bystanders respond to bullying by reinforcing the bully; this may occur because students do not know how to intervene on behalf of victims (Forsberg, Thornberg, & Samuelsson, 2014; Hutchinson, 2012; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Thus, training student bystanders to intervene on behalf of victims, rather than acting passively or reinforcing the bullying, represents a promising strategy for bullying prevention.

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School-based interventions typically rely on teacher-delivered bullying education curriculum, posing another barrier to implementation due to multiple demands placed on teachers (Biggs, Vernberg, Twemlow, Fonagy, & Dill, 2008). According to the ASCA National Model from the American School Counselor Association (ASCA, 2012), school counselors are systemic change agents within schools, promoting student achievement through school-wide initiatives, including programs that foster a safe learning environment. School counselors help students develop emotional and social skills fostering positive and supportive relationships and empathy, and engage students as advocates (ASCA, 2014), thereby promoting leadership, advocacy, collaboration, and systemic change (ASCA, 2012). Thus, taking a leadership role in antibullying curriculum delivery may be well suited to school counselors.

The STAC Program

The STAC program, which stands for the four bystander interventions strategies of "stealing the show," "turning it over," "accompanying others," and "coaching compassion," was developed by the authors as a brief, stand-alone, bullying bystander intervention program (Midgett, Doumas, Sears, Lundquist, & Hausheer, 2015). A central focus of the program is to teach students strategies they can use to intervene in bullying situations as "defenders" on behalf of victims. A unique feature of the STAC program is that it establishes school counselors as leaders by shifting program implementation from teachers to school counselors. Furthermore, the STAC program aligns with the ASCA mind-set standards because it was designed to help students develop self-confidence to succeed in intervening against bullying and to increase their sense of belonging in the school environment (ASCA, 2014). It also supports ASCA (2014) behavior standards for social skills including developing positive relationships with peers and demonstrating empathy, social responsibility, advocacy, and behaviors appropriate to the situation and environment.

In previous studies, we found support for the STAC program at the elementary school level. In the initial feasibility study, in which the school counselor selected students identified as leaders to be trained in the program, the researchers found that the STAC program could be successfully implemented as a 90-min training by graduate students in a Masters in Counseling program (Midgett & Doumas, 2016). Results of that study also indicated that students trained in the STAC program reported an increase in knowledge of bullying, knowledge of the STAC strategies, and confidence to intervene in bullying situations (Midgett & Doumas, 2016). More recently, results of a randomized controlled trial (RCT) evaluating the efficacy of the STAC program indicated that student leaders trained in the program reported an increase in knowledge and confidence to intervene as defenders (Midgett, Doumas, & Trull, 2017). Further, upper elementary school students (sixth graders) in the RCT reported an increase in self-esteem compared to students in a wait-list control group at a 30-day follow-up (Midgett et al., 2017). We have also found positive effects of the STAC program on bullying behavior. In an RCT with students identified by the school counselor as occasionally bullying, students in the intervention group reported a decrease in bullying perpetration compared to those in a wait-list control group at a 30-day follow-up (Midgett, Doumas, Trull, & Johnson, 2017).

Prior to this study, the authors have demonstrated the fidelity and short-term efficacy of the STAC program among elementary school students specifically selected for the training (e.g., student leaders or students who bully occasionally). Although these findings suggest the STAC program is a promising approach for bullying prevention among elementary school students, the methodology for all of these studies consisted of selecting a small group of students based on personal characteristics to be trained in the STAC program (Midgett & Doumas, 2016; Midgett et al., 2017; Midgett, Doumas, Trull, & Johnson, 2017). However, we had not evaluated the STAC program delivered as a school-wide intervention. Because bullying is embedded within the culture of schools (Waasdorp, Pas, O'Brennan, & Bradshaw, 2011) and school-wide programs are considered the standard for practice in bullying intervention (Ttofi & Farrington, 2011), assessing the efficacy of STAC when implemented as a school-wide intervention is important.

The Current Study

The purpose of this study was to extend the literature by evaluating the STAC program as a brief, school-wide, counselor-delivered intervention at the elementary school level. To achieve this aim, we used a single-group repeated measures design. The school counselor at one elementary school delivered the STAC program to all students during school-wide core curriculum classroom lessons. Students were given assessments at baseline, postintervention, and at a 4-month follow-up. We were interested in the following research questions: (1) Did students report an increase in perceived knowledge and confidence to intervene from baseline to posttraining and were these changes sustained at the 4-month follow-up? (2) Did students report utilizing the STAC strategies at a 4-month follow-up? and (3) Did students report a decrease in bullying victimization and a decrease in bullying perpetration from baseline to at the 4-month follow-up?

Method

Research Design

We used a single-group repeated measures design within one elementary school to explore the delivery of the STAC program as a school-wide intervention. All students were invited to participate in the STAC intervention. All participants completed baseline, posttraining, and 4-month follow-up assessment surveys.

Participants

The authors recruited elementary school students from an urban, public, northwestern school with a total enrollment of 323 students in Grades K–6 for participation in this study. Students in Grades 3–6 were invited to participated in the study ($N = 144$). Of these 144 eligible students, 113 (78%) received parental consent to participate in the study. Of these 113 students, 100% were present for the baseline assessment and the STAC training and assented to participate. Our final response rate of 78% is higher than the range of response rates (30–60%) typical of other school-based intervention studies using active parental consent (Smith, Boel-Studt, & Cleeland, 2009). The sample of 113 students (60.2% female; 39.8% male) included students in third ($n = 30$), fourth ($n = 28$), fifth ($n = 27$), and sixth ($n = 28$) grades. Participants ranged in age from 8 to 12 years old ($M = 9.74$ and $SD = 1.26$), with reported racial backgrounds of 64.2% White, 10.1% African American, 9.2% Hispanic, 7.3% Asian, 0.9% Pacific Islander, and 8.3% other.

Of the 113 students who completed baseline assessment and the STAC training, 85% ($n = 96$) completed the posttraining assessment and 82% ($n = 93$) completed the 4-month follow-up. There were no demographic differences or differences on outcome variables between students who completed follow-up measures and those who did not complete follow-up measures either at the posttraining assessment or the 4-month follow-up.

Procedure

Members of the research team worked closely with the school counselor to conduct the study procedures. In the fall semester, during regularly scheduled core curriculum classroom lessons, the school counselor explained that all students at school would be trained in a bystander antibullying program to learn strategies they could use to help reduce bullying. The school counselor also indicated that researchers would be evaluating the training, introduced the study procedures to students, and invited them to participate. The school counselor informed students there would be no negative consequences if they declined participation. All students in Grades 3–6 were given an informed consent form to take home to their parents/guardians to provide written consent for their student's participation in the study. The school counselor also followed up with a phone call or e-mail to a parent/guardian when necessary. Once students returned the signed informed consent to the school counselor, she provided them with an assent form and read the form to students in lower grades.

All eligible students were given the research questionnaires, which included the Student-Advocates Pre- and Postscale (SAPPS; Midgett et al., 2015), Use of STAC Strategies (Midgett, Doumas, Trull, & Johnston, 2017), Bullying Behavior Survey (Revised Olweus Bully/Victim Questionnaire; Olweus, 1996), and demographic questions. Students completed SAPPS, the Bullying Behavior Survey, and the demographic questions at baseline (October). Upon completion of four 30-min STAC classroom lessons (December), students completed the SAPPS. Four months after baseline (February), students completed follow-up questionnaires, which included SAPPS, Use of STAC Strategies, and the Bullying Behavior Survey. Members of the research team read each item from every questionnaire to students. The university's institutional review board and the school district approved all study procedures. We followed the American Counseling Association (ACA, 2014) ethical standards for the study.

Measures

Knowledge and confidence to intervene. The SAPPS (Midgett et al., 2015) was used to measure knowledge of bullying, knowledge of the STAC strategies, and confidence to intervene. The questionnaire comprises 11 items that measure student knowledge of bullying behaviors, knowledge of the STAC strategies, and confidence intervening in bullying situations. Examples of items include: "I know what verbal bullying looks like," "I know how to use humor to get attention away from the student being bullied," and "I feel confident in my ability to do something helpful to decrease bullying at my school." Items are rated on a 4-point Likert-type scale ranging from 1 (*I totally disagree*) to 4 (*I totally agree*). Items are summed to create a

total scale score. The questionnaire has established content validity and adequate internal consistency for the total scale with Cronbach's α ranging from .77 to .81 (Midgett & Doumas, 2016; Midgett et al., 2015). For this sample, Cronbach's α was .80.

Use of STAC strategies. Students' use of STAC strategies was measured by the Use of STAC Strategies questionnaire (Midgett, Doumas, Trull, & Johnston, 2017). Each STAC strategy was measured using a single item. Students were asked, "How often would you say that you used these strategies to stop bullying in the past month? (a) stealing the show—using humor to get the attention away from the bullying situation, (b) turning it over—telling an adult about what you saw, (c) accompanying others—reaching out to the student who was the target of bullying, and (d) coaching compassion—helping the student who bullied develop empathy for the target." Items were rated on a 5-point Likert-type scale ranging from 1 (*never/almost never*) to 5 (*always*/*almost always*).

Bullying victimization and perpetration. Bullying victimization and perpetration were measured using the Olweus Bully/Victim Questionnaire (Olweus, 1996). The Olweus Questionnaire comprises 39 self-report items that measure bullying victimization, perpetration, and student perception of adult support. Bullying victimization and bullying perpetration items include verbal, relational, physical, and cyberbullying. The 9-item Bullying Victimization Scale includes items such as "I was called mean names, was made fun of, or was teased in a hurtful way," "Other students left me out of things on purpose, excluded me from their group of friends, or completely ignored me," "I was hit, kicked, pushed, shoved around, or locked indoors," and "I was bullied with mean or hurtful messages, calls or pictures, or in other ways on my mobile phone or over the internet (computer)." The 9-item Bullying Perpetration Scale includes items such as "I called another student(s) mean names, made fun of him or her, or teased in a hurtful way," "I kept him or her out of things on purpose, excluded him or her from my group of friends, or completely ignored him or her," "I hit, kicked, pushed, shoved him or her around, or locked him or her indoors," and "I bullied him or her with mean or hurtful messages, calls or pictures, or in other ways on my mobile phone or over the internet (computer)." Items are rated on a 5-point Likert-type scale ranging from 0 (*It hasn't happened in the past couple of months*) to 4 (*several times a week*). The questionnaire has moderate to high internal reliability ranging from $\alpha = .74$ to .98 and satisfactory construct validity (Kyriakides, Kaloyirou, & Lindsay, 2006). For this sample, Cronbach's α was .83 for the Bullying Victimization Scale and .84 for the Bullying Perpetration Scale.

The STAC Intervention

The STAC intervention is designed to train students to act as defenders on behalf of victims of bullying (Midgett et al., 2015). In previous studies, counselor education graduate students delivered the STAC program at the elementary school level in a 75-min training format (Midgett & Doumas, 2016; Midgett et al., 2017) that included a didactic component, experiential activities, and role plays to teach students the four STAC strategies followed by two biweekly, 15-min small group meetings (for details, see Midgett et al., 2015). For the present study, the STAC program was modified to shift program curriculum delivery from counselor education students to the school counselor. The school counselor delivered the training during four 30-min core curriculum classroom lessons and conducted two 5-min follow-up meetings at the end of subsequent guidance lessons following the training. The counselor-delivered STAC training included four 30-min lessons.

Lesson 1. During the first lesson, the school counselor used an audiovisual presentation to teach students the definition of bullying and explain the different types of bystander roles.

Lesson 2. In the second lesson, the school counselor reviewed didactic material from Lesson 1 and facilitated a discussion about the different types of bullying students can observe at school (i.e., physical, verbal, relationship, and cyberbullying). Next, students participated in a small group activity where they created a poster, writing, or drawing about different types of bullying they learned.

Lesson 3. The third lesson also began with a review of the material previously covered followed by a "basketball" activity in which students wrote on a piece of paper about a bullying incident they had experienced or witnessed, crumpled the paper up into a ball, and tossed it into a basket. The school counselor read a few of the examples students provided and facilitated a brief discussion to help unite the class and motivate students to act as defenders. Next, the school counselor used an audiovisual presentation to introduce students to the four STAC strategies (Midgett et al., 2015).

Stealing the show. This strategy involves teaching defenders to use their sense of humor when they observe bullying to distract the peer audience's attention away from the target. The school counselor provides examples such as the defender telling a funny joke or pretending to trip by acting silly.

Turning it over. This strategy consists of encouraging defenders to identify and tell a safe adult at school when they witness bullying. Elementary school students learn to always use this strategy when they observe physical bullying and when they are unsure as to how to intervene.

Accompanying others. For this strategy, the school counselor teaches defenders to reach out to the student who was targeted after a bullying incident to offer support. Students learn they can use accompanying others either by letting victims know they witnessed the incident and communicating that what happened is not acceptable or defenders can support victims indirectly by spending time with them and nonverbally communicating that they are not alone at school.

Coaching compassion. This strategy involves gently confronting the student who bullies after the bullying incident to communicate that his or her behavior is unacceptable. The school counselor instructs defenders to use coaching compassion when they have an established friendship with the student who bullied or if the student who bullied is in a younger grade and the defender believes he or she will respect them.

Lesson 4. The school counselor started the fourth STAC lesson with a review of the four STAC strategies. Then, she separated students into small groups and provided each group with a prewritten role play for students to practice using the STAC strategies and then perform a skit for the class where they act as defenders. After concluding the role plays, the school counselor encouraged students to implement the strategies when they witness bullying at school and to ask her for help if they had any questions or concerns.

Follow-up meetings. The school counselor conducted two 5-min follow-up meetings at the end of two subsequent biweekly guidance lessons following the training. The school counselor asked students what types of bullying incidents they observed and helped them brainstorm effective ways to use the STAC strategies on behalf of victims. The school counselor also encouraged students to share honest feedback about their experience acting as defenders and reminded them that she was available to meet individually with students if they had any concerns.

Intervention fidelity. The researchers created an STAC training video to help prepare the school counselor to conduct the program. Research team members also observed the school counselor delivering each of the four STAC lessons one time to ensure she was delivering the curriculum with fidelity. Team members rated the training delivery on a dichotomous scale, *Yes* or *No*, to evaluate whether the school counselor accurately taught the definition and types of bullying, the STAC strategies, and whether she deviated from training materials. Furthermore, the researchers evaluated whether the school counselor conducted all role plays included in the training and whether students had an opportunity to practice all four STAC strategies.

Power Analysis

We conducted an a priori power analysis using the G*Power 3.1.3 program (Faul, Erdfelder, Lang, & Buchner, 2007) for a repeated measures analysis of variance (ANOVA) with one factor (time) at three time points and a paired sample t test. Results of the power analysis indicated that a sample size of 36 is needed for power of $\geq$0.90 to detect a medium effect size for the main effect of time with three measurements with an α level of .05. For a paired sample t test, a sample size of 35 is needed for power of $\geq$0.90 to detect a medium effect size with an α level of .05.

Statistical Methods

Prior to analysis, we examined all variables for outliers at baseline and follow-up assessments and adjusted them to 3.3 *SD* above the mean before conducting analyses (Tabachnick & Fidell, 2007). To assess perceived knowledge confidence gained in the intervention group, we conducted a GLM repeated measures ANOVA with one independent variable, time (baseline, postintervention, follow-up) and follow-up paired t tests to examine post hoc differences between time points. To assess skill usage in the intervention group, we computed descriptive statistics to examine frequency of use of STAC strategies at the follow-up assessment. We conducted two paired t tests to examine differences from baseline to follow-up assessments for bullying victimization and bullying perpetration. For these analyses, we were interested in determining changes in bullying victimization among students who reported at least one incident of bullying victimization at baseline and changes in bullying perpetration among students who reported at least one incident of bullying perpetration at baseline. We used an α level of $p < .05$ to determine statistical significance and used partial eta squared (η_p^2) as the measure of effect size for the GLM ANOVA and Cohen's d for paired t test with magnitude of effects interpreted as follows: small ($\eta_p^2 \geq .01$; $d = .20$), medium ($\eta_p^2 \geq .06$; $d = .50$), and large ($\eta_p^2 \geq .14$; $d = .80$; Cohen, 1969; Richardson, 2011). We used SPSS version 24.0 to conduct all analyses.

Results

Increase in Perceived Knowledge and Confidence

We examined changes in perceived knowledge and confidence to intervene to determine whether students learned the information presented in the STAC training across three time points (baseline, postintervention, and 4-month follow-up). Results indicated a significant main effect for time, Wilks's $\lambda = .79$, $F(2, 81) = 11.05$, $p < .001$, $\eta_p^2 = .21$. Follow-up paired t tests indicated a significant difference in perceived knowledge and confidence between baseline ($M = 33.72$, $SD = 6.21$) and postintervention ($M = 36.41$, $SD = 5.21$), $t(82) = -4.81$, $p < .001$, Cohen's $d = -.46$; and between baseline ($M = 33.72$, $SD = 6.21$) and 4-month follow-up ($M = 36.47$, $SD = 5.06$), $t(82) = -4.25$, $p < .001$, Cohen's $d = -.49$; but not between postintervention ($M = 36.41$, $SD = 5.21$) and 4-month follow-up ($M = 36.47$, $SD = 5.06$), $t(82) = -0.13$, $p = .90$, Cohen's $d = -.01$. As hypothesized, students reported an increase in perceived knowledge and confidence from baseline to postintervention, and this increase was sustained at the 4-month follow-up.

Use of STAC Strategies

Next, we examined rates of use of STAC strategies among students in the intervention group at the 4-month follow-up to determine whether students used the STAC strategies taught

in the STAC training. Among students who indicated they witnessed bullying (60.2%, $n = 93$), 90% reported using at least one STAC strategy in the past month. For specific STAC strategies, 50.9% reported using stealing the show, 78.2% reported using turning it over, 76.4% reported using "accompany others," and 44.4% reported using coaching compassion.

Bullying Victimization and Perpetration

Among students who reported bullying victimization at baseline ($n = 70$, 63.1%), results indicated a significant difference in bullying victimization between the baseline ($M = 8.40$, $SD = 6.43$) and the 4-month follow-up assessment ($M = 6.05$, $SD = 5.89$), $t(57) = 3.24$, $p < .01$, Cohen's $d = .43$. As hypothesized, students reported a decrease in bullying victimization between baseline and the 4-month follow-up assessment. Similarly, among students who reported bullying perpetration at baseline ($n = 27$, 24.8%), results indicated a significant difference in bullying perpetration between the baseline ($M = 2.52$, $SD = 2.76$) and the 4-month follow-up assessment ($M = 1.13$, $SD = 1.49$), $t(22) = 2.15$, $p < .05$, Cohen's $d = .47$. As hypothesized, students reported a decrease in bullying perpetration between baseline and the 4-month follow-up assessment.

Discussion

The purpose of this study was to extend the literature by evaluating the counselor-delivered STAC program implemented as a brief, school-wide intervention at the elementary school level. Because approximately one in four students in upper elementary school report being bullied at school (Luxenberg et al., 2015; U.S. Department of Education, 2017), identifying effective school-wide interventions that can be used in the elementary school setting is important. Overall, results indicated that the STAC program can effectively be delivered as a school-wide program conducted by the school counselor during core curriculum classroom lessons for elementary school students. Further, results suggest that the STAC program is a promising approach for reducing bullying victimization and perpetration when implemented as a counselor-led, school-wide training.

As hypothesized, students reported an increase in perceived knowledge of bullying, knowledge of the STAC strategies, and confidence to intervene from baseline to posttraining. Further, we found that these changes were sustained at a 4-month follow-up. In previous studies conducted at the elementary (Midgett & Doumas, 2016; Midgett et al., 2017) and middle school (Midgett et al., 2015; Midgett, Doumas, Trull, & Johnston, 2017) levels, we found similar results immediately posttraining (Midgett & Doumas, 2016; Midgett et al., 2015) and at a 30-day follow-up (Midgett et al., 2017; Midgett, Doumas, Trull, & Johnston, 2017). This is the first study to demonstrate that students report retaining their perception of increased knowledge and confidence to act as defenders across the school year.

As hypothesized, students reported an increase in perceived knowledge of bullying, knowledge of the STAC strategies, and confidence to intervene from baseline to posttraining.

Findings also supported our second hypothesis that students would use the STAC strategies. Results at the 4-month follow-up indicated that among students who witnessed bullying, 90% had used at least one STAC strategy to "defend" a student being bullied. This finding is similar to previous research conducted at the middle school level, in which 95% of middle school students reporting using at least one STAC strategy at a 30-day follow-up (Midgett, Doumas, Trull, & Johnston, 2017). Among the STAC strategies, more students utilized turning it over (78%) and accompanying others (76%), compared to stealing the show (51%) and coaching compassion (44%).

Although patterns reported by middle school students are similar, with 91% turning it over, 95% accompanying others, 76% stealing the show, and 57% coaching compassion (Midgett, Doumas, Trull, & Johnston, 2017), a smaller percentage of elementary school students reported using each strategy. One possible explanation is the different length of follow-up assessments. In the middle school study, students reported use of STAC strategies 30 days after training, whereas in the elementary school study, students reported use of STAC strategies 4 months after training. An alternative explanation is that the different rates of use may be due to the age of the students. Due to developmental differences, older students may be more likely to apply the skills they learned during the STAC training, whereas younger students may need additional support. For example, younger students may need to participate in more role plays during the training than older students or may need additional or longer follow-up sessions.

Findings also suggest that elementary students reported using coaching compassion less often than the other three STAC strategies. This finding is also consistent with prior research examining use of strategies among middle school students (Midgett, Doumas, Trull, & Johnston, 2017). Defenders may be reluctant to use coaching compassion because they fear becoming a target of bullying (Midgett, Moody, Reilly, & Lyter, 2017). Coaching compassion requires defenders to directly engage with students who bully rather than to address the problem through engaging with a peer audience (stealing the show), supporting the victim (accompanying others), or asking for adult help (turning it over). Moreover, defenders may be appropriately avoiding direct engagement with students who bully to avoid situations that may pose a greater risk for them to become a target of bullying.

Finally, as hypothesized, students who reported bullying victimization at baseline reported a decrease in bullying victimization and students who reported bullying others at baseline reported a decrease in bullying perpetration at the 4-month follow-up. These results are consistent with previous research indicating that elementary students who occasionally bully and

are trained in the STAC program report a decrease in bullying perpetration at a 30-day follow-up compared to students in a control group (Midgett, Doumas, Trull, & Johnson, 2017). Researchers have demonstrated that comprehensive, school-wide bystander programs can be effective at reducing school bullying (Kärnä et al., 2010; Polanin et al., 2012; Salmivalli et al., 2011); however, implementing these types of programs can be difficult due to time and financial demands they place on schools (Garrity et al., 2004; KiVa Antibullying, 2014; Menard & Grotpeter, 2014). Our findings suggest that a brief, school-wide bystander intervention that establishes school counselors as leaders in antibullying program delivery can be an effective approach to reducing bullying. This is an important finding when considering the wide range of negative consequences associated with bullying in elementary school (Buhs et al., 2006; Cook et al., 2010; Glew et al., 2005; Kim et al., 2015; Klomek et al., 2009; Wolke et al., 2014).

Students who reported bullying victimization at baseline reported a decrease in bullying victimization and students who reported bullying others at baseline reported a decrease in bullying perpetration at the 4-month follow-up.

Limitations and Directions for Future Research

Although this study contributes to our understanding of how to train students to act as defenders to reduce bullying at the elementary school level, it has certain limitations. The primary limitation is the lack of a control or comparison school. Thus, whether study outcomes were related to selection variables, the STAC intervention, or other unmeasured variables is not clear. Furthermore, results are limited to one school. Future research using a randomized controlled design with several schools in each condition (intervention and control) would improve the validity of the study. Next, the sample is predominantly female, limiting the generalizability of the results. Thus, further studies are needed that evaluate the STAC program as a school-wide intervention with samples that are more evenly distributed across males and females. This study obtained information through self-report questionnaires, potentially leading to biased or distorted reporting, especially at the elementary school level. However, children are able to provide useful information about their experience when asked Likert-type questions in a manner that is meaningful to them (Christensen & James, 2008). Therefore, the researchers read the surveys to the students in an effort to increase the quality of the data. Future studies, however, could include objective measures in addition to self-report to strengthen findings, including observational data of students acting as defenders and bullying incidents reported to school personnel. We did not track whether there was a relationship between types of bullying students observed and strategies they utilized. Therefore, future research could investigate whether that relationship exists.

Implications for School Counselors

This study has practical implications for elementary school counselors. Extant literature indicates that elementary school bullying is prevalent, with many negative associated consequences (Buhs et al., 2006; Cook et al., 2010; Glew et al., 2005; Kim et al., 2015; Klomek et al., 2009; Wolke et al., 2014). For this reason, equipping elementary school students with tools they can use to act as defenders to reduce bullying victimization and perpetration is imperative. Programs such as STAC can be delivered as brief, school-wide interventions through core curriculum classroom lessons as part of a school counseling curriculum. Because the program places a low demand on schools in terms of time and financial resources, a broader range of schools can have access to bullying reduction program implementation. Further, this approach to implementing the STAC program aligns with the ASCA (2012, 2014) National Model establishing school counselors as leaders in implementation of a program that fosters a safe learning environment for students.

Our findings also provide important implications for school counselors to train elementary students how to intervene as defenders to reduce bullying at school. Although our findings indicate a sustained increase in perceived knowledge and confidence to intervene in bullying postintervention, we also found that fewer students reported using stealing the show and coaching compassion relative to turning it over and accompanying others. Thus, school counselors providing students with additional practice to implement stealing the show and coaching compassion could be helpful. For example, elementary students might struggle to come up with an appropriate joke when they witness bullying. Therefore, school counselors could teach students to use distraction instead of humor to intervene. Instead of telling a funny joke, a defender could interrupt a bullying situation by attempting to initiate a game such as foursquare, inviting the students who are observing the bullying situation and the student who was targeted to join the game. School counselors could also teach defenders to use coaching compassion indirectly to decrease students' potential fear of becoming a target. For example, a defender could interrupt a fifth-grade boy who is teasing a younger student by asking the fifth grader if he saw his favorite sports team's most recent game on television. After the defender interrupts the bullying situation, the defender could gently state to the student who bullied that teasing others is not "cool" and that it can be hurtful to be teased. If the student who bullies has an established relationship with the defender, the student who bullies could be open to considering what the defender is communicating. Our findings indicate that turning it over and accompanying others were used more often by elementary students than the other strategies. Therefore, elementary school counselors can rely more heavily on these strategies when beginning to teach students how to intervene as defenders since the strategies were a natural fit for this population.

Implications for Counselor Educators

This study also has practical implications for counselor educators. When preparing school counseling students to become advocates for a safe learning environment for elementary school students (ASCA, 2012, 2014), counselor educators can introduce school counseling students to brief antibullying programs such as STAC. Counselor educators can share the specific STAC strategies with school counseling students to help them feel equipped to combat the issue of bullying. Further, counselor educators can focus on turning it over as an important strategy for elementary school students and engage counseling students in a discussion regarding how they can help foster a culture at school where adults are equipped to support elementary school students when they report bullying.

When preparing school counseling students to become advocates for a safe learning environment for elementary school students, counselor educators can introduce school counseling students to brief antibullying programs such as STAC.

Conclusion

This study evaluated a brief, school-wide, bystander antibullying program for elementary school students uniquely designed to establish school counselors as leaders in curriculum delivery. This is the first study to examine the effectiveness of the STAC program implemented as a school-wide program. Results indicated that students reported an increase in perceived knowledge and confidence to act as defenders, utilized the STAC strategies when they witnessed bullying, and reported a decrease in bullying perpetration and victimization at school at a 4-month follow-up. These findings provide evidence that positive outcomes from the STAC training can be sustained throughout the school year, extending from the fall to spring semester. Results provide support for the STAC program as a promising brief, school-wide, counselor-delivered approach that can be implemented with significantly fewer resources than many comprehensive school-wide programs that rely on teachers for implementation.

Declaration of Conflicting Interests

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References

Aboud, F., & Miller, L. (2007). Promoting peer intervention in name-calling. *South African Journal of Psychology*, *37*, 803–819. doi: 10.1177/008124630703700409

American Counseling Association. (2014). *2014 ACA code of ethics*. Alexandria, VA: Author.

American School Counselor Association. (2012). *ASCA national model: A framework for school counseling programs* (3rd ed.). Alexandria, VA: Author.

American School Counselor Association. (2014). *ASCA Mindsets & Behaviors for student success: K-12 college- and career-readiness standards for every student*. Alexandria, VA: Author. Retrieved from https://www.schoolcounselor.org/asca/media/asca/home/MindsetsBehaviors.pdf

Biggs, B. K., Vernberg, E. M., Twemlow, S. W., Fonagy, P., & Dill, E. J. (2008). Teacher adherence and its relation to teacher attitudes and student outcomes in an elementary school-based violence prevention program. *School Psychology Review*, *37*, 533–549.

Brank, E. M., Hoetger, L. A., & Hazen, K. P. (2012). Bullying. *Annual Review of Law and Social Science*, *8*, 213–230. doi:10.1146/annurev-lawsocsci-102811-173820

Buhs, E. S., Ladd, G. W., & Herald, S. L. (2006). Peer exclusion and victimization: Processes that mediate the relation between peer group rejection and children's classroom engagement and achievement? *Journal of Educational Psychology*, *98*, 1–13. doi:10.1037/0022-0663.98.1.1

Christensen, P., & James, A. (Eds.). (2008). *Research with children: Perspectives and practices* (2nd ed.). New York, NY: Routledge.

Cohen, J. (1969). *Statistical power analysis for the behavioral sciences*. New York, NY: Academic Press.

Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School Psychology Quarterly*, *25*, 65–83. doi:10.1037/a0020149

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175–191.

Forsberg, C., Thornberg, R., & Samuelsson, M. (2014). Bystanders to bullying: Fourth- to seventh-grade students' perspectives on their reactions. *Research Papers in Education*, *29*, 557–576. doi: 10.1080/02671522.2013.878375

Garrity, C., Jens, K., Porter, W., Sager, N., & Short-Camilli, C. (2004). *Bully-proofing your school: Administrator's guide to staff development in elementary schools* (3rd ed.). Longmont, CO: Sopris West.

Glew, G. M., Fan, M. Y., Katon, W., Rivara, F. P., & Kernic, M. A. (2005). Bullying, psychosocial adjustment, and academic performance in elementary school. *Archives of Pediatrics & Adolescent Medicine*, *159*, 1026–1031. doi:10.1001/archpedi.159.11.1026

Hawkins, D. L., Pepler, D. J., & Craig, W. M. (2001). Naturalistic observations of peer interventions in bullying. *Social Development*, *10*, 512–527. doi:10.1111./1467-9507.00178

Hutchinson, M. (2012). Exploring the impact of bullying on young bystanders. *Educational Psychology in Practice*, *28*, 425–442. doi: 10.1080/02667363.2012.727785

Kärnä, A., Voeten, M., Poskiparta, E., & Salmivalli, C. (2010). Vulnerable children in different classrooms: Classroom-level factors moderate the effect of individual risk on victimization. *Merrill-Palmer Quarterly*, *56*, 261–282. doi:10.1353/mpq.0.0052

Kim, J. W., Lee, K., Lee, Y. S., Han, D. H., Min, K. J., Song, S. H., . . . Kim, J. O. (2015). Factors associated with group bullying and psychopathology in elementary school students using child-welfare facilities. *Neuropsychiatric Disease and Treatment*, *11*, 991–998. doi:10.2147/NDT.S76105

KiVa Antibullying. (2014). *Frequently asked questions*. Retrieved from http://www.kivaprogram.net/faq

Klomek, A. B., Sourander, A., Niemelä, S., Kumpulainen, K., Piha, J., Tamminen, T., . . . Gould, M. S. (2009). Childhood bullying behaviors as a risk for suicide attempts and completed suicides: A population-based birth cohort study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *48*, 254–261. doi:10.1097/chi.0b013e318196b91f

Kyriakides, L., Kaloyirou, C., & Lindsay, G. (2006). An analysis of the revised Olweus bully/victim questionnaire using the Rasch measurement model. *British Journal of Educational Psychology*, *76*, 781–801. doi:10.1348/000709905X53499

Luxenberg, H., Limber, S. P., & Olweus, D. (2015). *Bullying in U.S. schools: 2014 status report*. Center City, MN: Hazelden. Retrieved from http://www.violencepreventionworks.org/public/document/bullying_2015_statusreport.pdf

Menard, S., & Grotpeter, J. K. (2014). Evaluation of bully-proofing your school as an elementary school antibullying intervention. *Journal of School Violence*, *13*, 188–209. doi:10.1080/15388220.2013.840641

Midgett, A., & Doumas, D. M. (2016). Training elementary school students to intervene as peer-advocates to stop bullying at school: A pilot study. *Journal of Creativity and Mental Health*, *11*, 353–365. doi:10.1080/15401383.2016.1164645

Midgett, A., Doumas, D. M., Sears, D., Lundquist, A., & Hausheer, R. (2015). A bystander bullying psychoeducation program with middle school students: A preliminary report. *The Professional Counselor*, *5*, 586–500. doi:10.15241/am.5.4.486

Midgett, A., Doumas, D. M., & Trull, R. (2017). Evaluation of a bystander bullying intervention program for elementary school students. *Professional School Counselor*, *20*, 72–183. doi:10.5330/1096-2409-20.1.172

Midgett, A., Doumas, D. M., Trull, R., & Johnson, J. (2017). Training students who occasionally bully to be peer advocates: Is a bystander intervention effective in reducing bullying behavior? *Journal of Child and Adolescent Counseling*, *3*, 1–13. doi:10.1080/23727810.2016.1277116

Midgett, A., Doumas, D. M., Trull, R., & Johnston, A. D. (2017). A randomized controlled study evaluating a brief, bystander bullying intervention with junior high school students. *Journal of School Counseling*, *15*. Retrieved from http://jsc.montana.edu/articles/v15n9.pdf

Midgett, A., Moody, S., Reilly, B., & Lyter, S. (2017). The phenomenological experience of student-advocates trained as defenders to stop school bullying. *Journal of Humanistic Counseling*, *56*, 53–71. doi:10.1002/johc.12044

Olweus, D. (1993). Victimization by peers: Antecedents and long-term outcomes. In K. H. Rubin & J. B. Asendorpf (Eds.), *Social withdrawal, inhibition, and shyness in childhood* (pp. 315–341). Mahwah, NJ: Lawrence Erlbaum.

Olweus, D. (1996). *The Revised Olweus Bully/Victim Questionnaire*. Bergen, Norway: University of Bergen, Research Center for Health Promotion (HEMIL Center).

Polanin, J. R., Espelage, D. L., & Pigott, T. D. (2012). A meta-analysis of school-based bullying prevention programs' effects on bystander intervention behavior. *School Psychology Review*, *41*, 47–65.

Richardson, J. T. E. (2011). Eta squared and partial eta squared as measurements of effect size in educational research. *Educational Research Review*, *6*, 135–147. doi:10.1016/j.edurev.2010.12.001

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive behavior*, *22*, 1–15. doi:10.1002/(SICI)1098-2337(1996)22:1<1::AID-AB1>3.0.CO;2-T

Salmivalli, C., Voeten, M., & Poskiparta, E. (2011). Bystanders matter: Associations between reinforcing, defending, and the frequency of bullying behavior in classrooms. *Journal of Clinical Child & Adolescent Psychology*, *40*, 668–676. doi:10.1080/15374416.2011.597090

Smith, D. C., Boel-Studt, S., & Cleeland, L. (2009). Parental consent in adolescent substance abuse treatment outcome studies. *Journal of Substance Abuse Treatment*, *37*, 298–306. doi:10.1016/j.sat.2009.03.007

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn and Bacon.

Ttofi, M. M., & Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology*, *7*, 27–56. doi:10.1007/s11292-010-9109-1

U.S. Department of Education, National Center for Educational Statistics. (2017). *Indicators of school crime and safety: 2016* (NCES 2017-064). Retrieved from https://nces.ed.gov/fastfacts/display.asp?id=719

Waasdorp, T. E., Pas, E. T., O'Brennan, L. M., & Bradshaw, C. P. (2011). A multilevel perspective on the climate of bullying: Discrepancies among students, school staff, and parents. *Journal of School Violence*, *10*, 115–132. doi:10.1080/15388220.2010.539164

Wolke, D., Lereya, S. T., Fisher, H. L., Lewis, G., & Zammit, S. (2014). Bullying in elementary school and psychotic experiences at 18 years: A longitudinal, population-based cohort study. *Journal of Abnormal Psychology*, *41*, 309–323. doi:10.1017/S0033291713002912

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Evaluation of a virtual reality enhanced bullying prevention curriculum pilot trial

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ABSTRACT

Introduction: Bullying is a widely prevalent public health and safety issue that can have serious long-term consequences for youth. Given the limited efficacy of traditional bullying prevention programs, a need exists for novel, theoretically informed, prevention programming. Construal Level Theory provides a useful framework.

Methods: This study evaluated a pseudo-randomized pilot trial of a virtual reality enhanced bullying prevention program among middle school students ($N = 118$) in the Midwest United States. Two models were proposed. The first predicts reductions in bullying behavior (traditional bullying, cyberbullying, relational aggression) at post-test, mediated by changes in empathy in the virtual reality condition compared to the control condition. The second predicts increases in school belonging and willingness to intervene as an active bystander at post-test, mediated by changes in empathy in the virtual reality condition compared to the control condition.

Results: The virtual reality condition yielded increased empathy from pre-to post-intervention compared to the control condition. Through the mediating role of empathy, changes in the desirable directions were also observed for traditional bullying, sense of school belonging, and willingness to intervene as an active bystander, but not for cyberbullying or relational aggression.

Conclusions: The scope and practical limitations of the virtual reality trial prevented a larger scale and more rigorous evaluation; however, results justify an expanded examination of virtual reality as a youth violence prevention tool.

1. Introduction

1.1. Bullying: a consequential health and safety issue

Bullying, defined "as aggressive, goal-directed, behavior that harms another individual within the context of a power imbalance" (Volk, Dane, & Marini, 2014, p. 2) is recognized internationally as a widespread public health and safety concern (Center for Disease Control and Prevention, 2018; World Health Organization, 2010). It takes several forms (traditional, relational, cyberbullying) and is linked to an array of negative acute and lasting health outcomes for victims (Center for Disease Control and Prevention, 2018; World Health Organization, 2010). Traditionally, bullying includes physical and relational aggression perpetrated by one or a group of

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students onto a/some target victim/s (Salmivalli, 2010). Relational aggression is a non-physical form of bullying that refers to directly or indirectly threatening or damaging one's relationships or social standing through means such as rumor spreading or social exclusion (Crick, 1995). Recent data indicate that between 31% and 48% of students ages 12–18 years report being relationally victimized by their peers and about 25% report physical victimization (Zhang, Musu-Gillette, & Oudekerk, 2016). With the rise of technology and internet use, cyberbullying has also emerged as a form of bullying that occurs via text messaging and social media platforms. A review of prevalence studies between 2004 and 2014 indicates that between 5% and 65% of students report being victimized, and rates vary between cultures (Brochado, Soars, & Fraga, 2017; Zhang et al., 2016). A substantial literature has found strong associations between all forms of victimization and academic difficulties, school adjustment, anxiety, depression, suicidal ideations and completion, future perpetration, and other conduct problems (Geel, Vedder, & Tanilon, 2014; Moore et al., 2017).

Unfortunately, many currently implemented interventions have shown little to no efficacy in preventing perpetration behavior, and particularly in the U.S. (Yeager, Fong, Lee, & Espelage, 2015). In a meta-analysis that examined age-related efficacy in 19 evaluations of bullying prevention programs internationally, Yeager and colleagues found modest desirable effects of programming among younger children (grades 1 though 7) but not in older children (grades 8 through 12). Though in their review of 14 randomized trials, Jiménez-Barbero, Ruiz-Hernández, Llor-Zaragoza, Pérez-García, and Llor-Esteban (2016) found that on average, these programs yield reductions in bullying, although the effect size was negligible (Cohen's $d = -0.12$). Taken together, there is insufficient evidence of the efficacy of bullying prevention programs among youth and early adolescents, which may be further exacerbated by evaluations that obtain null results and are thus less likely to be published (Easterbrook, Gopalan, Berlin, & Matthews, 1991). As such, there is a great need for novel and theoretically informed approaches to prevention, especially among older adolescents.

To this end, researchers have examined risk and protective factors associated with various forms of perpetration and victimization experiences. Literature on characteristics common to perpetrators have consistently identified low levels of empathy as a strong predictor of aggression perpetration and lack of willingness to intervene in conflict (e.g., bullying, relational aggression, cyberaggression; Jolliffe & Farrington, 2011; Mitsopoulou & Giovazolias, 2015). For purposes of the current study, empathy is defined as taking the perspective of another person and understanding what that situation might feel like for that person (Eisenberg & Fabes, 1990). A study of almost 1000 adolescents in Spain also supported this assertion, as empathy levels were inversely related to aggression perpetration generally as well as bullying and cyberbullying specifically (Casas, Del Rey, & Ortega-Ruiz, 2013). Conversely, high scores on measures of empathy are associated with positive outcomes such as school connectedness (Ahmed, 2008) and willingness to intervene when witnessing a bullying instance (Espelage, Polanin, & Low, 2014; Gini, Albiero, Benelli, & Altoè, 2007). Interestingly, Gini and colleagues found that low-level empathetic responses were strongly predictive of bullying behavior and high-level empathetic responses were predictive of intervening to help victimized others, among adolescent boys only (not girls). However, girls more often engage in relational aggression than traditional bullying (Paquette & Underwood, 1999), so perhaps this was not captured. Several studies also support inverse associations between empathy and relational aggression (Batanova & Loukas, 2014; Ettekal, Kochenderfer-Ladd, & Ladd, 2015).

1.2. Theoretical framework: Construal Level Theory

Given the strong correlation between risk perception and behavior modification (i.e., when a risk is perceived to be imminent, behavior changes; Brewer et al., 2007), many have found it helpful to examine and manipulate how individuals mentally represent risk associated with problem behaviors (Ahn, 2015; Chandran & Menon, 2004; Park & Morton, 2015; Weber, 2006). Construal Level Theory (Liberman & Trope, 1998) asserts that individuals' mental representations of events are a function of psychological distance.

Broadly, Construal Level Theory posits that individuals create mental representations of objects or events based on perceived psychological distance (Liberman & Trope, 1998). Psychological distance is comprised of four dimensions (Trope, Liberman, & Wakslak, 2007) that includes temporal distance (present versus future), social distance (me or close/similar others versus distant/different others), spatial distance (here versus far away) and uncertainty (is going to happen versus may happen). The theory posits that events that are perceived to be psychologically closer are likely to be associated with concrete, detailed, contextualized, mental representations while psychologically distal events are associated with more abstract, stable representations (Liberman & Trope, 1998). This phenomenon can be conceptualized as shifting between the “how” and “why” of an object or an event. Individuals are likely to think more about the details regarding a psychologically close event (e.g., thinking about going to a doctor appointment later today in terms of drive time, wait time, etc.). Conversely, distal events are associated with more abstract, stable, holistic representations having to do with the higher-level reasons of the importance of the event (e.g., thinking about going to a doctor appointment next year in terms of why an annual appointment is important for maintaining good health).

Behaviors are highly influenced by perceived psychological distance (see Trope et al., 2007 for review). These principles have been used to inform messaging that manipulates psychological distance, and thus intentions and behaviors. For example, Chandran and Menon (2004) found that framing the risk of heart attack using one day versus one year changed participants' intention to engage in preventative behaviors. Loewenstein (1996) proposed the mechanism of “hot and cold” systems, which asserts that salience, vividness, and emotional impact decrease with psychological distance. Said differently, operating with low psychological distance allows for more fluid and malleable thought processes. In support of this theory, some research has found that decreased psychological distance allows for the manipulation of empathy, which has been found to shift behavior toward more generous or others-focused decisions, both hypothetical and real (Loewenstein, 1996; Pronin, Olivola, & Kennedy, 2008).

1.3. Virtual reality and empathy

Virtual reality offers a highly immersive experience that allows for simulating decreased psychological distance on all four dimensions. Given that perspective-taking is a core component of empathy, using virtual reality to simulate assuming role of another person in an environment that feels realistic, it is not surprising that this experience has been shown to build or activate empathy in users: For example, one study (Kalyanaraman, Penn, Ivory, & Judge, 2010) found that when mentally healthy individuals engaged in a virtual reality experience meant to provide a psychosis simulation, they reported higher levels of empathy for individuals diagnosed with schizophrenia, compared to reading a similar experientially-descriptive narrative and completing a written reflection. Several researchers have conducted experiments to this end, though with mixed evidence regarding behavior modification (Ahn, Bailenson, & Park, 2014; Morina, Ijntema, Meyerbröker, & Emmelkamp, 2015; Schwebel, McClure, & Porter, 2017; Theng, Lee, Patinadan, & Foo, 2015; van Loon, Bailenson, Zaki, Bostick, & Willer, 2018.). However, the evidence is clear that virtual reality experiences can evoke empathy in viewers (Garner, 2018; Janda et al., 2004; Tettegah, Taylor, Whang, Meistninkas, & Chamot, 2006) which can lead to prosocial behavior in certain contexts (van Loon et al., 2018). Data on the relevant neurological processes offer some support for this phenomenon (Gu & Han, 2007).

1.4. The current study

However, to our knowledge, Construal Level Theory and virtual reality have not been used to guide bullying prevention research despite ostensible relevance. Several critical components of bullying (see above definition) make it a behavior theoretically susceptible to modification by altering psychological distance.

First, goal-directedness is a critical component of bullying behavior as discussed above. This aspect highlights that bullying is decidedly not accidental, but rather motivated by an attractive end. These perceived rewards often include gaining relative social status (compared to victim) or perceived dating opportunities (Volk, Camilleri, Dane, & Marini, 2012). There appears to be a trade-off (consciously or unconsciously) between perceived social status gain and harm to others. This trade-off choice represents a possible point of intervention, where framing could alter the decision-making processes that leads to the ultimate choice to engage in bullying behaviors.

Additionally, bullying is psychologically distant on all four dimensions. Foremost, bullying by definition occurs across a power dynamic, be it a relative social power dynamic or one that embodies systemic power imbalance such as racism or homophobia. Students consistently report that they believe victims are bullied because they are different from the bully or from the norm in some way (Swearer & Cary, 2007). This alludes to perceived social distance between the bully and victim as playing a determinant role in the bully-victim relationship. Several interventions have included role play and perspective-taking components specifically to address this aspect, which have yielded some efficacious signals among late middle school and early high school students (Espelage, Low, Polanin, & Brown, 2015; Ttofi & Farrington, 2011).

Regarding the other three facets of psychological distance, for most students engagement in bullying as a perpetrator, victim, or witness is not occurring right now (temporal distance) or here in the room (spatial distance). For many it may never occur, or unattractive consequences of engaging are improbable (probability; see rates of occurrence above). Also, examples of incidents discussed in programming lessons are hypothetical and occurrence is not impending or guaranteed. If bullying is perceived abstractly in a number of ways that existing interventions are not sufficiently addressing, students are provided with no motivations or conditions to change attitudes or behaviors.

A 2015 meta-analysis on the use of information and communication technologies (ICTs) in bullying prevention programs (Nocentini, Zambuto, & Menesini, 2015) identified only one that utilizes virtual reality, the Mii Program. However, Mii is a tool designed to assess for problem behaviors such as bullying by using virtual reality environments and has not been evaluated empirically (Carmona, Espinola, Diaz, & Iribarne, 2010). Though not as immersive, similar virtual environments such as videogames have demonstrated some positive signals in bully prevention among older adolescents, seemingly due to their use of positive affective states, engagement and self-actualizing experience, and social connectedness in their interventions (Nocentini et al., 2015). Virtual reality also has these properties but offers an even more realistic and immersive experience. However, Nocentini et al. (2015) call for an increased focus on the efficacy of ICT-focused prevention programs.

To explore virtual reality as a violence prevention tool, we used a pseudo-randomized controlled design to pilot test the effects of a virtual reality enhanced bullying prevention program compared to the business as usual in bully prevention in two Midwestern United States middle schools. The enhanced program includes professionally-designed virtual reality scenarios which place students into the situations as if they were witnessing them in real life (e.g., at the party or in the hallway watching an altercation). This in-vivo experience decreases all four dimensions of psychological distance (spatial, social, temporal, hypothetical) that the traditional curriculums do not. The enhanced curriculum also included related activities that have shown associations with increasing empathy. These activities included reflecting on character identification, perspective-taking discussion questions, and creating short films aimed to evoke empathy (Bearman, Palermo, Allen, & Williams, 2015; Staub, 1971). We hypothesized that the classroom randomly selected to receive the virtual reality enhanced intervention would demonstrate decreases in bullying behaviors (traditional, relational, and cyberbullying), increases in willingness to intervene to help others who are being bullied, and increases in school sense of belonging compared to the control condition. Further, we hypothesized that empathy would mediate the associations between the virtual reality treatment and our outcomes (bullying behaviors, willingness to intervene, and school belonging).

2. Method

2.1. Participants

One-hundred eighteen 7th and 8th grade students from two Midwest United States middle schools participated in this study (72 in the control condition school, 46 in the experimental condition school) and completed assessments at two time points (pre, post). Convenience sampling was used to recruit both schools: schools were selected based on support from the school district, principal, and staff willingness to accommodate scheduling. School principals confirmed that no other bullying prevention programming had been implemented at either school since the current students have been enrolled. 55% of participants identified as girls, 43% as boys, and 2% as non-binary or another gender. Participant ages ranged from 11 to 14 years ($\bar{x}$ = 12.50, *SD* = 0.61) and the racial composition is as follows: 25% African-American/Black, 3% Asian or Pacific Islander, 9% Hispanic/Latinx, 24% mixed race, 37% white, and 2% other. Ninety-nine percent of students at one school and 70% of students at the other school received free or reduced lunch (FRL). The schools were demographically similar (Intervention School: 785 students, 34% African/American/Black, 20% White, 54% female; Control School: 680 students, 33% African/American/Black, 29% White, 54% female).

2.2. Measures and materials

2.2.1. Measures

Each participant completed demographic information that included questions about sex, age, grade, and race/ethnicity. Then, students completed questions assessing empathy, school sense of belonging, willingness to intervene in bullying episodes, traditional bullying perpetration, relational aggression perpetration, and cyberbullying perpetration.

2.2.2. Empathy

The 5-item Empathy subscale of the Teen Conflict Scale (Bosworth & Espelage, 1995) measures adolescents' ability to listen to, care for, and trust others. Students were asked to indicate how often they would use items in the scale to describe themselves (e.g., “I can listen to others; ” “I get upset when my friends are sad”). Response options are on a 5-point Likert scale ranging from *Never* (0) through *Always* (4). High values indicate more frequent empathic behaviors. In the current study, Cronbach's alpha coefficients were 0.60 for both pre and post time points.

2.2.3. School belonging scale

Perceived belonging at school was assessed with 4 of the 20 items from the Psychological Sense of School Members Scale (Goodenow, 1993). Students were asked how much they agree with statements such as “I feel proud of belonging to this school.” Response options ranged from *“Strongly Disagree,”* (0) *through “Strongly Agree”* (4). In the current sample, Cronbach alpha coefficients were 0.60 for both pre and post time points.

2.2.4. Willingness to intervene in bullying episodes

The University of Illinois Willingness to Intervene in Bullying Episodes was used to assess student's willingness to intervene when others are being bullied. The 5-item scale was developed from a series of interviews and surveys of students in grades 3rd through 8th (Espelage, Green, & Polanin, 2012). The researchers asked students the extent that they agree with statements about intervening directly or indirectly when they encounter bullying (e.g., “If a kid is being teased, I will stick up for him/her.”, “I will tell an adult if a kid is being teased a lot.”). Response options ranged from “*Strongly Disagree*” (0) through “*Strongly Agree”* (4). Cronbach's alpha coefficients were 0.84 and 0.86 for pre and post time points respectively.

2.2.5. Bullying perpetration

The nine-item Illinois Bully Scale (Espelage & Holt, 2001) was used to assess the frequency of traditional bullying perpetration in middle school. For example, students were asked how often in the past 30 days they engaged in each behavior (e.g., teased other students, excluded others from their group of friends, threatened to hit or hurt another student). Response options ranged from “*Never*” (0) through “*7 or more times*” (4). The construct validity of this scale has been supported via exploratory and confirmatory factor analysis (Espelage & Holt, 2001). Higher scores indicated more self-reported bullying behaviors. Cronbach's alpha coefficients were: 0.71 for pre and .81 for post time points.

2.2.6. Relational aggression perpetration

The Relational Aggression Perpetration Scale (Crick, 1996) was used to measure exclusion, rumor spreading, and other activities meant to damage another child's reputation or social relationships across five items. Response options range from “*Never*” (0) to “*All the time*” (3). A confirmatory factor analysis supported the scales' construct validity (Crick, 1996), and the scale's Cronbach alpha coefficients were 0.88 and 0.85 at pre and post time points.

2.2.7. Cyberbullying perpetration

Cyberbullying perpetration was assessed with a four-item scale based on (Ybarra, Espelage, & Mitchell, 2007). Students were asked how often they did these things in this school year: made rude or mean comments to anyone online; spread rumors about someone online, whether they were true or not; made aggressive or threatening comments to anyone online; and sent a text message

that said rude or mean things. Response options included "*Never*" (0) through "*Often*" (3). The Cronbach's alpha coefficients were 0.90 and 0.86 at pre and post time points.

2.3. Intervention

2.3.1. Virtual reality enhanced bullying prevention curriculum

Entitled *Stand Up*: *Virtual Reality to Activate Bystanders Against Bullying*, this curriculum was designed to integrate the virtual reality experience into standard practice of short-term bullying prevention. A study staff member delivered the entire curriculum (including discussion components etc., such that teachers had no involvement). This staff member is highly credentialed (holds a doctorate degree in education) and trained (over 20 years working as a teacher and administrator in K through 12 settings, worked with the production team to ensure proper delivery of this curriculum). This process occurred during an hour once a week (during homeroom time) over a six-week period.

The curriculum consisted of six lessons. The first lesson introduced and taught participants how to use the technology. The following three lessons each began with a discussion (led by the interventionist), then utilized the virtual reality equipment to experience three original bullying-relevant scenarios. Students were directed to adopt the perspectives of various characters (see descriptions below) in activities. Afterward, students individually responded in writing to several discussion questions and participated in a brief interventionist-led discussion on perspective taking. During the last two sessions, students were grouped into small teams to create short videos aimed to spread an anti-bullying message. This project involved developing scripts, recording a 30–60 s video, and presenting the video to the entire group.

The virtual reality scenarios (approximately 5 minutes each) guided participants through scripted adaptations of realistic bully-relevant scenarios using Daydream goggles ("Daydream," n.d.), a commercially available virtual reality delivery system that has been used in previous virtual reality research (Dascalu, Bagis, Nitu, Ferche, & Moldoveanu, 2017; "Daydream Impact - Eastern Congo Initiative," 2018; "Daydream Impact - Rising Seas," 2018; Immersive virtual reality Education, 2018). Each focused on one of the following topics (consecutively): being an active bystander and standing up for victims, the consequences of common ineffective responses to bullying, and how to make a difference with small and realistic actions.

The first depicted a scenario where a student was bullied (traditional bullying, relational aggression) and became an outcast at school. Then, when his only friend was the victim of bullying and relational aggression (in person and online), he participated to gain social standing with the popular students. In the end, the victim sought help from a teacher and the friend stood up for her amongst his new popular friends. Students were asked to take the perspective of the victims in the scenario and reflect on how they felt. They were then asked to take the perspectives of the bystanders and reflect on what they could have done to intervene and what might have stopped them from doing so.

The second portrayed three short scenes that showed adults (presumably teachers) delivering different ineffective responses to bullying: "everything's fine" (there is no bullying), "it's not a big deal" (bullying is real but not a problem) and "it's hopeless" (bullying is an insolvable problem). Students were asked to adopt the perspectives of these adults. The reflection activities asked students to focus on the messaging they have received from educational systems about bullying, the role these systems have in allowing bullying to continue, and how to realistically create change.

In the third, participants time-travel to a future where bullying no longer exists. Peers from the future explain how bullying became extinct and teach the time-travelers how to be change agents and use small actions to intervene. The time-travelers are then inspired to return to their reality and implement these strategies.

Scenario content was informed by empirical literature on bystander intervention (Polanin, Espelage, & Pigott, 2012), an advisory board consisting of two prominent bully researchers, and were professionally scripted during a retreat by three screenwriters who specialize in creating virtual reality experiences, and experiences were then created by virtual reality production experts (employed by GoogleVR).

2.4. Procedure

Institutional review board approval was secured at the University of Florida and active parental consent was obtained for all participants. One hundred and seventy-three students were enrolled in the study and 118 completed surveys at both time points (pre, post), yielding an 86% completion rate. A class at one middle school was randomly selected to receive the virtual reality enhanced bullying prevention program (hereafter referred to as the virtual reality condition) during the measurement period. A class at a different middle school in the same county served as a "business-*as*-usual" control comparison group, which included only enforcement of existing anti-bullying policies during the measurement period (no curriculum).

All participants were assessed on all measures at two time points: one week pre-intervention (T1) and one week post-intervention (T2). Measures were collected via paper and pencil.

2.5. Data analytic plan

To test the effects of a virtual reality enhanced intervention on traditional, relational, and cyber bullying perpetration behaviors, students' willingness to intervene in bullying, and perceptions of school belonging we fit two path models to the data using Mplus 7.4. The first model examined the direct effect of the treatment (versus control) on traditional, relational, and cyber bullying perpetration at time 2, controlling for time 1. This model also examined the mediating effect of empathy on traditional, relational, and cyber

Table 1
Means (or n) and Standard Deviations (or %) of all Variables.

	Mean (or n)	Standard Deviation (or %)
Sex		
Female	65	55%
Male	51	43%
Non-Binary	2	2%
Conditions		
Treatment	46	39%
Control	72	61%
Age	12.50	0.61
Physical Bullying Perpetration T1	0.30	0.33
Physical Bullying Perpetration T2	0.37	0.44
Cyber Bullying Perpetration T1	1.07	0.65
Cyber Bullying Perpetration T2	1.13	0.56
Relational Aggression Perpetration T1	0.26	0.44
Relational Aggression Perpetration T2	0.28	0.45
Empathy T1	2.28	0.70
Empathy T2	2.18	0.67
Willingness to Intervene T1	2.16	0.62
Willingness to Intervene T2	2.07	0.68
School Belonging T1	1.98	0.47
School Belonging T2	1.91	0.56

bullying perpetration at time 2. Similarly, the second model examined the direct effect of the treatment group on students' willingness to intervene and perceptions of school belonging. The model also examined the mediating effect of empathy on students' willingness to intervene and levels of school belonging. All effects are standardized. Full Information Maximum Likelihood (FIML) was used to address missing data and a robust maximum likelihood estimator was used to address any non-normality in the data by estimating robust standard errors.

3. Results

3.1. Descriptive statistics

Descriptive statistics for the sample are shown in Table 1. There were slightly more females (55%) than males in the current sample. The treatment group made up 39% of the sample (n = 46). The average age was 12.5 years old. Table 2 shows correlations between all the variables across both time points.

3.2. Path model

To examine our hypotheses, we fit two path models, the first examined risk factors (traditional, relational, and cyber bullying perpetration; see Tables 3 and 4) and the second examined protective factors (students' willingness to intervene in bullying and school belonging; see Tables 3 and 5). Both the risk (CFI = 0.935, TLI = 0.893, RMSEA = 0.049, SRMR = 0.082) and protective

Table 2
Bivariate correlations between all variables.

	BP1	BP2	CP1	CP2	RA1	RA2	EM1	EM2	WI1	WI2	SB1	SB2
BP1	1	–	–	–	–	–	–	–	–	–	–	–
BP2	.71**	1	–	–	–	–	–	–	–	–	–	–
CP1	.20†	.06	1	–	–	–	–	–	–	–	–	–
CP2	.37**	.45**	.45**	1	–	–	–	–	–	–	–	–
RA1	.36**	.27**	-.01	.22†	1	–	–	–	–	–	–	–
RA2	.28*	.43**	.12	.31**	.22*	1	–	–	–	–	–	–
EM1	-.17†	-.30**	-.12	-.23*	.02	-.33**	1	–	–	–	–	–
EM2	-.28*	-.40**	-.10	-.19†	-.08	-.22*	.52**	1	–	–	–	–
WI1	-.08	-.21†	-.07	-.17	.00	-.31**	.33**	.12	1	–	–	–
WI2	-.06	-.31**	-.27*	-.16†	-.05	-.18†	.30**	.44**	.58**	1	–	–
SB1	-.13	-.21†	-.20†	-.18	.02	-.21†	.28**	.26*	.26**	.33**	1	–
SB2	-.23*	-.15	-.26*	-.11	-.10	.05	.07	.30**	.03	.24*	.51**	1

Note. BP1 = Physical Bullying Perpetration T1; BP2 = Physical Bullying Perpetration T2; CP1 = Cyber Bullying Perpetration T1; CP2 = Cyber Bullying Perpetration T2; RA1 = Relational Aggression Perpetration T1; RA2 = Relational Aggression Perpetration T2; EM1 = Empathy T1; EM2 = Empathy T2; WI1 = Willingness to Intervene T1; WI2 = Willingness to Intervene T2; SB1 = School Belonging T1; SB2 = School Belong T2.
$^{\dagger}p < .10$; $*p < .05$; $**p < .0$.

Table 3
Standardized effects of sex and age controls predicting all variables.

	β	*SE*
Risk Factor Model		
Physical Bullying Perpetration T1 ← Sex	−0.26**	0.09
Physical Bullying Perpetration T2 ← Sex	−0.20**	0.07
Cyber Bullying Perpetration T1 ← Sex	−0.22**	0.09
Cyber Bullying Perpetration T2 ← Sex	−0.08	0.09
Relational Aggression Perpetration T1 ← Sex	−0.17	0.10
Relational Aggression Perpetration T2 ← Sex	−0.18	0.11
Empathy T1 ← Sex	0.17	0.10
Empathy T2 ← Sex	0.23**	0.09
Physical Bullying Perpetration T1 ← Age	−0.22	0.19
Physical Bullying Perpetration T2 ← Age	−0.02	0.18
Cyber Bullying Perpetration T1 ← Age	0.41	0.22
Cyber Bullying Perpetration T2 ← Age	−0.26	0.24
Relational Aggression Perpetration T1 ← Age	−0.33	0.22
Relational Aggression Perpetration T2 ← Age	−0.10	0.19
Empathy T1 ← Age	0.10	0.19
Empathy T2 ← Age	0.11	0.16
Protective Factor Model		
Willingness to Intervene T1 ← Sex	0.16	0.10
Willingness to Intervene T2 ← Sex	0.13	0.07
School Belonging T1 ← Sex	0.25**	0.10
School Belonging T2 ← Sex	0.10	0.09
Empathy T1 ← Sex	0.17	0.10
Empathy T2 ← Sex	0.23**	0.09
Willingness to Intervene T1 ← Age	−0.12	0.18
Willingness to Intervene T2 ← Age	−0.12	0.18
School Belonging T1 ← Age	−0.14	0.10
School Belonging T2 ← Age	0.04	0.20
Empathy T1 ← Age	0.09	0.19
Empathy T2 ← Age	0.11	0.16

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

Table 4
Standardized effects and standard errors of risk factor path model.

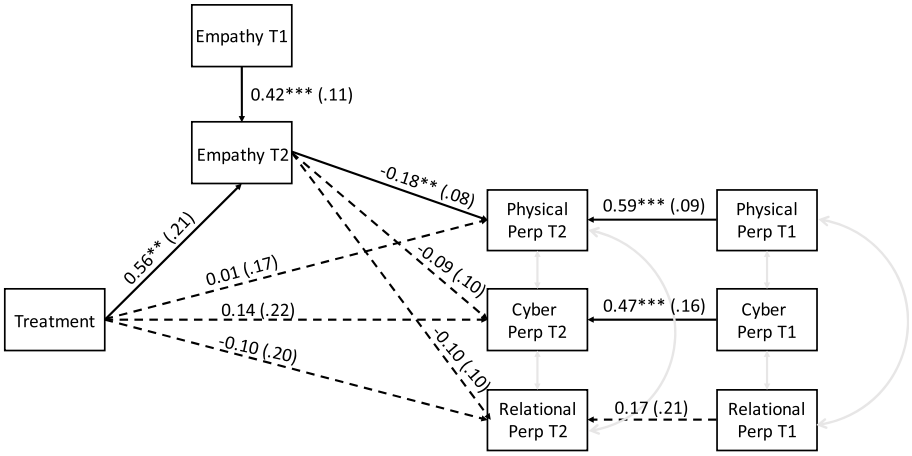
	β	*SE*
Physical Bullying Perpetration T2 ← Treatment	0.01	0.17
Physical Bullying Perpetration T2 ← Physical Bullying Perpetration T1	0.59***	0.09
Physical Bullying Perpetration T2 ← Empathy T2	−0.18**	0.08
Cyber Bullying Perpetration T2 ← Treatment	0.14	0.22
Cyber Bullying Perpetration T2 ← Cyber Bullying Perpetration T1	0.47**	0.16
Cyber Bullying Perpetration T2 ← Empathy T2	−0.09	0.10
Relational Aggression Perpetration T2 ← Treatment	−0.10	0.20
Relational Aggression Perpetration T2 ← Relational Aggression Perpetration T1	0.17	0.21
Relational Aggression Perpetration T2 ← Empathy T2	−0.10	0.10
Empathy T2 ← Treatment	0.56**	0.21
Empathy T2 ← Empathy T1	0.42***	0.11
Physical Bullying Perpetration T1 with Cyber Bullying Perpetration T1	.19*	0.09
Physical Bullying Perpetration T1 with Relational Aggression Perpetration T1	.34**	0.11
Cyber Bullying Perpetration T1 with Relational Aggression Perpetration T1	-.01	0.12
Physical Bullying Perpetration T2 with Cyber Bullying Perpetration T2	.38**	0.13
Physical Bullying Perpetration T2 with Relational Aggression Perpetration T2	.31*	0.14
Cyber Bullying Perpetration T2 with Relational Aggression Perpetration T2	.28*	0.14

(CFI = 0.909, TLI = 0.878, RMSEA = 0.052, SRMR = 0.083) factor models had acceptable model fit. Fig. 1 shows the path model for the risk factors that examined the direct effect of the virtual reality treatment on traditional, relational, and cyber bullying perpetration at T2 and the indirect effect through empathy at T2. This model controlled for age and sex which indicated that females reported lower rates of traditional, relational and cyber bullying perpetration and higher rates of empathy compared to males (see Table 3). Traditional, relational, and cyber bullying perpetration are significantly positively correlated at both T1 and T2 (see Table 4). Contrary to our first hypothesis, we did not find evidence of any direct effects of the virtual reality treatment on reductions in various forms of bullying behaviors; however, we found one significant indirect effect through empathy. More specifically, individuals in the treatment group reported significantly higher rates of empathy at T2 ($\beta = 0.58$, SE = 0.21, $p < .01$) compared to the control group, while controlling for T1 levels of empathy ($\beta = 0.43$, SE = 0.08, $p < .001$); in turn, empathy was associated with

Table 5
Standardized effects and standard errors of protective factor path model.

	β	*SE*
Willingness to Intervene T2 ← Treatment	−0.10	0.19
Willingness to Intervene T2 ← Willingness to Intervene T1	0.58***	0.09
Willingness to Intervene T2 ← Empathy T2	0.35***	0.08
School Belonging T2 ←Treatment	−0.02	0.20
School Belonging T2 ←School Belonging T1	0.47***	0.10
School Belonging T2 ←Empathy T2	0.24**	0.10
Empathy T2 ← Treatment	0.56**	0.21
Empathy T2 ←Empathy T1	0.42***	0.11
School Belonging T1 with Willingness to Intervene T1	.19	0.11
School Belonging T2 with Willingness to Intervene T2	0.16	0.12

Note. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.



Note: All effects are standardized. Sex and Age are regressed on all variables but are not shown for ease of reading. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Fig. 1. Path Model of Risk Factors. Note: All effects are standardized. Sex and Age are regressed on all variables but are not shown for ease of reading. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

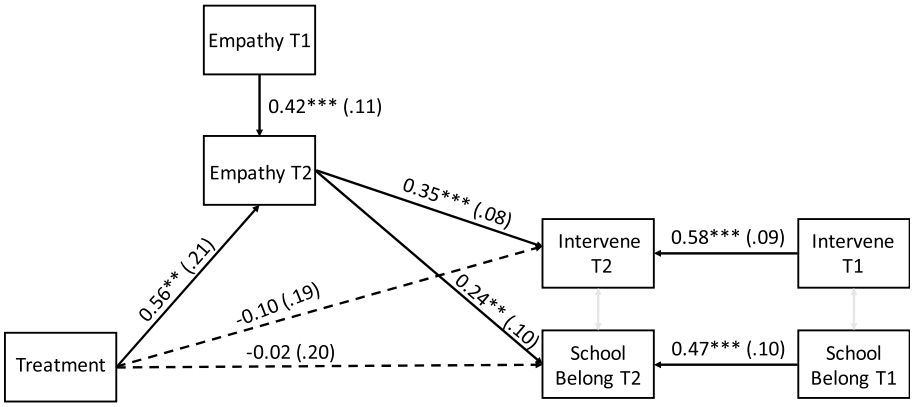
significant decreases in traditional bullying perpetration at T2 ($\beta = -0.19$, SE = 0.21, $p < .01$) while controlling for T1 levels ($\beta = 0.59$, SE = 0.09, $p < .001$). That is, being in the virtual reality treatment group predicted increases in empathy larger than one half a standard deviation (0.58), and in turn, a one standard deviation increase in empathy was associated with a 0.19 standard deviation decrease in traditional bullying perpetration. The mediation effect of the virtual reality treatment on reductions in traditional bullying perpetration behaviors via empathy was also significant ($\beta = -0.53$, SE = 0.03, $p = .04$; see Table 6), and provided further evidence which suggested that the virtual reality treatment lead to increases in empathy at the following time point (T2) which in turn was associated with reductions in traditional bullying perpetration.

Fig. 2 shows the path model for the protective factors that examined the direct effect of the virtual reality treatment on individuals' willingness to intervene in bullying and perceptions of school belonging at T2 and the indirect effect through empathy. This model controlled for age and sex which indicated that females reported higher rates of empathy and school belonging compared to males (see Table 3). Willingness to intervene and school belonging are significantly positively correlated at T1 but not T2 (see Table 5). While we did not find evidence of any direct effects of the virtual reality treatment on increases in willingness to intervene or school belonging, we found two significant indirect effects through empathy. More specifically, individuals in the treatment group reported significant increases in empathy ($\beta = 0.59$, SE = 0.21, $p < .01$) at T2 compared to the control group, while controlling for

Table 6
Standardized mediation effects and standard errors.

	Estimate	SE
Treatment → Empathy T2 → Physical Bullying Perpetration T2	−0.49†	0.03
Treatment → Empathy T2 → Willingness to Intervene T2	0.10**	0.04
Treatment → Empathy T2 → School Belonging T2	.07	0.04

Note. $^{\dagger}p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.



Note: All effects are standardized. Sex and Age are regressed on all variables but are not shown for ease of reading. *$p < .05$; **$p < .01$; ***$p < .001$.

Fig. 2. Path Model of Protective Factors. Note: All effects are standardized. Sex and Age are regressed on all variables but are not shown for ease of reading. *$p < .05$; **$p < .01$; ***$p < .001$.

T1 levels of empathy ($\beta = 0.43$, SE = 0.11, $p < .001$); in turn, empathy was associated with significant increases in willingness to intervene ($\beta = 0.37$, SE = 0.08, $p < .001$) and school belonging at T2 ($\beta = 0.24$, SE = 0.10, $p < .01$) while controlling for T1 levels. That is, being a member of the treatment group predicted increases in empathy by more than one half a standard deviation (0.59), and in turn, a one standard deviation increase in empathy was associated with a 0.37 standard deviation increase in willingness to intervene and a 0.24 standard deviation increase in school belonging. The mediation effect of the treatment on individual willingness to intervene via empathy was significant ($\beta = 0.11$, SE = 0.04, $p = .01$; see Table 6) and provided further evidence which suggested that the treatment lead to increases in empathy which in turn was associated with increases in students' willingness to intervene in bullying.

4. Discussion

The current research evaluated a pilot trial of a virtual reality enhanced bullying prevention program compared to a business-*as*-usual control group. We proposed two models by which the intervention would evidence success. In the first, students in the virtual reality condition would demonstrate decreases in perpetration of bullying behaviors (traditional bullying, relational aggression, and cyberbullying) through a mediating pathway of empathy in comparison to the business-*as*-usual control condition. In the second, we expected that students in the virtual reality condition would report increases in willingness to intervene as an active bystander as well as school connectedness, also through a mediating pathway of empathy, in comparison to students in the control condition.

The first model yielded an association between receiving the virtual reality intervention and increased empathy between T1 and T2, compared to the control group. Additionally, receiving the virtual reality intervention was associated with decreased traditional bullying perpetration, mediated by empathy (no direct effects were observed). However, the same was not true for cyberbullying nor relational aggression as outcomes; no direct nor indirect effects were found. Regarding the second model, receiving the virtual reality intervention was associated with increased school connectedness and willingness to intervene as an active bystander compared to the control group, through empathy as a mediating pathway. These results suggest that manipulating empathy using a virtual reality-enhanced intervention can positively influence constructs that often protect against a culture of aggression in schools (Espelage et al., 2012; Gini et al., 2007; Nickerson, Singleton, Schnurr, & Collen, 2014). Though only partial support was found for these hypotheses and no conclusions can be drawn regarding the potent component of this intervention, these results are somewhat consistent with previous work that has tested virtual reality as a tool to evoke empathy (Janda et al., 2004; Tettegah et al., 2006) and work that has proposed manipulating empathy as a mechanism of aggression reduction and prosocial promotion (Gini et al., 2007; Ttofi & Farrington, 2011).

While we did not assess the contribution of each component, extant research supports several aspects of the current intervention as conducive to its goals. First, virtual reality provides a solitary learning experience while engaging. These individualized experiences may allow for students to absorb the material without distraction from social dynamics or disruptive behavior that occur in a group setting (Jonkmann, Trautwein, & Lüdtke, 2009). Additionally, this intervention also included lesson plans and activities that provided opportunities to process the virtual reality content. This aspect was meant to connect the virtual reality experiences to the intended messaging as to amplify it. Additionally, this practice likely prevented priming effects (i.e. watching a bullying scenario and then feeling primed to bully; Buckley & Anderson, 2006).

However, inconsistency in effects across forms of aggression is atypical considering some previous literature that has found cyberbullying to correlate with relational aggression and traditional bullying (Calvete, Orue, Estévez, Villardón, & Padilla, 2010; Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014 for review). Several possible explanations arise. Though extant literature has identified commonalities among perpetrators of these three types of aggression, they are distinct in nature and do not always

demonstrate identical properties (Casas et al., 2013). Also, compared to other forms of youth aggression, perpetration of cyberbullying is associated with notably low levels of empathy and perspective taking among adolescents (Brewer & Kerslake, 2015; Pettalia, Levin, & Dickinson, 2013; Steffgen, König, Pfetsch, & Melzer, 2009). Therefore, conjuring empathy may be more challenging regarding online aggression. Additionally, key features of the encounter differ between in-person and online behavior, that intervention design should consider (e.g., perpetrators may feel a sense of anonymity and lack of consequence; Barlińska, Szuster, & Winiewski, 2012; Pettalia et al., 2013). Similarly, relational aggression is conceptualized as indirect aggression (e.g., spreading rumors, social exclusion; Crick, 1995). In these scenarios, the victim is not always aware of the social damage or exclusion. There may be more psychological distance between the perpetration behavior and the consequence, which may deter creating sufficient empathy to change behavior (Loewenstein, 1996; Pronin et al., 2008).

Further, these findings should be interpreted cautiously given several limitations. First, the sample size was small, which may have limited our ability to detect effects and generalizability of findings. Additionally, practical and ethical constraints did not allow for a highly rigorous design (e.g., a business as usual vs. curriculum without virtual reality vs. curriculum with virtual reality). Thus, the present results do not allow for inferences regarding comparative effectiveness of virtual reality-integrated programs with other non-virtual reality programs. Replication in larger samples and comparison to existing programming is necessary, especially given cost considerations attached to virtual reality. Additionally, we can draw no conclusions regarding sustained effects. Finally, we relied solely on student self-reported data for all measurements, which presents a number of limitations including social desirability bias and memory inaccuracies. Also, the alpha coefficients of 0.60 for the empathy and school belonging scales represent threats to internal validity. This study also did not formally examine the liking or excitement born of introducing a novel technological instrument. It is possible that this contributed to adherence. Future research should more closely examine the unique contribution of the virtual reality component specifically, role of psychological distance in bullying, and utilize other or additional forms of measurement such as behavioral tasks (live or in virtual reality), observations, or multiple informant strategies (e.g., teacher reports, parent reports).

Regarding feasibility, using virtual reality is inherently inequitable given school budget determinants. The Google Daydream used in this study can be purchased from electronic retailers for about $30, though options that range in price and quality are also commercially available. It is not clear from this study how much this intervention would cost if scaled up to more than one classroom or school. Economic cost analyses should be conducted in future studies. Further, there are practical challenges (charging, portability) that need to be considered.

Students were asked to provide feedback on acceptability via open-ended questions. When prompted to describe what they liked, several common threads emerged. Many students (25) indicated they liked the realistic aspect. Fifteen found the content meaningful in some way. Three students appreciated the solitary experience. Regarding what they disliked, 4 students reported not liking the content of the program. Seven students noted practical issues (e.g., becoming nauseous). Six students felt like they did not have enough time to engage with the virtual reality experiences. These reports confirm that liking the program may contribute to adherence and thus effects.

Despite limitations, these findings signal the potential usefulness of virtual reality in this area, and justify further exploration of this desperately needed novel approach to intervention design. Future directions in this area should address the shortcomings described above and continue to explore virtual reality as a potentially useful tool for enhancing school-based aggression interventions. Ways to strengthen the virtual reality experience to be more “potent” are (1) to include an interactivity component that involves decision-making and (2) to create characters that the user is likely to stronger identify with based on identity components (Kalyanaraman & Sundar, 2006).

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References

Ahmed, E. (2008). ‘Stop it, that's enough’: Bystander intervention and its relationship to school connectedness and shame management. *Vulnerable Children and Youth Studies, 3*(3), 203–213. https://doi.org/10/bv6ftw.

Ahn, S. J. (2015). Incorporating immersive virtual environments in health promotion campaigns: A construal level theory approach. *Health Communication, 30*(6), 545–556. https://doi.org/10.1080/10410236.2013.869650.

Ahn, S. J., Bailenson, J. N., & Park, D. (2014). Short- and long-term effects of embodied experiences in immersive virtual environments on environmental locus of control and behavior. *Computers in Human Behavior, 39*, 235–245. https://doi.org/10.1016/j.chb.2014.07.025.

Barlińska, J., Szuster, A., & Winiewski, M. (2012). Cyberbullying among adolescent bystanders: Role of the communication medium, form of violence, and empathy. *Journal of Community & Applied Social Psychology, 23*(1), 37–51. https://doi.org/10/f4jw9d.

Batanova, M., & Loukas, A. (2014). Unique and interactive effects of empathy, family, and school factors on early adolescents' aggression. *Journal of Youth and Adolescence, 43*(11), 1890–1902.

Bearman, M., Palermo, C., Allen, L. M., & Williams, B. (2015). Learning empathy through simulation: A systematic literature review. *Simulation in Healthcare, 10*(5), 308–319. https://doi.org/10.1097/SIH.0000000000000113.

Bosworth, K., & Espelage, D. (1995). *Teen conflict survey. Center for adolescent studies.* Bloomington, IN, USA: Indiana University.

Brewer, N. T., Chapman, G. B., Gibbons, F. X., Gerrard, M., McCaul, K. D., & Weinstein, N. D. (2007). Meta-analysis of the relationship between risk perception and health behavior: The example of vaccination. *Health Psychology, 26*, 136–145. https://doi.org/10.1037/0278-6133.26.2.136.

Brewer, G., & Kerslake, J. (2015). Cyberbullying, self-esteem, empathy and loneliness. *Computers in Human Behavior, 48*, 255–260. https://doi.org/10/f7bg7b.

Brochado, S., Soares, S., & Fraga, S. (2017). A scoping review on studies of cyberbullying prevalence among adolescents. *Trauma, Violence, & Abuse, 18*(5), 523–531.

Buckley, K. E., & Anderson, C. A. (2006). A theoretical model of the effects and consequences of playing video games. *Playing Video Games: Motives, Responses, and Consequences,* 363–378.

Calvete, E., Orue, I., Estévez, A., Villardón, L., & Padilla, P. (2010). Cyberbullying in adolescents: Modalities and aggressors' profile. *Computers in Human Behavior, 26*(5), 1128–1135.
Carmona Torres, J. A., Espínola, A. M., Cangas Díaz, A. J., & Iribarne Martínez, L. F. (2010). Detecting drug use in adolescents using a 3D simulation program. *Society, Psychology, and Education, 2*, 143–153.
Casas, J. A., Del Rey, R., & Ortega-Ruiz, R. (2013). Bullying and cyberbullying: Convergent and divergent predictor variables. *Computers in Human Behavior, 29*(3), 580–587. https://doi.org/10.1016/j.chb.2012.11.015.
Center for Disease Control and Prevention. (2018, July 16). Retrieved July 24, 2018, from https://www.cdc.gov/violenceprevention/youthviolence/bullyingresearch/index.html.
Chandran, S., & Menon, G. (2004). When a day means more than a year: Effects of temporal framing on judgments of health risk. *Journal of Consumer Research, 31*(2), 375–389. https://doi.org/10/cfkq4z.
Crick, N. R. (1995). Relational aggression: The role of intent attributions, feelings of distress, and provocation type. *Development and Psychopathology, 7*(2), 313–322. https://doi.org/10.1017/S0954579400006520.
Crick, N. R. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. *Child Development, 67*(5), 2317–2327. https://doi.org/10/btq2nd.
Dascalu, M.-I., Bagis, S., Nitu, M., Ferche, O.-M., & Moldoveanu, A. D. B. (2017). Experiential learning virtual reality system for studying computer architecture. *Romanian Journal of Human - Computer Interaction; Bucuresti, 10*(3), 197–215.
Daydream Impact - Eastern Congo Initiative. (2018). Retrieved July 25, 2018, from https://virtualreality.google.com/daydream/impact/congo/.
Daydream Impact - Rising Seas. (2018). Retrieved July 25, 2018, from: https://virtualreality.google.com/daydream/impact/risingseas.
Daydream. (n.d.). Retrieved June 16, 2018, from https://virtualreality.google.com/daydream/.
Easterbrook, P. J., Gopalan, R., Berlin, J. A., & Matthews, D. R. (1991). Publication bias in clinical research. *The Lancet, 337*(8746), 867–872. https://doi.org/10.1016/0140-6736(91)90201-Y.
Eisenberg, N., & Fabes, R. A. (1990). Empathy: Conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion, 14*(2), 131–149.
Espelage, D., Green, H., & Polanin, J. (2012). Willingness to intervene in bullying episodes among middle school students: Individual and peer-group influences. *The Journal of Early Adolescence, 32*(6), 776–801. https://doi.org/10/cgjgj7.
Espelage, D. L., & Holt, M. K. (2001). Bullying and victimization during early adolescence: Peer influences and psychosocial correlates. *Journal of Emotional Abuse, 2*(2–3), 123–142. https://doi.org/10.1300/J135v02n02_08.
Espelage, D. L., Low, S., Polanin, J. R., & Brown, E. C. (2015). Clinical trial of Second Step© middle-school program: Impact on aggression & victimization. *Journal of Applied Developmental Psychology, 37*, 52–63.
Espelage, D. L., Polanin, J. R., & Low, S. K. (2014). Teacher and staff perceptions of school environment as predictors of student aggression, victimization, and willingness to intervene in bullying situations. *School Psychology Quarterly, 29*(3), 287.
Ettekal, I., Kochenderfer-Ladd, B., & Ladd, G. W. (2015). A synthesis of person-and relational-level factors that influence bullying and bystanding behaviors: Toward an integrative framework. *Aggression and Violent Behavior, 23*, 75–86.
Garner, T. A. (2018). Applications of virtual reality. *Echoes of other worlds: Sound in virtual reality. Palgrave studies in sound.* Cham: Palgrave Macmillan.
Geel, M. van, Vedder, P., & Tanilon, J. (2014). Bullying and weapon carrying: A meta-analysis. *JAMA Pediatrics, 168*(8), 714–720. https://doi.org/10.1001/jamapediatrics.2014.213.
Gini, G., Albiero, P., Benelli, B., & Altoè, G. (2007). Does empathy predict adolescents' bullying and defending behavior? *Aggressive Behavior, 33*(5), 467–476. https://doi.org/10.1002/ab.20204.
Goodenow, C. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools, 30*(1), 79–90. https://doi.org/10.1002/1520-6807(199301)30:1%3c79::AID-PITS2310300113%3e3.0.CO;2-X.
Gu, X., & Han, S. (2007). Attention and reality constraints on the neural processes of empathy for pain. *NeuroImage, 36*(1), 256–267. https://doi.org/10/b5fj7w.
Immersive virtual reality Education (2018). *Engage education platform | immersive virtual reality education.* Retrieved June 16, 2018, from http://immersivevirtualrealityeducation.com/engage-education-platform/.
Janda, M. S., Mattheos, N., Nattestad, A., Wagner, A., Nebel, D., Färbom, C., et al. (2004). Simulation of patient encounters using a virtual patient in periodontology instruction of dental students: Design, usability, and learning effect in history-taking skills. *European Journal of Dental Education, 8*(3), 111–119. https://doi.org/10.1111/j.1600-0579.2004.00339.x.
Jiménez-Barbero, J. A., Ruiz-Hernández, J. A., Llor-Zaragoza, L., Pérez-García, M., & Llor-Esteban, B. (2016). Effectiveness of anti-bullying school programs: A meta-analysis. *Children and Youth Services Review, 61*, 165–175. https://doi.org/10.1016/j.childyouth.2015.12.015.
Jolliffe, D., & Farrington, D. P. (2011). Is low empathy related to bullying after controlling for individual and social background variables? *Journal of Adolescence, 34*(1), 59–71. https://doi.org/10/dvg74t.
Jonkmann, K., Trautwein, U., & Lüdtke, O. (2009). Social dominance in adolescence: The moderating role of the classroom context and behavioral heterogeneity. *Child Development, 80*(2), 338–355.
Kalyanaraman, S., Penn, L. D., Ivory, D. J., & Judge, A. (2010). The virtual doppelganger. *The Journal of Nervous and Mental Disease, 198*(6), 437–443. https://doi.org/10.1097/NMD.0b013e3181e07d66.
Kalyanaraman, S., & Sundar, S. (2006). The psychological appeal of personalized content in web portals: Does customization affect attitudes and behavior? *Journal of Communication, 56*(1), 110–132. https://doi.org/10.1111/j.1460-2466.2006.00006.x.
Liberman, N., & Trope, Y. (1998). The role of feasibility and desirability considerations in near and distant future decisions: A test of temporal construal theory. *Journal of Personality and Social Psychology, 75*(1), 5–18.
Loewenstein, G. (1996). Out of control: Visceral influences on behavior. *Organizational Behavior and Human Decision Processes, 65*(3), 272–292. https://doi.org/10/cf5dxw.
van Loon, A., Bailenson, J., Zaki, J., Bostick, J., & Willer, R. (2018). Virtual reality perspective-taking increases cognitive empathy for specific others. *PLoS One, 13*(8), e0202442.
Mitsopoulou, E., & Giovazolias, T. (2015). Personality traits, empathy and bullying behavior: A meta-analytic approach. *Aggression and Violent Behavior, 21*, 61–72. https://doi.org/10.1016/j.avb.2015.01.007.
Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., & Runions, K. C. (2014). Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. *Journal of Adolescent Health, 55*(5), 602–611. https://doi.org/10.1016/j.jadohealth.2014.06.007.
Moore, S. E., Norman, R. E., Suetani, S., Thomas, H. J., Sly, P. D., & Scott, J. G. (2017). Consequences of bullying victimization in childhood and adolescence: A systematic review and meta-analysis. *World Journal of Psychiatry, 7*(1), 60–76. https://doi.org/10.5498/wjp.v7.i1.60.
Morina, N., Ijntema, H., Meyerbröker, K., & Emmelkamp, P. M. G. (2015). Can virtual reality exposure therapy gains be generalized to real-life? A meta-analysis of studies applying behavioral assessments. *Behaviour Research and Therapy, 74*, 18–24. https://doi.org/10/f7xkxh.
Nickerson, A. B., Singleton, D., Schnurr, B., & Collen, M. H. (2014). Perceptions of school climate as a function of bullying involvement. *Journal of Applied School Psychology, 30*(2), 157–181.
Nocentini, A., Zambuto, V., & Menesini, E. (2015). Anti-bullying programs and information and communication technologies (ICTs): A systematic review. *Aggression and Violent Behavior, 23*, 52–60.
Paquette, J. A., & Underwood, M. K. (1999). Gender differences in young adolescents' experiences of peer victimization: Social and physical aggression. *Merrill-Palmer Quarterly (1982),* 242–266.
Park, S.-Y., & Morton, C. R. (2015). The role of regulatory focus, social distance, and involvement in anti-high-risk drinking advertising: A construal-level theory perspective. *Journal of Advertising, 44*(4), 338–348. https://doi.org/10.1080/00913367.2014.1001503.
Pettalia, J. L., Levin, E., & Dickinson, J. (2013). Cyberbullying: Eliciting harm without consequence. *Computers in Human Behavior, 29*(6), 2758–2765. https://doi.org/10/f5dk6f.

Polanin, J. R., Espelage, D. L., & Pigott, T. D. (2012). A meta-analysis of school-based bullying prevention programs' effects on bystander intervention behavior. *School Psychology Review, 41*(1), 21.

Pronin, E., Olivola, C. Y., & Kennedy, K. A. (2008). Doing unto future selves as you would do unto others: Psychological distance and decision making. *Personality and Social Psychology Bulletin, 34*(2), 224–236. https://doi.org/10/brztnm.

Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior, 15*(2), 112–120. https://doi.org/10/ckq9jr.

Schwebel, D. C., McClure, L. A., & Porter, B. E. (2017). Experiential exposure to texting and walking in virtual reality: A randomized trial to reduce distracted pedestrian behavior. *Accident Analysis & Prevention, 102*, 116–122. https://doi.org/10/f98jxz.

Staub, E. (1971). The use of role playing and induction in children's learning of helping and sharing behavior. *Child Development, 42*(3), 805–816.

Steffgen, G., König, A., Pfetsch, J., & Melzer, A. (2009). The role of empathy for adolescents' cyberbullying behaviour. *Kwartalnik Pedagogiczny = Pedagogical Quarterly, 214*(4), Retrieved from http://orbilu.uni.lu/handle/10993/4388.

Swearer, S. M., & Cary, P. T. (2007). Perceptions and attitudes toward bullying in middle school youth: A developmental examination across the bully/victim continuum. In J. E. Zins, M. J. Elias, & C. A. Maher (Eds.). *Bullying, victimization, and peer harassment: A handbook of prevention and intervention* (pp. 67–83). New York, NY: The Haworth Press.

Tettegah, S., Taylor, K., Whang, E. W., Meistninkas, S., & Chamot, R. (2006). Can virtual reality simulations Be used as a research tool to study empathy, problems solving and perspective taking of educators?: Theory, method and application. *ACM SIGGRAPH 2006 educators program*New York, NY, USA: ACMhttps://doi.org/10.1145/1179295.1179331.

Theng, Y.-L., Lee, J. W. Y., Patinadan, P. V., & Foo, S. S. B. (2015). The use of videogames, gamification, and virtual environments in the self-management of diabetes: A systematic review of evidence. *Games for Health Journal, 4*(5), 352–361. https://doi.org/10.1089/g4h.2014.0114.

Trope, Y., Liberman, N., & Wakslak, C. (2007). Construal levels and psychological distance: Effects on representation, prediction, evaluation, and behavior. *Journal of Consumer Psychology, 17*(2), 83–95.

Ttofi, M. M., & Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology, 7*(1), 27–56.

Volk, A. A., Camilleri, J. A., Dane, A. V., & Marini, Z. A. (2012). Is adolescent bullying an evolutionary adaptation? *Aggressive Behavior, 38*(3), 222–238. https://doi.org/10/f3xf2g.

Volk, A. A., Dane, A. V., & Marini, Z. A. (2014). What is bullying? A theoretical redefinition. *Developmental Review, 34*(4), 327–343. https://doi.org/10/f6tqh2.

Weber, E. U. (2006). Experience-based and description-based perceptions of long-term risk: Why global warming does not scare us (yet). *Climactic Change, 77*, 103–120. https://doi.org/10.1007/s10584-006-9060-3.

World Health Organization (2010). *Prevention of bullying-related morbidity and mortality: A call for public health policies.* Retrieved July 24, 2018, from http://www.who.int/bulletin/volumes/88/6/10-077123/en/.

Ybarra, M. L., Espelage, D. L., & Mitchell, K. J. (2007). The Co-occurrence of internet harassment and unwanted sexual solicitation victimization and perpetration: Associations with psychosocial indicators. *Journal of Adolescent Health, 41*(6, Supplement), S31–S41. https://doi.org/10.1016/j.jadohealth.2007.09.010.

Yeager, D. S., Fong, C. J., Lee, H. Y., & Espelage, D. L. (2015). Declines in efficacy of anti-bullying programs among older adolescents: Theory and a three-level meta-analysis. *Journal of Applied Developmental Psychology, 37*, 36–51. https://doi.org/10/f7bgz7.

Zhang, A., Musu-Gillette, L., & Oudekerk, B. A. (2016). *Indicators of school crime and safety: 2015. NCES 2016-079/NCJ 249758.* National Center for Education Statistics. Retrieved from https://eric.ed.gov/?id=ED565704.

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ORIGINAL PAPER

Patterns of Victimization Locations in Elementary School Children: Effects of Grade Level and Gender

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Abstract
Background Little research has examined the locations in which youth are victimized, particularly outside the school context. Further, it is not clear if the locations in which youth are victimized vary as a function of grade level or gender.
Objective The goals of the current study were to: (1) Determine the locations inside and outside of the school context in which elementary school students are most likely to report being victimized, and (2) Examine whether the locations in which victimization takes place varies by grade level and gender.
Methods Associations were examined in a sample of 186 2nd thru 5th grade students (52 % male) who reported experiencing victimization.
Results The playground was the most common place in which victimization was reported, followed by home and the neighborhood. Boys were more likely than girls to report being victimized on the bus or during a sporting activity, while girls were more likely than boys to report being victimized at home. No grade level effects were found, suggesting that specific locations of victimization did not become more or less evident at older grade levels.
Conclusions Findings indicate that there are many locations inside and outside the school context that need to be further monitored for the prevention of victimization and that gender differences may need to be considered.

Keywords Victimization · Locations · Grade and gender differences

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Introduction

Peer victimization, or being the object of other children's aggressive and ostracizing behavior, is associated with a host of negative outcomes starting in elementary school, including poor academic performance (Nakamato and Schwartz 2010), aggression and delinquency (e.g., Hodges et al. 1999; Khatri et al. 2000), depression, anxiety, loneliness, and low self-esteem (Hawker and Boulton 2000; Reijntjes et al. 2010). Early onset and duration of peer victimization has significant implications for the development of adjustment problems (Kochenderfer and Ladd 1996), and as such, elementary school age represents a critical time period for studying children's experiences of victimization. From a prevention and intervention perspective it is important to understand where early victimization is most likely to take place so that effective interventions, such as increased adult monitoring and supervision, can be implemented before more pervasive patterns of victimization are established. Unfortunately, however, our knowledge of where children are most often victimized has been limited, particularly in elementary school-age students, with no research to our knowledge examining where peer victimization takes place outside the school context. Additionally, grade level and gender differences in the locations in which victimization occurs are not yet clear. The current study significantly advances the field by being one of the first to assess locations in which elementary school-age children reported being victimized in and outside the school context and examining grade level and gender differences in these locations.

Peer Victimization

Peer victimization can take many forms, with research commonly distinguishing between overt, relational, and cybervictimization. Overt victimization refers to the experience of being physically attacked (e.g., hit or kicked) or verbally threatened by a peer (Crick et al. 1999; Olweus 2001). In contrast, relational victimization involves being harmed by others through the manipulation of peer relationships to diminish a child's reputation, self esteem, and social status using tactics such as spreading rumors and encouraging peers to exclude a specific child from desired activities (Crick and Grotpeter 1996), with most research conceptualizing relational victimization as occurring through in-person processes. More recently, cybervictimization has drawn attention as a distinct form of victimization that involves being threatened with harm, disparaged, or ostracized through the use of electronic forms of contact (e.g. sending derogatory or threatening text messages via cell phones or posting negative comments or photos on social media sites such as Facebook or Twitter; Hinduja and Patchin 2008; Smith et al. 2008). Although research has found associations between relational and overt victimization, accumulating evidence suggests cybervictimization is a unique construct. In a recent study, Dempsey et al. (2009), using confirmatory factor analysis, found the constructs of overt-, relational-, and cyber-victimization, while overlapping to some degree, formed 3 separate latent factors. Further, Smith (2012) identified seven characteristics that distinguish cybervictimization from traditional victimization, including cybervictimization not being bound by time (e.g. school hours), or place (e.g., community, neighborhood, or school; also see Slonje et al. 2013).

Peer victimization in multiple forms appears to be a frequent problem for a significant proportion of children, with all forms of victimization evident during the elementary school-age years (Turner et al. 2011). Evidence suggests that between 10 and 20 % of students are severely and repeatedly victimized by their peers (Biggs et al. 2010; Centers for Disease Control and Prevention 2012; Graham and Juvonen 1998; Kochenderfer-Ladd and Wardrop

2001; Nansel et al. 2001; Stadler et al. 2010), and approximately 60 % of elementary school children report having been exposed to some form of peer victimization (Kochenderfer-Ladd and Wardrop 2001). More systematic evaluation of the locations in which elementary school-age children are at risk for experiencing all forms of peer victimization may inform efforts to prevent the many negative outcomes that arise from persistent peer victimization. Potential grade and gender differences in locations must be also considered, as some differences in forms of victimization across grade and gender have been found.

Considerable debate among researchers has focused on grade and gender differences in rates of specific forms of peer victimization. Several studies have found that elementary school-age girls are more likely than boys to be victims of relational aggression (e.g., Biggs et al. 2010; Crick and Grotpeter 1995; Galen and Underwood 1997), although other studies did not find such differences (see Card et al. 2008). There is also evidence suggesting that relational victimization increases as children age and may become more prominent in girls' peer networks as they age (Galen and Underwood 1997). Similarly, there are inconsistencies in findings pertaining to cybervictimization, with some studies suggesting that girls more likely to be victims of cyberbullying than boys (Dehue et al. 2008; Kowalski and Limber 2007; Wade and Beran 2011; Ybarra and Mitchell 2008) and other studies finding no gender differences in rates of cybervictimization (Hinduja and Patchin 2008; Juvoven and Gross 2008; Li 2006; Patchin and Hinduja 2006; Tokunaga 2010; Williams and Guerra 2007). With regard to grade level, some studies have found no association between grade level and cybervictimization (Juvoven and Gross 2008; Patchin and Hinduja 2006; Smith et al. 2008), while others have found that cybervictimization is more prevalent among youth in older grades (Hinduja and Patchin 2008; Kowalski and Limber 2007; Slonje and Smith 2008). At this point in time, there appears to be a curvilinear relationship between grade level and cyberbullying involvement with victimization peaking in junior high (7th and 8th grades) and then declining in older adolescence (Sevciková and Smahel 2009; Tokunaga 2010).

In contrast, gender differences in overt victimization are consistent, with studies most often finding greater overt victimization for boys than girls (Card et al. 2008) and that overt aggression appears to decrease in both girls' and boys' social networks as they age (Brame et al. 2001; Côté et al. 2006). Given these gender and grade level difference in victimization, an important extension of the peer victimization literature is to assess for potential gender and grade level differences in locations of victimization.

Locations of Victimization

To date, only a handful of studies have focused on the locations in which children are most likely to be victimized, and these studies are primarily limited to victimization within the school context (i.e., Baldry and Farrington 1999; Bradshaw et al. 2007; Collins et al. 2004; Craig and Pepler 1997; Craig et al. 2000; deLara 2008; Espelage and Asidao 2001; Fekkes et al. 2005; Raskauskas 2005; Vaillancourt et al. 2010; Wolke et al. 2001). These studies suggest that victimization occurs in many locations within the school, but is most likely to take place in large areas where fewer rules and constraints exist, the ratio of students to teachers is high, and adults are limited in their ability to monitor and provide supervision (e.g., Craig et al. 2000). Indeed, the playground is consistently viewed as the location where children are most likely to be victimized (Craig and Pepler 1997; Craig et al. 2000; Collins et al. 2004; Fekkes et al. 2005; Wolke et al. 2001). The lunchroom, the hallway, the bathroom, and the classroom (particularly when the teacher is absent) are other school locations where high levels of victimization are reported (e.g., Bradshaw et al. 2007;

Collins et al. 2004; Espelage and Asidao 2001; Vaillancourt et al. 2010). Studies have also found that victimization is also likely to occur on the school bus (Allen et al. 2003; deLara 2008; Raskauskas 2005).

Assessing victimization outside of the school context generally captures victimization that occurs "on the way to school," "from school," and "at the bus stop" (Collins et al. 2004; Vaillancourt et al. 2010). However, it is unlikely that victimization only occurs within the school context, particularly in light of cyberbullying—a form of victimization that may also take place at home via cell phone or computer. In fact, a recent study found that 66 % of fourth through ninth graders have computers in their home and can access them from the privacy of their bedrooms (Tokunaga 2010). Thus, further research is needed to understand victimization that occurs outside the school context in order to further inform prevention and intervention efforts. Importantly, limiting prevention and intervention efforts to the school context alone may not address all instances of victimization. Improving our understanding of where victimization occurs outside the school context will help to identify who, other than school personnel, may need to be aware of and know how to effectively intervene with victimization.

Moreover, although preliminary evidence has identified grade level differences regarding where victimization is most likely to take place, some inconsistencies exist. Bradshaw et al. (2007) found that victimization among middle school youth occurred more often in the hallways as compared to elementary and high school students. Vaillancourt et al. (2010) found that older students felt less safe in the lunchroom, bathroom, and hallways, whereas elementary school students reported feeling less safe during outside recess time on the playground. Collins et al. (2004) found that the most common places for primary school students (year 6 of their education) to report being victimized were in the lunchroom and to and from school, while post primary school students (year 9 of their education) reported that victimization was most likely to take place on the playground/athletic field and in the hallways. Both groups reported victimization in the classroom when the teacher was absent. Although grade level differences are somewhat mixed across studies, particularly with regard to the lunchroom, it appears that elementary school students may be more likely to report being victimized on the playground yet less likely to report being victimized in the hallway as compared to middle and high school students. Of note, however, students at all grade levels may be at risk for victimization in the classroom when the teacher is absent.

Further, gender differences in locations of victimization have only been empirically evaluated in two known studies. Raskauskas (2005) found that there were no gender differences in rates of victimization on the bus when examining videotaped observations on 30 elementary school bus rides. However, Collins et al. (2004) found that of children in primary school reported that girls were more likely than boys to be victimized in the classroom. In contrast, youth in post-primary school reported that girls were more likely than boys to be victimized in the bathroom and at the school bus stop, whereas boys were more likely to be victimized at other locations (however, "other" locations were not specified). Further examination of both grade and gender differences is key for improving our prevention and intervention efforts. Understanding at what grade and for whom particular locations are more vulnerable for experiencing victimization will inform the development of additional protection strategies for youth victimized by their peers (i.e., extra monitoring and contingency plans).

Current Study

In sum, the current study examined locations in which elementary school students reported being victimized and evaluated whether grade level and gender differences exist in the

locations in which victimization occurs. The current study advances the field by examining victimization locations at school (i.e., lunchroom, hallway, bathroom, classroom, playground), on the bus, and outside the school context (i.e., program or club, sporting activity, babysitter, at home, in neighborhood). This study further contributes to the literature by examining grade level and gender differences in victimization locations. Consistent with prior elementary school research, victimization rates were expected to be the highest on the playground (Craig and Pepler 1997; Craig et al. 2000; Collins et al. 2004; Fekkes et al. 2005; Wolke et al. 2001), where adult monitoring is difficult and fewer rules and constraints exist. Victimization rates among elementary school-age students were also expected to be high in other locations in which monitoring is more difficult, such as the hallway, the bathroom, the bus, and in the neighborhood. No specific hypotheses regarding grade level or gender differences in locations were posited, however, given the unclear findings from the limited research available.

Method

Participants

Participants for this study included 186 students in 2nd thru 5th grade from an elementary school in a small Midwestern town. Second through fifth grade students at this school were recruited in two ways: (1) during school enrollment days just prior to school starting, and (2) through letters and consent forms sent home at the beginning of the school year that could mailed back in a pre-addressed, stamped envelope to the research lab. Of the 490 students enrolled in the school, 360 (73.4 %) parental consent forms were received. Of those received, 318 (88 %) consented for their children to participate and a total of 294 students actually completed the study measures. The remaining 24 students with written consent did not participate in data collection due to moving prior to data collection (n = 2), absent or unavailable during the data collection period (n = 18), or declining to participate (n = 4).

The final sample for the current study is comprised of the 186 (63 %) participants who reported experiencing at least one instance of peer victimization within the first 2 months of school. The sample included 96 males and 90 females ranging from 7 to 11 years of age (M = 8.65, SD = 1.19). School records indicate that the majority of the students are Caucasian, with less than 20 % of the student body identifying with an ethnic/racial minority group. The demographic make-up of the sample is representative of the entire school, with similar gender and grade level distributions. City data indicate that per capita income is approximately $25,369, and the school reported that approximately 35 % of the entire student body receives free or reduced fee lunch.

Measures

Peer Victimization

Children's self-reports of victimization were assessed using 9 items of the Victimization of Self (VS) scale from the Peer Experiences Questionnaire used in prior research with elementary school-age children (e.g., Biggs et al. 2010; Dill et al. 2004; Vernberg et al. 2011) and three new items intended to reflect children's experiences of cybervictimization (Vernberg, personal communication). Overt victimization items reflected physically aggressive behavior (e.g., *a kid hit, kicked or pushed me in a mean way*; *a kid grabbed, held,*

or touched me in a way I didn't like). Relational victimization items reflected behaviors that were hurtful to the child by the manipulation of peer relationships (e.g., *a kid told lies about me so other kids wouldn't like me*; *some kids left me out of thing just to be mean to me*). Cybervictimization items reflected the use of electronic forms of contact to disparage or ostracize the child (e.g., *a kid used email, instant messaging, or a chat room to turn other kids against me; a kid used a webspace such as MySpace or Facebook to say mean things about me*). Participants were asked to rate the frequency of such occurrences since the beginning of the current school year (i.e., over a 10-week period) on a 5-point scale ranging from 1 (*Never*) to 5 (*Several Times a Week*). A dichotomous variable of whether or not a student endorsed any of the above items was created and used for location analyses. Internal consistency of the overall sample was good ($\alpha = .87$).

For descriptive purposes, items for each form of victimization were summed to create an overall score for each subscale, with higher scores indicating more severe experiences of victimization. Each subscale demonstrated adequate internal consistency ($\alpha = .72$ for overt victimization, $\alpha = .80$ for relational victimization, and $\alpha = .79$ for cybervictimization) in the current sample. Mean scores of relational victimization were 8.63 (SD = 4.05), means scores of overt victimization were 5.74 (SD = 2.73), and mean scores of cybervictimization were 3.46 (SD = 1.61). Correlations between these subscales ranged from .70 (relational-overt) to .57 (overt-cyber), suggesting related but distinct forms of victimization.

Location of Peer Victimization

Upon completion of the VS scale, participants were then asked to report globally where these acts of victimization occurred. Participants were given a list of five locations associated with the school context (i.e., lunchroom, hallway, bathroom, classroom, playground), on the bus, and five locations outside of the typical school context (i.e., program or club, sporting activity, babysitter, at home, in my neighborhood) and asked to indicate whether or not (yes/no) they had experienced victimization in each of the locations.

Procedure

All study procedures were approved by the researchers' institutional review board as well as the school district's administrators and board prior to data collection. Participants completed the survey in their classroom during the school day approximately 2 months into the Fall semester. The research team came to the school on two separate days to administer the survey, with 4th and 5th graders completing the survey on 1 day and 2nd and 3rd graders completing the survey on a second day. There were 2–3 trained research team members in each classroom; one researcher in each room read all survey items aloud while the others walked around the room to help answer questions. Most students completed the survey in 30 min. No school personnel were present in the room while surveys were administered in order to maintain student confidentiality. Participants provided verbal assent prior to starting the survey, and each classroom received a $75 gift card for school supplies as a thank you for participating.

Results

Among this sample of children (n = 186) who reported at least one recent incident of peer victimization, most (91.9 %) reported one or more instance of relational victimization,

57 % reported experiencing at least one instance of overt victimization, and 11.8 % reported experiencing at least one instance of cybervictimization.

Rates of victimization in the various locations are reported in Table 1. McNemar's Chi square test was used to evaluate whether the endorsement rate of particular locations was significantly different from other locations. Note that a Chi square value is not provided in SPSS, only a p value is reported. Victimization most often occurred on the playground ($p = .00$). Also within the school setting, the lunchroom and hallway were common locations in which victimization occurred, and they occurred at similar rates ($p = .13$). Interestingly, less than 11 % of children reported being victimized in the classroom, which is significantly less than reported in the lunchroom ($p = .02$) but similar to rates reported in the hallway ($p = .46$). The bathroom was the location least likely for children to report being victimized in the school setting ($p = .04$). The school bus was another common location for victimization to occur, with rates similar to the lunchroom ($p = .20$).

Outside the school context, children were equally as likely to experience victimization at home and in their neighborhood ($p = .44$). Additionally, children reported that victimization occurs at programs and clubs. However, rates of victimization at a babysitter or sporting activity were of similarly low rates ($p > .50$), with less than 10 % of youth reporting being victimized in these settings.

Associations between grade level and victimization locations were evaluated using correlation analyses. As seen in Table 2, grade level was not correlated with any victimization location. That is, no location becomes more or less evident for victimization at higher grade levels.

Pearson Chi square tests were then estimated in order to evaluate gender differences in victimization locations (See Table 3); only 3 gender differences emerged. Specifically, boys were more likely to report victimization on the bus than girls. Additionally, there was a marginally statistically significant trend ($p = .056$) for boys to be more likely to report victimization during sporting events than girls. In contrast, girls were more likely to report victimization at home than boys.

Discussion

The current study examined locations in which elementary school students reported being victimized by peers and evaluated whether locations varied as a function of gender and

Table 1 Rates of endorsement for particular locations of victimization

Location	% Reported
Playground	58.4
At home	31.4
In neighborhood	27
On the bus	24.9
Lunchroom	18.9
Program or club	15.7
Hallway	13.5
Classroom	10.8
Sporting activity	7
Babysitter	5.9
Bathroom	4.9

Table 2 Correlations among locations and grade level

	1	2	3	4	5	6	7	8	9	10	11	12
1. Lunchroom	–											
2. Hallway	.29**	–										
3. Bathroom	.15*	.21**	–									
4. Classroom	.28**	.27**	.16*	–								
5. Playground	−.04	.05	.04	.05	–							
6. On the Bus	.04	−.08	.04	.00	−.17*	–						
7. P/C	.13	.00	−.03	.14	.00	.17*	–					
8. Sport	.03	.02	.04	.04	.10	.18*	.00	–				
9. Sitter	−.06	.17*	.05	−.01	.07	.07	−.11	−.07	–			
10. At Home	.03	.14	−.04	.03	.03	−.01	−.07	.04	.03	–		
11. Neighbor	.05	.15*	.09	−.02	.05	.13	.04	−.02	−.05	−.07	–	
12. Grade	.10	.06	−.08	.05	.01	−.09	−.11	.02	−.09	−.07	.04	–

$N = 186$; * $p < .05$, ** $p < .01$; *P/C* program or club, *Neighbor* neighborhood

Table 3 Evaluation of gender differences in locations of victimization

	Boys (n)	Girls (n)	χ^2
Lunchroom	14	21	2.23
Hallway	14	11	.25
Bathroom	4	5	.18
Classroom	9	11	.36
Playground	51	57	1.77
On the bus	32	14	8.13*
Program or club	11	18	2.48
Sporting activity	10	3	3.66†
Babysitter	7	4	.71
At home	22	36	6.09*
In neighborhood	30	20	2.05

* $p < .05$; † $p < .06$

grade. The present study extends previous research by examining locations outside the school context and by further evaluating grade and gender differences in victimization locations. The playground was by far the location in which victimization was most likely to occur, followed by home, the neighborhood, and on the bus. Although three gender differences in locations of victimization were evident, grade level differences in these locations were not found. Specific findings and their implications are described in turn.

As anticipated, the playground was the most common location for victimization to occur. Additionally, the lunchroom was a common location in which youth were victimized within the school context. Findings are consistent with previous research, which has found that victimization at school most often occurs on the playground and in other locations in which monitoring is limited and rules and expectations are not as well defined (Bradshaw et al. 2007; Collins et al. 2004; Craig and Pepler 1997; Craig et al. 2000; Espelage and Asidao 2001; Vaillancourt et al. 2010). Strategies to improve adult monitoring (e.g., additional adult monitors strategically placed on the playground) and provide

added structure (e.g., organized games and activities for the students to choose from) appear to be warranted.

Students also reported being victimized in the hallway and the classroom, but less so than other locations, and rates reported in the current sample were lower than rates reported in other studies examining these victimization locations in elementary school (e.g., Fekkes et al. 2005; Vaillancourt et al. 2010). It may be that teachers in this school are more likely to be present in these locations, and thus be aware of victimization that takes place among students. We are aware of existing anti-bullying training for staff and enhanced monitoring practices within this school (e.g., adult hall monitors before/after school). We note, however, that although victimization appears to be less likely to occur in the hallway and classroom, the rates of victimization as a whole are not lower, suggesting that the issue of victimization persists. Thus, further research and interventions focusing on preventing victimization in other locations are necessary to curtail victimization.

Interestingly, very few children reported being victimized in the bathroom (<5 %), which is a common location endorsed in prior studies (e.g., Espelage and Asidao 2001). At the school in which data were collected children are required to be escorted by an adult to the bathroom. The additional monitoring of bathrooms in this school context may account for the low rates of victimization reported by students. This finding suggests that appropriate monitoring can prevent this location from being a "hotspot" for victimization. However, it is possible the bathroom may be a more common location for victimization in middle and high schools, when students visit the restroom in between classes and the flow of traffic in and out is more difficult to monitor.

The school bus was an important "hotspot" for victimization in the present study. Findings are consistent with previous research (Allen et al. 2003; deLara 2008; Raskauskas 2005) and further suggest the need to intervene while children are being transported. Although prior research has not found gender differences in victimization on the bus when using videotaped observations (Raskauskas 2005), results of the present study suggest that victimization on the bus is particularly prevalent for boys. In light of findings that boys report higher rates of overt victimization than girls (Card et al. 2008), it is possible that the school bus represents a context where verbal taunts and physical forms of victimization may be more likely, thus placing boys at a greater risk for experiencing victimization within this context. However, further replication of these gender differences as well as investigations to determine factors that contribute to these differences in locations are needed to develop prevention and intervention strategies specific to girls and boys.

Previous research has documented that school bus drivers often observe victimization, yet reports of these incidents to school personnel are often ignored (deLara 2008). Thus, school-based anti-bullying efforts, including policies and practices, must extend to the school bus context. Prior intervention recommendations by bus drivers themselves have included: using behavioral strategies to prevent victimization (i.e., assigned seating), building a positive relationship with all students, and holding parents and students accountable for behavior on the bus (deLara 2008). However, empirical investigation of these potential strategies is needed in order to identify which strategies are most effective.

When examining locations outside the school context, victimization was most likely to be reported at home and the neighborhood. The neighborhood is certainly a large location, where monitoring is more difficult and there are fewer rules and behavioral demands (Craig et al. 2000), which may account for the increased rate of victimization reported in this study.

However, the finding for increased rates of victimization at home is not as clear. Further, girls (relative to boys) appear to be at an increased risk for victimization at home.

Although the form of victimization could not be assessed in these locations, it is possible that the increased rates of victimization among girls reported at home may capture experiences through electronic means. While evidence on gender differences in cyber-victimization is largely inconclusive, some studies have found that girls experience more cybervictimization than boys (e.g., Dehue et al. 2008; Smith et al. 2008).

In the present study, we were unable to determine if the victimization occurring at home takes place while parents are present and to what degree monitoring is taking place when victimization occurs. This is an important direction for future research, particularly in light of the growing body of evidence on cybervictimization. Research suggests that when parents' directly monitor their child's online activities the risk for victimization can be reduced (Hinduja and Patchin 2008). Yet parents often know little about their child's activities online (David-Feron and Feldman 2007). Consequently, an important direction for future research is to identify appropriate strategies for parents to protect their child from electronic forms of victimization.

There was a significant portion of students (>15 %) who reported being victimized at a program or club. Adult monitoring/supervision and child to adult ratios will vary across after school clubs and programs. As previously reported (Craig et al. 2000), victimization is most likely to occur in less structured environments, especially when the child to adult ratio is high. In contrast, relatively low rates (<8 %) of youth reported being victimized at the babysitters or sporting activity, and there was a trend ($p < .06$) for boys to be more often victimized at a sporting activity than girls. These lower rates may be due to these locations being better monitored and a smaller child to adult ratio. On the other hand, it may be that fewer children receive after school care by a babysitter or attend sporting activities, particularly among elementary school students, resulting in fewer youth endorsing these locations. Nonetheless, it appears that these locations may not be considered "hotspots" for victimization among elementary school age youth.

No grade level differences in victimization locations were found in the present study. Prior research has found mixed results regarding differences among elementary school and older students (e.g., Bradshaw et al. 2007; Collins et al. 2004; Vaillancourt et al. 2010). Yet the current study focused only on elementary school-age youth; thus, grade level differences may not be evident when focusing solely on elementary school students. It will be particularly important for future research to evaluate grade and gender differences in locations for middle and high school students.

Several limitations need to be considered when interpreting the results of the current study. First, although it is important to examine associations in the current age sample, findings should be interpreted as age specific. That is, current findings may not generalize to middle and high school age students, as previous research has suggested that elementary school-age children may not be victimized in the same locations as middle and high school students (Bradshaw et al. 2007; Collins et al. 2004; Vaillancourt et al. 2010). Additionally, our list of locations was not all-inclusive. Other locations, such as friends' homes, birthday parties and other social gatherings, need to be evaluated. The current data are also limited in that we were not able to evaluate whether the forms of victimization occur at different rates in various locations given that a global assessment of victimization locations was utilized. Further, it is not clear from our data who the aggressor is or the characteristics of the aggressor in these locations. Future research evaluating the various forms of victimization, who is aggressing (e.g., siblings, older children, same age peers), and characteristics of the aggressor (e.g., impulsivity level, gender) in various locations would be helpful to better educate adults on how to identify and intervene with victimization in hopes of preventing subsequent victimization and its associated negative

outcomes. Finally, we did not ask whether students had access to the various locations that we assessed in the current study. For example, some children may not attend a program or club, providing less opportunity for victimization to occur in this location. It will be important for future studies that examine the locations where peer victimization occurs to consider student access to specific locations and how frequently they are victimized in the location.

Despite these limitations, the current study has several important implications for the prevention of peer victimization. First and foremost, our findings suggest that better coordination of prevention and intervention efforts between adults both within and outside of the school and at home must occur. Schools would greatly benefit by extending anti-bullying training to bus drivers, after school program coordinators, and sports club leaders, to name a few, such that consistent monitoring and intervention with students are possible. Moreover, schools' anti-bullying policies would be strengthened by including clear reporting and investigation procedures so that adults on the periphery of the school know how to report such incidents and how these incidents will be investigated by school personnel. Of note, however, the role of schools in addressing victimization that occurs off school grounds or outside of school-sponsored activities is presently unclear. In fact, the U.S. Department of Education issued guidance to public schools suggesting that victimization that creates a significant disruption of the school environment, even when occurring outside of the school context, is the school's responsibility to address (Stuart-Cassel et al. 2011). It might be necessary, however, to have school districts' legal counsel review any anti-bullying policy language to clarify the degree to which outside activities are the responsibility of the school.

Moreover, enhanced communication and coordination between school personnel and parents is critical for preventing and intervening with students victimized by their peers within as well as outside the school context. The results of the present study suggest that, particularly for girls, parents may play a key role in preventing and intervening with victimization at home. Prevention and intervention efforts would likely benefit from outlining steps parents can take to monitor their child's online activities and their cell phone usage. Finally, the locations in which victimization occurs appear to be consistent across all grade levels in this elementary school sample, suggesting that strategies and locations for monitoring may be the same for all elementary school-age students.

Conflict of interest The authors declare that they have no conflict of interest.

References

Allen, M., Young, E. L., Ashbaker, B. Y., Heaton, E., & Parkinson, M. (2003). Sexual harassment on the school bus: Supporting and preparing bus drivers to respond appropriately. *Journal of School Violence, 2*(4), 101–108. Retrieved from http://www.tandfonline.com/loi/wjsv20#.UdDvk-vEizY.

Baldry, A. C., & Farrington, D. P. (1999). Types of bullying among Italian school children. *Journal of Adolescence, 22*(3), 423–426. Retrieved from http://www.journals.elsevier.com/journal-of-adolescence.

Biggs, B. K., Vernberg, E. M., Fonagy, P., Twemlow, S. W., Little, T. D., & Dill, E. J. (2010). Peer victimization trajectories and their association with children's affect in late elementary school. *International Journal of Behavioral Development, 34*(2), 136–146. doi:10.1177/0165025409348560.

Bradshaw, C. P., Sawyer, A. L., & O'Brennan, L. M. (2007). Bullying and peer victimization at school: Perceptual differences between students and school staff. *School Psychology Review, 36*(3), 361–382. Retrieved from http://www.nasponline.org/publications/spr/index-list.aspx.

Brame, B., Nagin, D. S., & Tremblay, R. E. (2001). Developmental trajectories of overt aggression from school entry to late adolescence. *Journal of Child Psychology and Psychiatry, 42*(4), 503–512. doi:10.1017/S0021963001007120.

Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development, 79*(5), 1185–1229. doi:10.1111/j.1467-8624.2008.01184.x.

Centers for Disease Control and Prevention. (2012). *Understanding bullying—Fact sheet*. Retrieved from http://www.cdc.gov/ViolencePrevention/pdf/BullyingFactsheet2012-a.pdf.

Collins, K., McAleavy, G., & Adamson, G. (2004). Bullying in schools: A Northern Ireland study. *Educational Research, 46*(1), 55–71. doi:10.1080/0013188042000178827.

Côté, S., Vaillancourt, T., LeBlanc, J., Nagin, D., & Tremblay, R. (2006). The development of physical aggression from toddlerhood to pre-adolescence: A nation wide longitudinal study of Canadian children. *Journal of Abnormal Psychology, 34*(1), 71–85. doi:10.1007/s10802-005-9001-z.

Craig, W. M., & Pepler, D. J. (1997). Observations of bullying and victimization in the school yard. *Canadian Journal of School Psychology, 13*(2), 41–59. doi:10.1177/082957359801300205.

Craig, W. M., Pepler, D., & Atlas, R. (2000). Observations of bullying in the playground and in the classroom. *School Psychology International, 21*(1), 22–36. doi:10.1177/0143034300211002.

Crick, N. R., Casas, J. F., & Ku, H. C. (1999). Relational and physical forms of peer victimization in preschool. *Developmental Psychology, 35*(2), 579–588. doi:10.1037/0012-1649.35.2.376.

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*(3), 710–722. doi:10.2307/1131945.

Crick, N. R., & Grotpeter, J. K. (1996). Children's treatment by peers: Victims of relational and overt victimization. *Development and Psychopathology, 8*(2), 367–380. doi:10.1017/S0954579400007148.

David-Feron, C., & Feldman, M. H. (2007). Electronic media, violence, and adolescents: An emerging public health problem. *Journal of Adolescent Health, 41*(6), S1–S5. doi:10.1016/j.jadohealth.2007.08.020.

Dehue, F., Bolman, C., & Völlink, T. (2008). Cyberbullying: Youngsters' experiences and parental perceptions. *CyberPsychology & Behavior, 11*(2), 217–223. doi:10.1089/cpb.2007.0008.

deLara, E. W. (2008). Bullying and aggression on the school bus: School bus drivers' observations and suggestions. *Journal of School Violence, 7*(3), 48–70. doi:10.1080/15388220801955554.

Dempsey, A. G., Sulkowski, M. L., Nichols, R., & Storch, E. A. (2009). Differences between peer victimization in cyber and physical settings and associated psychological adjustment in early adolescence. *Psychology in Schools, 46*, 962–972. doi:10.1002/pits.20437.

Dill, E. J., Vernberg, E. M., Fonagy, P., Twemlow, S. W., & Gamm, B. K. (2004). Negative affect in victimized children: The roles of social withdrawal, peer rejection, and attitudes towards bullying. *Journal of Abnormal Child Psychology, 32*(2), 159–173. doi:10.1023/B:JACP.0000019768.31348.81.

Espelage, D. L., & Asidao, C. S. (2001). Conversations with middle school students about bullying and victimization: Should we be concerned? *Journal of Emotional Abuse, 2*(2–3), 49–62. doi:10.1300/J135v02n02_04.

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

Galen, B. R., & Underwood, M. K. (1997). A developmental investigation of social aggression among children. *Developmental Psychology, 33*(4), 589–600. doi:10.1037/0012-1649.33.4.589.

Graham, S., & Juvonen, J. (1998). Self-blame and peer victimization in middle school: An attributional analysis. *Developmental Psychology, 34*(3), 587–599. doi:10.1037/0012-1649.34.3.587.

Hawker, D. S., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial adjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry, 41*(4), 441–455. doi:10.1111/1469-7610.00629.

Hinduja, S., & Patchin, J. W. (2008). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant Behavior, 29*(2), 129–156. doi:10.1080/01639620701457816.

Hodges, E. V. E., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology, 35*(1), 94–101. doi:10.1037/0012-1649.35.1.94.

Juvoven, J., & Gross, E. F. (2008). Extending the school grounds? Bullying experiences in cyberspace. *The Journal of School Health, 78*(9), 496–505. doi:10.1111/j.1746-1561.2008.00335.x.

Khatri, P., Kupermidt, J. B., & Patterson, C. (2000). Aggression and peer victimization as predictors of self-reported behavioral and emotional adjustment. *Aggressive Behavior, 26*(5), 345–358. doi:10.1002/1098-2337(2000)26:5.

Kochenderfer, B. J., & Ladd, G. W. (1996). Peer victimization: Cause or consequence of school maladjustment? *Child Development, 67*(4), 1305–1317. doi:10.2307/1131701.

Kochenderfer-Ladd, B., & Wardrop, J. L. (2001). Chronicity and instability of children's peer victimization experiences as predictors of loneliness and social satisfaction trajectories. *Child Development, 72*(1), 134–151. doi:10.1111/1467-8624.00270.

Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *Journal of Adolescent Health, 41*(6), S22–S30. doi:10.1016/j.jadohealth.2007.08.017.

Li, Q. (2006). Cyberbullying in schools: A research of gender differences. *School Psychology International, 27*(2), 157–170. doi:10.1177/0143034306064547.

Nakamato, J., & Schwartz, D. (2010). Is peer victimization associated with academic achievement? A meta-analytic review. *Social Development, 19*(2), 221–242. doi:10.1111/j.1467-9507.2009.00539.x.

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association, 285*, 2094–2100. doi:10.1001/jama.285.16.2094.

Olweus, D. (2001). Peer harassment: A critical analysis and some important issues. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 5–20). New York: The Guilford Press.

Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard: A preliminary look at cyber-bullying. *Youth Violence and Juvenile Justice, 4*(2), 148–169. doi:10.1177/1541204006286288.

Raskauskas, J. (2005). Bullying on the school bus: A video analysis. *Journal of School Violence, 4*(3), 93–107. Retrieved from http://www.tandfonline.com/loi/wjsv20#.UdD3WevEizY.

Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010). Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse and Neglect, 34*(4), 244–252. doi:10.1016/j.chiabu.2009.07.009.

Sevciková, A., & Smahel, D. (2009). Online harassment and cyberbullying in the Czech Republic. *Zeitschrift für Psychologie, 217*(4), 227–229. doi:10.1027/0044-3409.217.4.227.

Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology, 49*(2), 147–154. doi:10.1111/j.1467-9450.2007.00611.x.

Slonje, R., Smith, P. K., & Frisén, A. (2013). The nature of cyberbullying, and strategies for prevention. *Computers in Human Behavior, 29*(1), 26–32. doi:10.1016/j.chb.2012.05.024.

Smith, P. K. (2012). Cyberbullying and cyber aggression. In S. R. Jimerson, A. B. Nickerson, M. J. Mayer, & M. J. Furlong (Eds.), *Handbook of school violence and school safety* (pp. 93–103). New York: Routledge.

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry, 49*(4), 376–385. doi:10.1111/j.1469-7610.2007.01846.x.

Stadler, C., Feifel, J., Rohrmann, S., Vermeiren, R., & Poustka, F. (2010). Peer victimization and mental health problems in adolescents: Are parental and school support protective? *Child Psychiatry and Human Development, 41*(4), 371–386. doi:10.1007/s10578-010-0174-5.

Stuart-Cassel, V., Bell, A., & Springer, J. F. (2011). *Analysis of state bullying laws and policies*. Office of Planning, Evaluation and Policy Development, US Department of Education.

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

Turner, H. A., Finkelhor, D., Hamby, S. L., Shattuck, A., & Ormrod, R. K. (2011). Specifying type and location of peer victimization in a national sample of children and youth. *Journal of Youth and Adolescence, 40*(8), 1052–1067. doi:10.1007/s10964-011-9639-5.

Vaillancourt, T., Brittain, H., Bennett, L., Arnocky, S., McDougall, P., Hymel, S., et al. (2010). Places to avoid: Population-based study of student reports of unsafe and high bullying areas at school. *Canadian Journal of School Psychology, 25*(1), 40–54. doi:10.1177/0829573509358686.

Vernberg, E. M., Nelson, T. D., Fonagy, P., & Twemlow, S. W. (2011). Victimization, aggression, and visits to the school nurse for somatic complaints, illness, and physical injury. *Pediatrics, 127*(5), 842–848. doi:10.1542/peds.2009-3415.

Wade, A., & Beran, T. (2011). Cyberbullying: The new era of bullying. *The Canadian Journal of School Psychology, 26*(1), 44–61. doi:10.1177/0829573510396318.

Williams, K. R., & Guerra, N. G. (2007). Prevalence and predictors of internet bullying. *Journal of Adolescent Health, 41*(6), S14–S21. doi:10.1016/j.jadohealth.2007.08.018.

Wolke, D., Woods, S., Stanford, K., & Schulz, H. (2001). Bullying and victimization of primary school children in England and Germany: Prevalence and school factors. *British Journal of Psychology, 92*(4), 673–696. doi:10.1037/0012-1649.31.4.548.

Ybarra, M. L., & Mitchell, J. K. (2008). How risky are social networking sites? A comparison of places online where youth sexual solicitation and harassment occurs. *Pediatrics, 121*(2), e350–e357. doi:10.1542/peds.2007-0693.

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RESEARCH ARTICLE

WILEY

Pilot evaluation of a targeted intervention for peer-victimized youth

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Abstract

Objective: Due to the limited effectiveness of extant prevention and intervention strategies, the current study is an initial evaluation of a cognitive behavioral group intervention, originally designed to treat symptoms of depression and anxiety, for youth who experienced peer victimization.

Methods: Twelve third- through fifth-grade youth participated in the intervention, and their data were compared with 12 youth who were a part of a naturalistic control group. Additionally, school-wide data are reported to provide overall school trends.

Results: Whereas the intervention group participants exhibited decreases in relational victimization, depressive symptoms, and passive coping, the control group participants exhibited nonsignificant increases in relational victimization, depressive symptoms, and passive coping. School-wide data also indicated overall increases in relational victimization and depressive symptoms, but no changes in passive coping.

Conclusion: Findings suggest that cognitive behavioral group interventions may provide a promising avenue for addressing the mental health needs of victimized elementary school-age youth.

KEYWORDS
cognitive behavioral intervention, middle childhood, peer victimization

1 | INTRODUCTION

Peer victimization is a relationship-based pattern of behavior that involves the use of bullying and other aggressive acts to intentionally oppress, humiliate or dominate others (CDC, 2012; Vernberg & Biggs, 2010). Peer victimization occurs frequently in school settings (Bradshaw, Sawyer, & O'Brennan, 2007; Kochenderfer-Ladd & Wardrop, 2001; Nansel et al., 2001), with stable patterns found over time for both the aggressor and victim (Bettencourt, Farrell, Liu, & Sullivan, 2012; Camodeca, Goossens, Terwogt, & Schuengel, 2002). Patterns of victimization begin early in development, and the majority of children will be victimized at some point during the elementary school years (Cooley, Fite, & Pederson, 2018; Kochenderfer-Ladd & Wardrop, 2001; Ladd, Ettekal, & Kochenderfer-Ladd, 2017). A considerable body of research has shown that such experiences are detrimental to child adjustment (Vernberg & Biggs, 2010); specifically, peer victimization has been associated with internalizing symptoms, suicidal ideation, academic difficulties, substance use, and behavior problems (Card & Hodges, 2008; Reijntjes et al., 2011; Reijntjes, Kamphuis, Prinzie, & Telch, 2010), and these effects may persist well into adulthood (McDougall & Vaillancourt, 2015). Consequently, a number of prevention and intervention strategies for peer aggression and victimization have been developed and evaluated worldwide over the last 20 years, with the majority of programs delivered at the universal level, targeting all students regardless of their level of risk (Jiménez-Barbero, Ruiz-Hernández, Llor-Zaragoza, Pérez-García, & LlorEsteban, 2016).

Although some universal programs, including social-emotional learning curricula and programs targeting youth violence, have demonstrated positive effects (Durlak, Weissberg, Dymnicki, Taylor, & Shellinger, 2011, Matjasko et al., 2012), many programs have produced only modest to marginal effects (Farrington & Ttofi, 2009; Jiménez-Barbero et al., 2016; Ttofi & Farrington, 2011). In fact, a recent meta-analysis investigating the impact of preventive interventions reported moderate effect sizes, concluding that beneficial yet discrete impacts are found for bullying and victimization outcomes (Jiménez-Barbero et al., 2016). However, programs implemented in the United States are often more limited in their effectiveness (Bradshaw, 2015), which may be due in part of methodological challenges related to implementation and fidelity. Furthermore, these meta-analyses often point to several factors, such as level of family involvement and individual characteristics (e.g., age) that may limit or bolster program effectiveness (Durlak et al., 2012; Matjasko et al., 2012; Yeager, Fong, Lee, & Espelage, 2015). The limited effects associated with many universal programs have led experts to call for the implementation of more intensive interventions for children at risk for peer victimization (Vernberg & Biggs, 2010); however, to our knowledge, only a few targeted interventions specifically for victimized youth have been evaluated (e.g., Chu, Hoffman, Johns, Reyes-Portillo, & Hansford, 2015). Thus, additional studies evaluating peer victimization interventions are needed.

2 | PEER VICTIMIZATION AND INTERNALIZING SYMPTOMS: THE CASE FOR COGNITIVE BEHAVIORAL INTERVENTIONS

It is important to note that experiences of peer victimization and internalizing symptoms have been shown to be bidirectionally associated (Card, Isaacs, & Hodges, 2007; Schacter, White, Chang, & Juvonen, 2014). That is, individuals who do not regulate their emotions effectively tend to respond to peer aggression in ways that put them at risk for experiencing subsequent victimization; in turn, being victimized by peers, especially for children who experience more chronic patterns, is associated with increases in internalizing symptoms (i.e., depressed mood, social withdrawal, and anxiety) as well as aggression, poor academic achievement, and substance use (Bierman, 2004; Card et al., 2007; Coie, 1990; Grills-Taquechel, Polifroni, & Pane, 2010; Hawkins, Lishner, Catalano, & Howard, 1985; Hodges, Boivin, Vitaro, & Bukowski, 1999; Reijntjes et al., 2011; Vernberg, 1990).

Following experiences of victimization, youth tend to make attributions about why they were targeted by peers. In doing so, youth may blame themselves, perceiving the causes of these negative experiences to be internal, stable, and uncontrollable (Schacter et al., 2014). As a result, they may believe that there is nothing that can be done to

prevent peer victimization from happening again. Indeed, results from one study showed that self-blaming was linked to subsequent increases in peer victimization from the Fall to the Spring semester, and this tendency partially accounted for the continuity of peer victimization over time (Schacter et al., 2014). Other work also suggests that self-blaming exacerbates the prospective link between peer victimization and depressive symptoms (Perren, Ettekal, & Ladd, 2013). Taken together, these indicate that the negative attributions children make about themselves after aggressive encounters increase the likelihood that they will be victimized again and lead to increases in adjustment difficulties over time. Thus, Perren et al. (2013) suggest that interventions focused on changing youth's attributions for peer victimization may reduce the negative outcomes of such experiences.

Cognitive behavioral interventions represent one potential avenue for addressing the mental health needs of victimized youth. These programs emphasize the use of cognitive restructuring, behavioral activation, and problem solving to decrease symptoms of depression and anxiety, which produce changes in cognitions (Chu & Harrison, 2007; Hollon, Stewart, & Strunk, 2006; Mattick, Peters, & Clarke, 1989). Thus, a targeted intervention for children experiencing high levels of peer victimization that focuses on changing negative (i.e., self-blaming) cognitions and implementing effective coping strategies to reduce negative emotions is expected to help prevent subsequent peer victimization and internalizing symptoms; however, we are aware of only one study that has evaluated a group-based cognitive behavioral intervention among victimized Chinese middle school students (Fung, in press). Results from this initial investigation were found to be promising, as participating youth exhibited declines in peer victimization, social exclusion, and internalizing symptoms 1 year later. An important extension of this study would be to examine the effects of a cognitive behavioral intervention with elementary school-age youth, when patterns of victimization become increasingly stable (Cooley et al., 2018; Kochenderfer-Ladd & Wardrop, 2001; Ladd et al., 2017).

Taking ACTION is a group-based cognitive behavioral intervention that focuses on problem solving, behavioral activation, coping skills, and positive self-evaluation by targeting negative cognitions among elementary school-age children (Stark & Kendall, 1996). In prior work, this program has been found to reduce both depressive and anxiety symptoms (Stark, Reynolds, & Kaslow, 1987; Stark, Rouse, & Livingston, 1991), and accordingly, this intervention may be useful in reducing the negative emotions and social withdrawal that victimized youth experience, ultimately preventing subsequent victimization.

3 | CURRENT STUDY

The current study was designed as a pilot evaluation of Taking ACTION as a preventive intervention with elementary school-age children experiencing high levels of physical and/or relational victimization, with the goal of providing participants with more effective coping strategies to reduce the stability and frequency of their peer victimization during the subsequent school year. Further, taking into account previous research indicating that early experiences of victimization are prospectively associated with increases in depressive symptoms, even after controlling for changes in peer victimization over time (Rudolph et al., 2011), our intervention also aimed to mitigate the impact of victimization on participants' subsequent internalizing symptoms. It was hypothesized that youth who participated in the intervention would show reductions in peer victimization and internalizing (i.e., depressive and anxiety) symptoms as compared to a naturalistic control group. Data from those who participated in the intervention groups were also compared to school-wide data to situate intervention findings in the context of overall school climate and trends.

The current study also tested two proposed mechanisms of action for the intervention: passive coping and problem solving. Whereas passive coping represents an avoidance coping strategy that entails withdrawing, ruminating, and blaming oneself for a hostile encounter with a peer, problem solving is an approach coping strategy that involves trying to determine the cause of the victimization and develop a plan to prevent it from happening again (Causey & Dubow, 1992). A growing body of research indicates that the

strategies youth use to cope with aggressive peers may influence their risk for subsequent experiences of victimization (e.g., Kochenderfer-Ladd, 2004) and psychosocial maladjustment (e.g., Sugimura, Rudolph, & Agoston, 2014), with passive coping associated with higher levels of peer victimization (Kochenderfer-Ladd & Pelletier, 2008; Shelley & Craig, 2010; Spence, De Young, Toon, & Bond, 2009) and depressive symptoms (Machmutow, Perren, Sticca, & Alsaker, 2012). Although problem solving has not been consistently linked to experiences of victimization (Kochenderfer-Ladd & Pelletier, 2008; Shelley & Craig, 2010; Spence et al., 2009), other findings suggest that this coping strategy is related to lower levels of victimization (Kochenderfer-Ladd, 2004) and depressive symptoms (Sugimura et al., 2014; Troop-Gordon, Rudolph, Sugimura, & Little, 2015). Given that Taking ACTION directly targets cognitive restructuring, behavioral activation, and problem solving, it was hypothesized that youth who participated in the intervention would exhibit decreases in passive coping and increases in problem solving as compared to a naturalistic control group.

Finally, it is important to note that aggressive victims were excluded from participating in the targeted intervention. Research shows that a subset of victimized youth also engage in aggression toward peers (Vernberg & Biggs, 2010). Aggressive victims are found to be distinct from nonaggressive victims (and other nonaggressive youth) in that they report more acceptance of deviance and aggression, engage in higher levels and more diverse types of aggressive behaviors, and exhibit less prosocial behavior (Camodeca et al., 2002; Haynie et al., 2001; Marini, Dane, Bosacki, & Ylc, 2006; McDougall & Vaillancourt, 2015; Veenstra et al., 2005). Thus, interventions targeting aggression may be more indicated with these youth.

4 | METHOD

4.1 | Participants

Participants for this study were recruited from an elementary school located in a small, rural Midwestern community in the United States in which consent for school-wide data collection was requested each year using back-to-school enrollment packets. According to school records, the racial composition of the student body was predominantly Caucasian, with <10% identifying as a racial or ethnic minority, and approximately 40% of all students were eligible for free or reduced-price lunch.

Recruitment and data collection for this study occurred in several phases (see Figure 1 for participant flow diagram). First, all students in the second through fourth grades who were not receiving special education services were recruited for participation in school-wide data collection during the summer of 2015. Note that children receiving special education services were excluded due to practical constraints, as they were either not present in the classroom during data collection or they were unable to independently complete child-report measures during the group administration. Caregivers provided informed consent via an electronic form that was included in the paperwork they completed to enroll their child in the school year. Consent was obtained for 84% of the 413 eligible students to participate in the project during the 2015–2016 academic year (n = 347). Second- through fourth-grade homeroom teachers also provided written informed consent (n = 19; 100% participation) before completing study measures. Child- and teacher-reported data were then collected on 325 second- through fourth-grade students during the Spring of 2016.

Recruitment for school-wide data collection during the subsequent school year followed the aforementioned procedures, with the exception that it involved third- through fifth-grade students. On this occasion, consent was obtained for 73% of the 420 eligible students (n = 308). All third- through fifth-grade homeroom teachers (n = 20) also provided written informed consent. Child- and teacher-reported data were then collected on 292 third- through fifth-grade students during the Fall of 2016 and 281 students during the Spring of 2017.

Following the Spring of 2016 data collection, children's peer victimization and aggression scores were standardized, such that each variable was rescaled to have a mean of zero and a *SD* of 1. Thirty-six children

were deemed eligible for participation in the targeted intervention based on: (a) they reported ≥1 *SD* of physical and/or relational victimization, (b) they endorsed weekly experiences of physical and/or relational victimization, and (c) teachers reported <1 *SD* of reactive and/or proactive aggression. These students were recruited for the targeted intervention in early Fall 2016. Youth who had moved before the school year or whose parents had declined the school-wide data collection were not contacted ($n = 5$); further, school administrators indicated that one student was no longer eligible due to recent school-related issues. Thus,

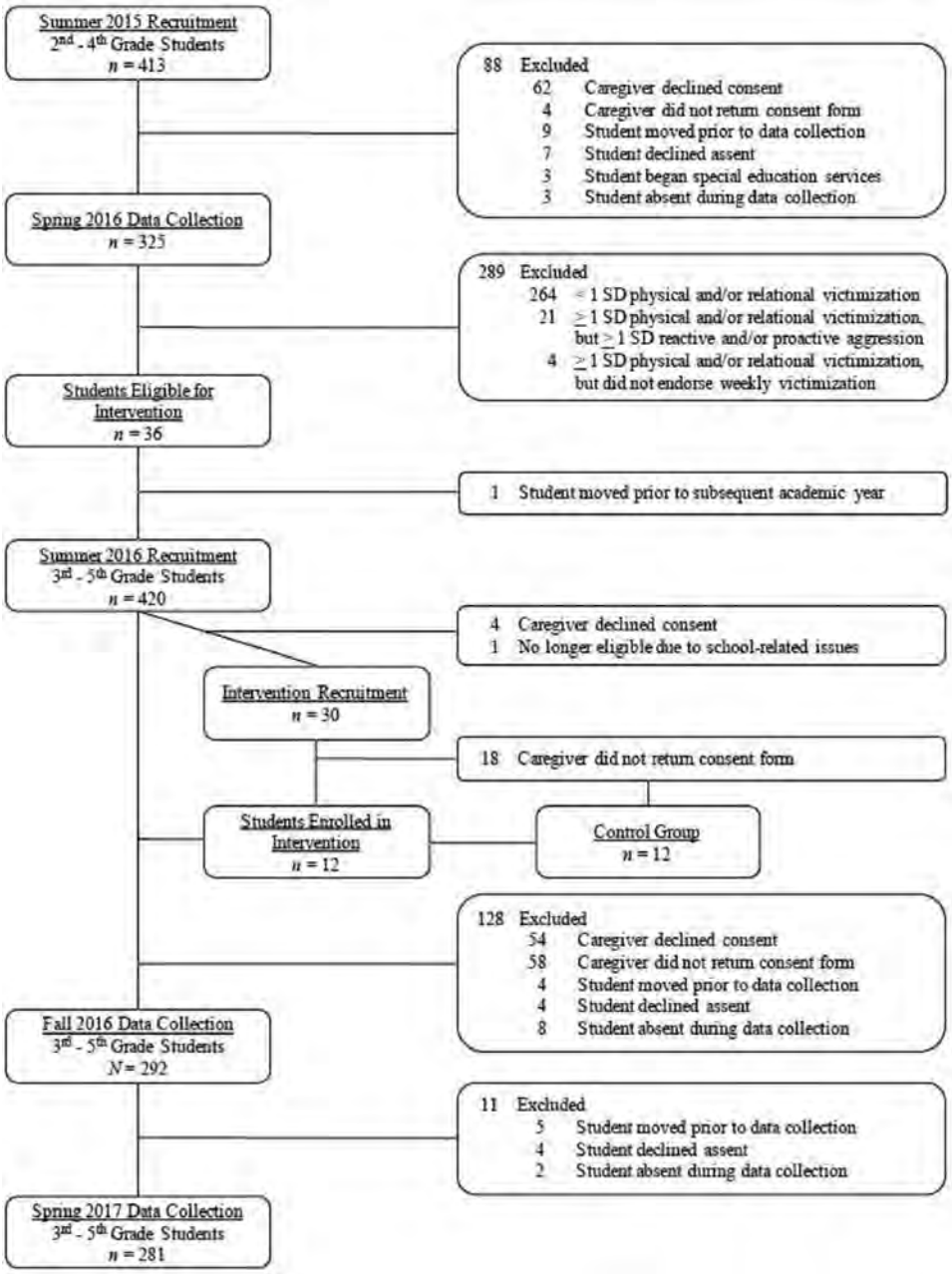

FIGURE 1 Participant flow diagram

TABLE 1 Participant demographics and descriptive statistics at the preintervention assessment (Fall, 2016)

	Overall school (third to fifth grade)	Intervention group participants	Control group participants	Independent samples *t* tests
Participants (*n*)	280	12	12	—
Age (*M* [*SD*])	9.22 (0.98)	9.27 (1.01)	8.92 (1.08)	—
Boys (%)	53.9	66.7	58.3	—
Third grade (%)	34.6	58.3	50.0	—
Fourth grade (%)	28.9	16.7	25.0	—
Fifth grade (%)	36.4	25.0	25.0	—
Child report (*M* [*SD*])				
Physical victimization	1.44 (0.67)	1.60 (0.64)	2.00 (0.75)	$t(22) = -1.39$, $p = 0.18$
Relational victimization	1.45 (0.70)	1.74 (0.71)	1.80 (0.94)	$t(22) = -0.17$, $p = 0.87$
Depressive symptoms	0.42 (0.42)	0.61 (0.43)	0.30 (0.32)	$t(21) = 1.93$, $p = 0.07$
Anxiety symptoms	2.09 (0.97)	2.26 (0.97)	2.09 (0.83)	$t(21) = 0.45$, $p = 0.66$
Problem solving	2.06 (0.54)	2.38 (0.40)	2.08 (0.49)	$t(22) = 1.58$, $p = 0.13$
Passive coping	1.60 (0.44)	1.85 (0.48)	1.74 (0.45)	$t(22) = 0.54$, $p = 0.60$
Teacher report (*M* [*SD*])				
Physical victimization	1.08 (0.26)	1.00 (0.00)	1.23 (0.39)	$t(9) = -1.91$, $p = 0.09$[a]
Relational victimization	1.25 (0.60)	1.08 (0.21)	1.40 (0.70)	$t(9) = -1.81$, $p = 0.10$[a]
Depressive symptoms	1.13 (0.27)	1.13 (0.22)	1.21 (0.45)	$t(20) = -0.22$, $p = 0.83$

Note. Intervention, but not control, group participants were excluded from the participant demographics and the descriptive statistics for the overall school; comparisons were conducted between the intervention and control group participants.

[a]Independent samples *t* tests with equal variances not assumed.

letters providing information about the intervention groups along with consent forms were sent home to the caregivers of remaining students, and they were asked to return signed copies to the elementary school office. Overall, permission was obtained for 40% of the 30 eligible students to participate in the targeted intervention ($n = 12$).[1]

Twelve of the remaining 18 eligible students who did not enroll in the targeted intervention but who participated in the school-wide data collection were selected as a naturalistic control group. Note that these control group participants met the aforementioned inclusion criteria with regard to their levels of peer victimization and aggression during the Spring of 2016. Of the six students who were not included in the control group, three were excluded because their caregivers did not return consent forms for them to participate in the school-wide data collection, and three were excluded due to missing data at either the pre- and/or postintervention assessment.

Accordingly, the intervention group included 12 youth (66.7% boys), the comparison group included 12 youth (58.3% boys), and the school-wide data included 280 youth (53.9% boys; all students who participated, except the 12 who were included in the intervention). All youth ranged between 7 and 11 years of age (see Table 1).

[1]Consent was received for one additional student following the deadline for registration. The decision was made to include this child in fourth-grade group approximately 2 weeks after the targeted intervention began; however, this student did not participate in the school-wide data collection and was therefore not included in the analyses.

TABLE 2 Sample schedule of session content (third grade)

Session	Objectives/topics reviewed
1	**1.** Introductions **2.** Set group expectations
2	**1.** Set group rules **2.** Assess symptom severity **3.** Provide hope
3	**1.** Set group leader expectations **2.** Establish labels for emotions **3.** Review homework procedures
4	**1.** Emotion recognition; Relationship between thinking, feeling, behaving **2.** Review ACTION acronym **3.** Link mood and engagement in pleasant activities
5	**1.** Review ACTION and "catching" the positive **2.** Extend pleasant events activities and review link between mood and pleasant events
6	**1.** Review and discuss further Mood–Thought–Behavior relationship
7	**1.** Introduce problem-solving steps
8	**1.** Set goal to increase engagement in pleasant events **2.** Review problem-solving steps
9	**1.** Continue to review problem-solving steps
10	**1.** Begin to build a positive sense of self (symbols of emotions)
11	**1.** Continue building a positive sense of self (symbols of emotions) **2.** Review pleasant events schedule
12	**1.** Apply problem-solving steps to three different emotions
13	**1.** Review how to apply problem-solving steps to emotions
14	**1.** Continue building a positive sense of self (self-descriptions) **2.** Apply problem-solving steps to daily hassles
15	**1.** Continue building a positive sense of self (positive and negative thought bubbles)
16	**1.** Practice spontaneous use of problem solving **2.** Review rationale for cognitive restructuring
17	**1.** Practice how to notice and catch thoughts
18	**1.** Continue building a positive sense of self (positive counters to negative self-evaluations; favorite things)
19	**1.** Review cognitive restructuring **2.** Review relationship between thoughts and feelings
20	**1.** Introduction to alternative interpretations **2.** Continue building a positive sense of self (positive perspective on negative characteristic; happy, funny, and proud moments)
21	**1.** Introduction to self-standards **2.** Introduction to self-evaluation and affect **3.** Identify areas for self-improvement **4.** Review alternative interpretations
22	**1.** Discuss and establish goals **2.** How to break down goals into subgoals **3.** How to start working on achieving goals

(Continues)

TABLE 2 (Continued)

Session	Objectives/topics reviewed
23	**1.** Introduction to expectations and predictions **2.** Learn to counter catastrophic thoughts with reasonable thoughts **3.** Use problem-solving steps and cognitive restructuring to facilitate change **4.** Check progress on goal attainment
24	**1.** Continue working toward self-improvement (progress toward goal attainment) **2.** Facilitate discussion on how to use problem-solving steps and cognitive restructuring to facilitate change **3.** Discuss termination of groups

4.2 | Targeted intervention

Nonaggressive, victimized youth participated in Taking ACTION (Stark & Kendall, 1996). The manual is written for youth ranging from 9 to 13 years of age, but it can be adapted for younger individuals (Stark & Kendall, 1996). The originally designed curriculum includes 15 new content sessions and up to three summary sessions that are approximately 45–60 min in duration, with up to two sessions held per week. The intervention focuses on problem solving, coping strategies, and self-management skills (e.g., self-evaluation and monitoring) in addition to cognitive restructuring.

Three groups were conducted (one for each grade level), with seven students in the third-grade group, two students in the fourth-grade group, and three students in the fifth-grade group. Minimal adaptations to the intervention structure were needed to fit with the school schedule. Specifically, the intervention was completed over 21–24 group sessions (third = 24 sessions; fourth = 21 sessions; fifth = 23 sessions), which were held for approximately 30 min each, twice a week. Variations in the number of sessions held per grade were due to factors such as slower group pace due to larger number of group members and cancellation of sessions due to absences of the majority of group members. Although the number of group sessions increased compared to the originally designed curriculum, groups were only held for approximately 30 min rather than up to an hour. Note that breaking up the length of the sessions is one adaptation listed as appropriate in the manual (Stark & Kendall, 1996). Group meetings consisted of engaging activities (e.g., playing board games, drawing, and coloring) and discussions that included personal examples and story-telling. Group leaders did not observe significant participant fatigue throughout the intervention. At the end of treatment youth provided feedback expressing that they did not want the groups to end, suggesting that participating in the group was a positive experience. Attendance of each group member was tracked, with all children being present for at least 75% of all sessions. The majority of absences were due to group member illnesses.

The first author, a licensed clinical psychologist, supervised two advanced, doctoral-level graduate students in the delivery of the intervention in weekly group meetings. The two graduate students were selected by the first author to implement the intervention given their advanced training and their research and clinical expertise in aggression and victimization. Each group was coled by the two graduate students, with less than five groups led by only one of the graduate students due to personal absences. To ensure fidelity, session content checklists were completed, and audio recordings were randomly reviewed by the first author throughout the intervention.

Adaptations to intervention content and materials were negligible. See Table 2 for a summary of group session content. Changes in content consisted of tailoring stories (e.g., Session 1, Objective 5: "Nicki Story") to relate towards a similar age as group members and to be more focused on peer relations. Material changes included adapting the cover page of the workbooks and other materials to exclude reference to "depressed." Additionally, changes were made for two homework sheets (i.e., Pleasant Events Schedule, Feelings Diary) to include an overall daily mood rating (0 = *bad*, 5 = *okay*, 10 = *great*). In the interest of time, group leaders had group supplies (e.g., silhouettes, magazine cut-outs) prepared before group sessions.

4.3 | Measures

4.3.1 | Peer victimization

Both child and teacher reports of peer victimization were collected to identify youth in Spring 2016 as well as again at pre- and postintervention. Self-report of peer victimization was assessed using the nine-item Victimization of Self (VS) scale of the Peer Experiences Questionnaire (Dill, Vernberg, Fonagy, Twemlow, & Gamm, 2004; Vernberg, Jacobs, & Hershberger, 1999). The measure consists of two subscales; four items measured physical victimization (e.g., "A kid hit, kicked, or pushed me in a mean way"), and five items measured relational victimization (e.g., "A kid ignored me on purpose to hurt my feelings"). Participants were asked to respond to items on a 5-point scale (1 = *never* to 5 = *a few times a week*). Items were averaged, with higher scores indicating more peer victimization. The VS has demonstrated good reliability in previous studies (e.g., Cooley & Fite, 2016; Dill et al., 2004). In the current study, the subscales demonstrated good internal consistencies across time points (αs = 0.87 –0.89).

Teacher reports of victimization were assessed using a six-item measure adapted from a peer-nomination scale (Crick & Bigbee, 1998). Of the six items, three items measured physical victimization (e.g., "Gets hit, kick, punched by others") and three items measured relational victimization (e.g., "Other kids tell rumors about them behind their backs"). Teachers were asked to respond to items on a 5-point scale (1 = *never* to 5 = *almost always*). Items were averaged, with higher scores indicating more peer victimization. This adapted measure has demonstrated good internal consistency in previous studies (e.g., Fite et al., 2013; Fite, Evans, Cooley, & Rubens, 2014). In the current study, the subscales demonstrated good internal consistencies across time points (αs = 0.83 –0.86).

4.3.2 | Proactive/reactive aggression

Teacher reports of proactive and reactive aggression were collected in Spring 2016 to identify nonaggressive victimized youth. Teachers completed the Proactive/Reactive Aggression Rating Scale (Dodge & Coie, 1987) for each student in their class. The measure consists of six items; three items measured proactive aggression (e.g., "This child gets other kids to gang up on somebody they don't like") and three items measured reactive aggression (e.g., "When this child has been teased or threatened, they get angry easily and strike back"). Participants were asked to rate each item on a 5-point scale (1 = *never* to 5 = *almost always*). Mean scores were computed for each subscale, with higher scores indicating higher levels of aggression. Previous research has found this measure to have good reliability and validity (e.g., Coie, Dodge, Terry, & Wright, 1991; Dodge & Coie, 1987). In the current study, the subscales demonstrated good internal consistencies (αs = 0.87 and 0.94).

4.3.3 | Depressive symptoms

Both child and teacher reports of depressive symptoms were assessed at pre- and postintervention. Child report of depressive symptoms was assessed using the Mood and Feelings Questionnaire, Short Version (SMFQ, Angold et al., 1995). The measure consists of eight items that measured symptoms of depression (e.g., "I felt miserable or unhappy," "I felt I was no good anymore"). Participants were instructed to respond to questions on a 3-point scale (0 = *not true*, 1 = *sometimes*, 2 = *true*). Items were averaged, with higher scores indicating higher levels of depressive symptoms. The SMFQ has been found to be psychometrically sound, with evidence demonstrating good reliability and validity (Angold et al., 1995; Messer et al., 1995). In the current study, this measure demonstrated good internal consistency at both pre- and postintervention assessments (αs = 0.87 and 0.88).

Teacher reports of depressive symptoms were assessed using the Withdraw/Depressed subscale of the Teacher Report Form (Achenbach & Rescorla, 2001). Teachers responded to eight items that measured symptoms of depression, including loss in pleasure and unhappiness/sadness, on a 3-point scale (1 = *not true*, 2 = *somewhat or sometimes true*, 3 = *very or often true*). Items were averaged, with higher scores indicating higher levels of depressive

symptoms. In the current study, this measure demonstrated good internal consistency at both pre- and postintervention assessments (αs = 0.86 and 0.85).

4.3.4 | Anxiety symptoms

Child reports of anxiety were collected at pre- and postintervention. Anxiety symptoms were assessed using the Patient-Reported Outcomes Measurement Information System (PROMIS) Pediatric Short Form (Irwin et al., 2010). The measure consists of eight items assessing various aspects of anxiety (e.g., "I felt like something awful might happen," "I worried about what could happen to me"), with participants asked to rate each item on a 5-point scale (1 = *never* to 5 = *always*). Items were averaged, with higher scores indicating higher levels of anxiety symptoms. In the current study, this measure demonstrated good internal consistency at both pre- and postintervention assessments (αs = 0.91 and 0.90).

4.3.5 | Passive coping and problem solving

Child reports of passive coping and problem solving were collected at pre- and postintervention. These coping strategies were assessed using two subscales from a modified version of the Self-Report Coping Scale (SRCS; Causey & Dubow, 1992), which was adapted by Kochenderfer-Ladd and Pelletier (2008). Six items assessed passive coping (e.g., "Go off by yourself," "Blame yourself for doing something wrong"), and three items assessed problem solving (e.g., "Try to think of ways to stop it," "Change things to keep it from happening again"). Participants were asked to rate each item on a 3-point scale (1 = *never*, 2 = *sometimes*, 3 = *most of the time*). Items were averaged, with higher scores indicating higher levels of passive coping and problem solving. The modified SRCS has demonstrated good reliability and validity in previous studies (e.g., Kochenderfer-Ladd & Pelletier, 2008; Sugimura et al., 2014). In the current study, the passive coping (αs = 0.72 and 0.67) and problem-solving (αs = 0.61 and 0.61) subscales demonstrated modest to adequate internal consistency at both pre- and postintervention assessments.

4.4 | Assessment procedures

The current study was approved by the researcher's university Institutional Review Board, the school district, and the school administrators. Parents/legal guardians provided consent for their youth to complete surveys in online back-to-school packets. Additionally, verbal assent was obtained from youth before each data collection. Teachers provided written consent for participation during teacher in-service meetings.

Preintervention assessment with both children (those who participated as well as those who did not participate in the intervention) and teachers occurred 2 weeks before the intervention commencing, approximately 10 weeks after the start of the 2016–2017 academic year (mid-October). Self-report measures were collected via group administration at the same time for those in the intervention and other youth in the school. No school personnel or students without consent were present during data collection to ensure confidentiality of responses. A trained research assistant read measure instructions, descriptions of response scales, and measure items aloud while additional research assistants circulated throughout the classroom to assist in the understanding of items and to answer individual questions. Teachers completed assessments via secure online surveys. Similar procedures were followed for postintervention assessments, which occurred within 1 month of the intervention concluding. Students received a small prize (e.g., a mechanical pencil) for participating at each time point. Teachers were compensated $65 for completing all student surveys at each time point.

4.5 | Data analytic plan

Descriptive statistics were initially estimated to describe the sample using IBM SPSS Statistics Version 24 (IBM Corp., 2016). Further, independent samples *t* tests were conducted to examine potential differences at the preintervention assessment between the intervention and control group participants. School-wide and intervention group changes in

physical victimization, relational victimization, depressive symptoms, and anxiety symptoms over a 6-month period were subsequently evaluated using a series of multilevel models within SAS University Edition (SAS Institute Inc., 2014). Data collection occasions at Level 1 were nested within persons at Level 2, and model parameters were estimated using restricted maximum likelihood (REML) and the PROC MIXED procedure. REML estimation was used to account for the minimal missing data (i.e., 4%) in the school-wide analyses, and time was centered such that 0 represented the first observation.

An empty means, random intercept model was estimated first to determine the intraclass correlation (i.e., the proportion of the random intercept variance relative to the total variance) for each outcome. A fixed linear effect of time was then added to the models evaluating school-wide changes in outcomes over time. A fixed linear effect of time, intervention group variable (0 = *control*, 1 = *intervention*), and a Time×Intervention Group interaction were added to the models evaluating the effects of the targeted intervention. The significance of these effects of time and intervention group were assessed using Wald tests, and effect sizes were assessed with pseudo-R^2 values for the proportion reduction in the Level-1 residual variance relative to the empty means, random intercept model. Note that the models evaluating school-wide changes in each outcome excluded the 12 intervention group participants.

5 | RESULTS

5.1 | Descriptive statistics

At the time of the screening assessment (Spring 2016), 58% ($n = 7$) of the students who subsequently enrolled in the intervention groups reported having experienced weekly physical victimization over the course of the school year, and 92% ($n = 11$) reported having experienced weekly relational victimization. At the preintervention assessment (Fall 2016), only one student reported experiencing weekly physical victimization and three students reported experiencing weekly relational victimization; however, 58% ($n = 7$) reported at least one incident of physical victimization since the beginning of the school year, and 75% ($n = 9$) reported at least one incident of relational victimization, suggesting that these were continuing issues for these youth. Means and *SD*s of the outcome variables for all study participants at the time of the preintervention assessment are reported in Table 1. Further, a series of independent series *t* tests indicated that intervention and control group participants did not significantly differ on any variable at the preintervention assessment (see Table 1).

TABLE 3 Linear effects of time for the overall school (third to fifth grade)

	Child report	Teacher report
Physical victimization		
Time	$b = 0.08$, $SE = 0.05$, $p = 0.09$	$b = 0.01$, $SE = 0.01$, $p = 0.60$
Relational victimization		
Time	**$b = 0.10$, $SE = 0.04$, $p = 0.02$**	**$b = 0.12$, $SE = 0.03$, $p < 0.001$**
Depressive symptoms		
Time	**$b = 0.04$, $SE = 0.02$, $p = 0.05$**	**$b = 0.05$, $SE = 0.02$, $p < 0.001$**
Anxiety symptoms		
Time	$b = -0.08$, $SE = 0.06$, $p = 0.19$	—
Problem solving		
Time	$b = -0.01$, $SE = 0.04$, $p = 0.74$	—
Passive coping		
Time	$b = 0.04$, $SE = 0.03$, $p = 0.14$	—

Note. Bold estimates represent statistically significant ($p < 0.05$) estimates; intervention, but not control, group participants were excluded from the school-wide analyses.

5.2 | Multilevel models

5.2.1 | School-wide analyses

Intraclass correlation estimates revealed that between 44% and 74% of the variance was between persons in the mean outcomes over time. When the fixed linear effects of time were added to the models (see Table 3), results indicated that there were statistically significant increases in child- and teacher-reported relational victimization (see Figure 2a,c, respectively) and depressive symptoms (see Figure 2b,d, respectively); these effects accounted for an additional 2% of the Level-1 residual variance for child-reported relational victimization, 1% of the Level-1 residual variance for child-reported depressive symptoms, 4% of the Level-1 residual variance for teacher-reported relational victimization, and 3% of the Level-1 residual variance for teacher-reported depressive symptoms. In contrast, significant changes were not observed for child- or teacher-reported physical victimization nor child-reported anxiety symptoms, problem solving, or passive coping.

5.2.2 | Intervention group analyses

Intraclass correlation estimates revealed that between 0% and 59% of the variance for the intervention group participants and between 0% and 84% of the variance for the control group participants was between persons

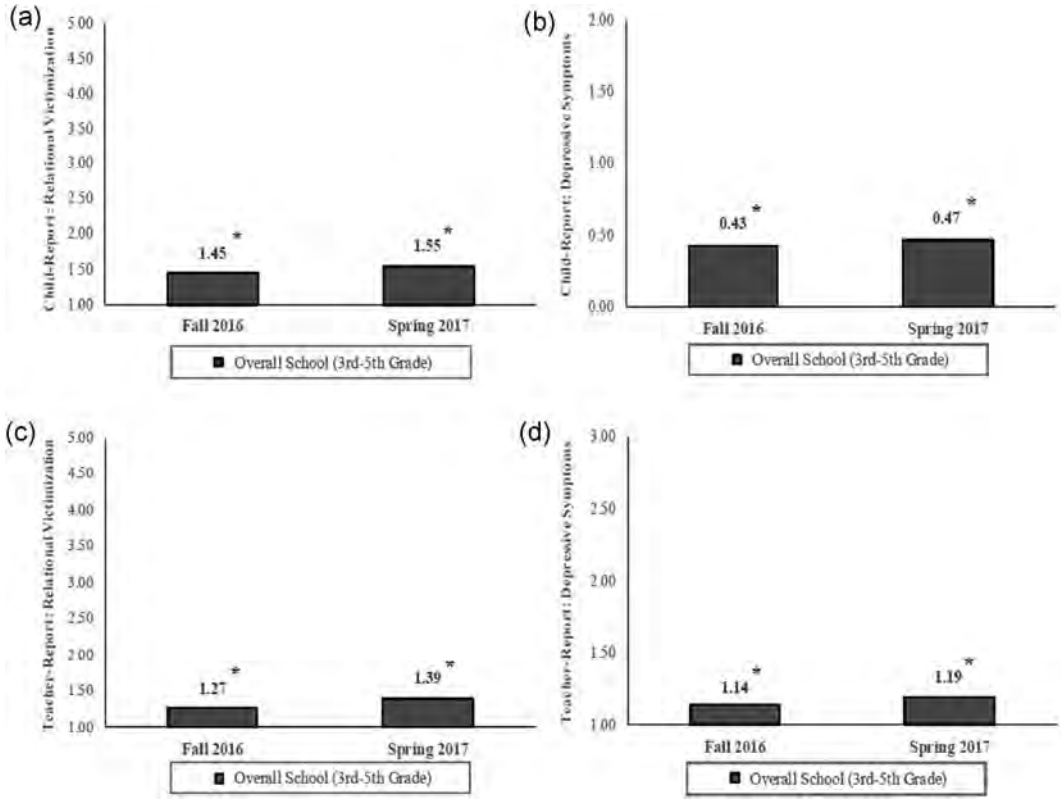

FIGURE 2 (a–d) School-wide changes in child- and teacher-reported relational victimization and depressive symptoms. *Note.* $n = 280$; intervention, but not control, group participants were excluded from these analyses. *Statistically significant ($p < 0.05$) linear change

TABLE 4 Interactions between linear effects of time and intervention group

	Child report	Teacher report
Physical victimization		
Time	$b = -0.06$, $SE = 0.19$, $p = 0.74$	$b = 0.00$, $SE = 0.10$, $p = 0.99$
Intervention group	$b = -0.40$, $SE = 0.28$, $p = 0.17$	$b = -0.28$, $SE = 0.15$, $p = 0.08$
Time×Intervention Group	$b = -0.19$, $SE = 0.27$, $p = 0.49$	$b = 0.00$, $SE = 0.14$, $p = 0.99$
Relational victimization		
Time	$b = 0.18$, $SE = 0.17$, $p = 0.32$	**$b = 0.37$, $SE = 0.15$, $p = 0.02$**
Intervention group	$b = -0.06$, $SE = 0.32$, $p = 0.86$	**$b = -0.55$, $SE = 0.25$, $p = 0.04$**
Time×Intervention Group	**$b = -0.55$, $SE = 0.24$, $p = 0.04$**	$b = -0.28$, $SE = 0.20$, $p = 0.17$
Depressive symptoms		
Time	$b = 0.17$, $SE = 0.12$, $p = 0.19$	$b = -0.03$, $SE = 0.08$, $p = 0.73$
Intervention group	$b = 0.30$, $SE = 0.16$, $p = 0.07$	$b = -0.05$, $SE = 0.13$, $p = 0.70$
Time×Intervention Group	**$b = -0.36$, $SE = 0.17$, $p = 0.05$**	$b = -0.01$, $SE = 0.11$, $p = 0.91$
Anxiety symptoms		
Time	$b = 0.15$, $SE = 0.33$, $p = 0.64$	—
Intervention group	$b = 0.16$, $SE = 0.37$, $p = 0.68$	—
Time×Intervention Group	$b = -0.64$, $SE = 0.46$, $p = 0.17$	—
Problem solving		
Time	$b = 0.08$, $SE = 0.16$, $p = 0.60$	—
Intervention group	$b = 0.29$, $SE = 0.19$, $p = 0.12$	—
Time×Intervention Group	$b = -0.38$, $SE = 0.23$, $p = 0.11$	—
Passive coping		
Time	$b = 0.06$, $SE = 0.09$, $p = 0.51$	—
Intervention group	$b = 0.10$, $SE = 0.19$, $p = 0.59$	—
Time×Intervention Group	**$b = -0.31$, $SE = 0.13$, $p = 0.02$**	—

Note. Bold estimates represent statistically significant ($p < 0.05$) estimates; intervention group (0 = *control*, 1 = *intervention*).

in the mean outcomes over time. When the effects of time, intervention group, and Time×Intervention Group were added to the models (see Table 4), results indicated that there were statistically significant differences in linear change between intervention and control group participants on child-reported relational victimization (see Figure 3a), depressive symptoms (see Figure 3b), and passive coping (see Figure 3c); these effects accounted for an additional 13% of the Level-1 residual variance for relational victimization, 8% of the Level-1 residual variance for depressive symptoms, and 20% of the Level-1 residual variance for passive coping. Whereas the intervention group participants exhibited significant decreases in relational victimization, $b = -0.37$, $SE = 0.17$, $p = 0.04$, and passive coping, $b = -0.25$, $SE = 0.09$, $p = 0.01$, the control group participants exhibited nonsignificant increases in relational victimization, $b = 0.18$, $SE = 0.17$, $p = 0.32$, and passive coping, $b = .06$, $SE = 0.09$, $p = 0.51$, over time. Further, the intervention group participants exhibited nonsignificant decreases, $b = -0.19$, $SE = 0.12$, $p = 0.13$, and the control group participants exhibited nonsignificant increases, $b = 0.17$, $SE = 0.12$, $p = 0.19$, in depressive symptoms over time.[2] Significant differences were not observed between the intervention and control group participants on changes in child-reported physical victimization, anxiety symptoms, or problem solving, nor any of the teacher-reported outcomes.

[2]Due to the limited sample size and power to detect differences between groups, post hoc analyses were conducted to separately examine the linear effects of time on child-reported depressive symptoms for the intervention and control group participants. Results indicated that the intervention group participants exhibited significant decreases in depressive symptoms over time, $b = -0.19$, $SE = 0.09$, $p = 0.05$. In contrast, control group participants continued to exhibit nonsignificant increases in depressive symptoms over time, $b = 0.18$, $SE = 0.15$, $p = 0.28$.

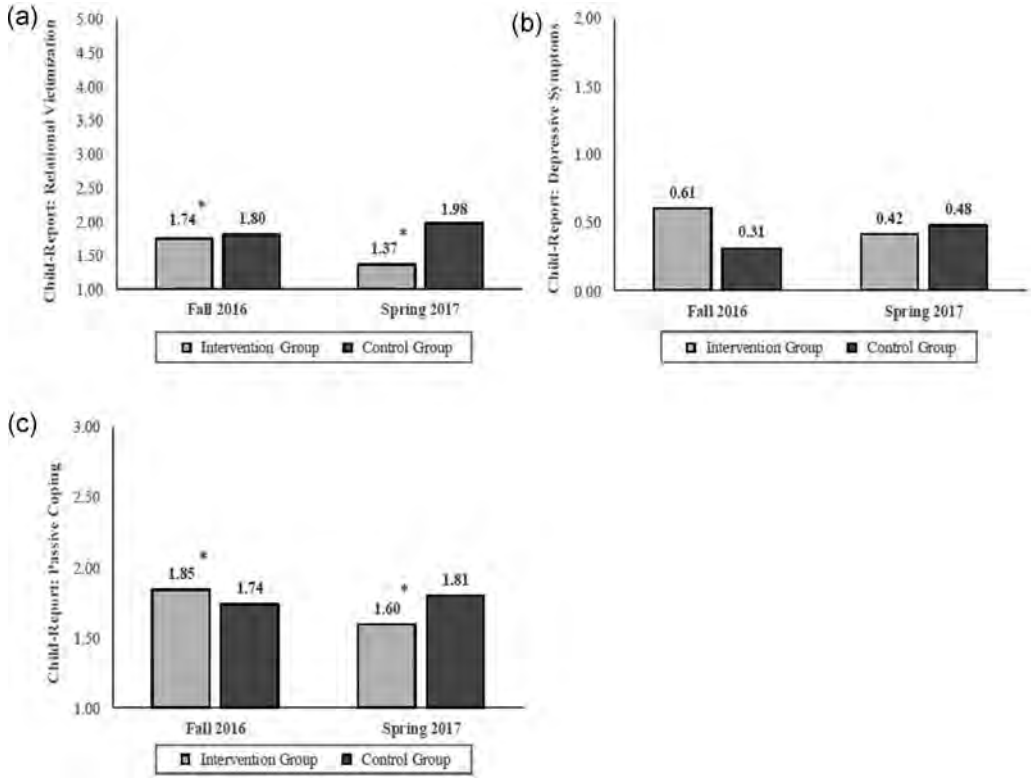

FIGURE 3 (a–c) Change comparisons between intervention and control group participants on relational victimization, depressive symptoms, and passive coping. *Note.* Intervention group $n = 12$; control group $n = 12$. *Statistically significant ($p < 0.05$) linear change

6 | DISCUSSION

The goal of the current study was to evaluate whether Taking ACTION (Stark & Kendall, 1996), a group-based cognitive behavioral intervention originally designed to reduce symptoms of depression and anxiety, may prevent subsequent peer victimization among elementary school-age youth. Indeed, current findings indicated that youth who completed the intervention reported significant decreases in relational victimization over the course of the academic year, but no changes in teacher-reported relational victimization were evident. Conversely, no changes in self-reported relational victimization were evident for the control group. Moreover, increases in both child- and teacher-reported relational victimization were observed for the school as a whole. These results yield some promising initial data for the use of this intervention with victimized youth during middle childhood.

Interestingly, however, no differences in the intervention group and naturalistic control group were evident for teacher-reported outcomes. Differences in self- and teacher reports of victimization for the intervention group may reflect a difference in perceived versus observable changes in victimization. It could be that youth who completed the intervention experienced a reduction in internalizing symptoms, which resulted in less sensitivity to peer victimization and/or less internalization of peer behavior. There may also be many incidences of victimization, particularly relational acts, that the teachers are not aware of that resulted in decreased self- but not teacher-reports (Card & Hodges, 2008). Nonetheless, both self- and teacher reports have been found to be valid and reliable and may provide additive and unique information, with both contributing to our understanding of peer victimization (Card & Hodges, 2008).

Unfortunately, the intervention did not influence physical victimization in the current evaluation, which is likely attributable to the low base rate evident for all youth in the school. As such, the impact of Taking ACTION on physical victimization still warrants further investigation, especially in samples where incidents of physical victimization are more prevalent.

Although sample size likely limited our ability to detect significant effects between groups, findings also showed decreases in self-reports of depressive symptoms for youth who participated in the intervention, which is consistent with the original goals of Taking ACTION (Stark & Kendall, 1996) and previous evaluations of the intervention (Stark et al., 1987, 1991). These findings are in contrast to the nonsignificant increases the naturalistic control group exhibited. Additionally, significant increases in both child- and teacher-reported depressive symptoms were found for the school as a whole. However, no changes in anxiety were evident for any group, suggesting anxiety remained stable over the year, regardless of intervention status. It is possible that the focus on peers in the current study's intervention groups only impacted depressive symptoms.

Peer victimization and internalizing symptoms have been found to be bidirectionally associated (Card et al., 2007; Schacter et al., 2014), and negative cognitions may contribute to this cycle (Barchia & Bussey, 2010; Cole, Maxwell, Dukewich, & Yosick, 2010; Harper, 2012; Sinclair et al., 2012). Specifically, self-blaming attributions have been shown to place youth at risk for peer victimization and ultimately lead to increases in depressive symptoms over time (Perren et al., 2013; Schacter et al., 2014). The focus of Taking ACTION on cognitive restructuring, behavioral activation, and problem solving may have helped to reduce the negative cognitions and emotions experienced by victimized youth, thereby reducing their subsequent experiences of relational victimization and symptoms of depression.

Indeed, youth who participated in the intervention exhibited significant decreases in passive coping over time. This avoidant coping strategy is focused on managing the cognitive and emotional reactions arising from experiences of victimization (Causey & Dubow, 1992) rather than reducing future victimization, and it may actually signal vulnerability to peers (Shelley & Craig, 2010). It is thought that passive victims are seen as easy targets who submit to aggressors (Kochenderfer-Ladd & Ladd, 2010), and passive coping has been linked to higher levels of peer victimization (Kochenderfer-Ladd & Pelletier, 2008; Shelley & Craig, 2010; Spence et al., 2009) and depressive symptoms (Machmutow et al., 2012). Further, experiences of victimization may predict increases in passive coping over time (Terranova, Boxer, & Morris, 2010). Although the current study was not able to test a mediational model due to the limited sample size, future research efforts are needed to test whether reductions in passive coping serve as a mechanism of action of cognitive behavioral interventions for victimized youth.

Contrary to expectations, however, youth who participated in the intervention did not exhibit subsequent increases in problem solving. This finding may be explained in part by the measure utilized in the current study, which consisted of only three items and assessed the overall frequency of this coping strategy rather than the effectiveness of youth's efforts to determine the cause of their victimization and develop a plan to prevent it from happening again. Problem solving is generally considered to be an adaptive form of coping with social stress that has been related to lower levels of peer victimization (Kochenderfer-Ladd, 2004) and symptoms of depression over time (Sugimura et al., 2014; Troop-Gordon et al., 2015). Still, experiences of victimization may decrease youth's use of this coping strategy (Troop-Gordon et al., 2015), and findings from one cross-sectional study suggest that problem solving may actually increase victimized children's risk for peer rejection (Kochenderfer-Ladd & Skinner, 2002); the authors suggested that "if victimized children implement ineffective, or inappropriate, strategies, others may conclude that they are provoking conflicts rather than solving them" (Kochenderfer-Ladd & Skinner, 2002, p. 275). Thus, it would be informative for future research to include a more comprehensive assessment of this coping strategy and examine whether cognitive behavioral interventions improve the effectiveness of the problem-solving strategies victimized youth select and implement.

It is important to note that this study is a preliminary investigation and current findings need to be interpreted in light of its limitations. First, the intervention was conducted with a small sample of youth, which may have limited our power to detect effects. Although significant changes from pre- to postintervention were evident, results

need to be replicated in larger samples. Second, although the naturalistic control group (and school-wide data) allowed for comparisons, there could be selection biases that influenced those who participated in the intervention versus those who did not. Future investigations with randomization utilized for group assignment are needed to provide more confidence that the effects can be attributed to the intervention. Information regarding additional services received outside the school setting was not collected, which needs to be addressed in future research.

Given that Taking ACTION intervention is designed for youth ranging from 9 to 13 years of age, we included third- through fifth-grade students in this study. Nonetheless, this narrow age span limits the generalizability of findings to other grade levels and developmental stages. Moreover, the school was comprised of predominantly Caucasian youth, and effects may not generalize to ethnically/racially diverse youth. Further research examining associations across various ethnic/racial groups is needed. It would also be beneficial to evaluate anxiety symptoms from multiple perspectives beyond child reports in future investigations (e.g., parent or teacher reports). Future research also needs to assess cyber victimization, as this form is evident in among elementary school-age youth (DePaolis & Williford, 2015; Monks, Robinson, & Worlidge, 2012; Tokunaga, 2010) and has a direct impact on social relationships at school (Juvonen & Gross, 2008; Patchin & Hinduja, 2010; Smith, 2012).

It is important to note that the participating school is invested in preventing peer victimization, with antibullying policies in place that likely limited the amount of victimization that was observed. It is possible that the promising effects found in the current study may be even stronger in schools with higher rates of victimization. Thus, an important next step is to evaluate this intervention within schools with higher rates of victimization and less structure to address peer victimization (i.e., schools with fewer evidence-based policies, procedures, and practices). Future work should also evaluate long-term postintervention effects to determine whether intervention gains persist over time. Additionally, examining the effectiveness of the intervention when delivered by school counselors and other school personnel is warranted, with sustainability more likely if school staff can provide the intervention. Finally, although the group leaders did not notice any differences in response to the intervention across individual characteristics, it is important to recognize that acts of peer victimization occur within contexts (e.g., schools and neighborhoods), where ecological norms may heighten the risk for certain groups to experience peer victimization, such as ethnic/racial minorities, LGBTQ youth, and students with disabilities. Given prior evidence noting elevated risk for these populations (Earnshaw, Bogart, Poteat, Reisner, & Schuster, 2016; Limber, Kowalski, Agatston, & Huynh, 2016; Newman, Fantus, Woodford, & Rwigema, 2017), future studies investigating targeted interventions for victimized youth may benefit from assessing broader ecological factors that may increase risk for certain groups, as well evaluating the effectiveness of interventions for particular groups of individuals.

7 | CONCLUSIONS

Despite limitations, current findings, in conjunction with the Fung (in press) study, provide support for the use of cognitive behavioral interventions for victimized youth. Observed changes in youths' of peer victimization, as well as depressive symptoms and passive coping, are likely tied to the targeted intervention's focus on cognitive restructuring of victims' attributions. Schacter et al. (2014) posit that "an attributional approach to changing victims' subjective interpretations offers an underutilized intervention method that can play an important role in helping to prevent the cycle of peer victimization" (p. 452). Further work evaluating these interventions for victimized youth is indicated.

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CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

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REFERENCES

Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for ASEBA school-age forms and profiles*. Burlington: University of Vermont, Research Center for Children, Youth, and Families.

Angold, A., Costello, E., Messer, S., Pickles, A., Winder, F., & Silver, D. (1995). The development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research*, *5*, 237–249.

Barchia, K., & Bussey, K. (2010). The psychological impact of peer victimization: Exploring social-cognitive mediators of depression. *Journal of Adolescence*, *33*, 615–623. https://doi.org/10.1016/j.adolescence.2009.12.002

Bettencourt, A., Farrell, A., Liu, W., & Sullivan, T. (2012). Stability and change in patterns of peer victimization and aggression during adolescence. *Journal of Clinical Child and Adolescent Psychology*, *42*, 429–441. https://doi.org/10.1080/15374416.2012.738455

Bierman, K. L. (2004). *Peer rejection: Developmental processes and intervention strategies*. New York, NY: Guilford Press.

Bradshaw, C. P., Sawyer, A. L., & O'Brennan, L. M. (2007). Bullying and peer victimization at school: Perceptual differences between students and school staff. *School Psychology Review*, *36*, 361–382. https://doi.org/10.1080/15388220.2010.539164

Bradshaw, C. P., (2015). Translating research to practice in bullying prevention. *American Psychologist*, *70*(4), 322–332.

Camodeca, M., Goossens, F. A., Terwogt, M. M., & Schuengel, C. (2002). Bullying and victimization among school-age children: Stability and links to proactive and reactive aggression. *Social Development*, *11*, 332–345. https://doi.org/10.1111/1467-9507.00203

Card, N. A., & Hodges, E. V. E. (2008). Peer victimization among schoolchildren: Correlations, causes, consequences, and considerations in assessment and intervention. *School Psychology Quarterly*, *23*, 451–461. https://doi.org/10.1037/a0012769

Card, N. A., Isaacs, J., & Hodges, E. V. E. (2007). Correlates of school victimization: Implications for prevention and intervention. In J. E. Zins M. J. Elias & C. A. Maher (Eds.), *Bullying, victimization, and peer harassment: A handbook of prevention and intervention* (pp. 339–366). New York, NY: Haworth Press.

Causey, D. L., & Dubow, E. F. (1992). Development of a self-report coping measure for elementary school children. *Journal of Clinical Child Psychology*, *21*, 47–59. https://doi.org/10.1207/s15374424jccp2101_8

CDC. (2012). *Understanding bullying fact sheet*. Retrieved from www.cdc.gov/ViolencePrevention/pdf/BullyingFactsheet2012-a.pdf

Chu, B. C., & Harrison, T. L. (2007). Disorder-specific effects of CBT for anxious and depressed youth: A meta-analysis of candidate mediators of change. *Clinical Child and Family Psychology Review*, *10*, 352–372. https://doi.org/10.1007/s10567-007-0028-2

Chu, B. C., Hoffman, L., Johns, A., Reyes-Portillo, J., & Hansford, A. (2015). Transdiagnostic behavior therapy for bullying-related anxiety and depression: Initial development and pilot study. *Cognitive and Behavioral Practice*, *22*, 415–429. https://doi.org/10.1016/j.cbpra.2014.06.007

Coie, J. D. (1990). Toward a theory of peer rejection. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 365–401). Cambridge, UK: Cambridge University Press.

Coie, J. D., Dodge, K. A., Terry, R., & Wright, V. (1991). The role of aggression in peer relations: An analysis of aggression episodes in boys' play groups. *Child Development*, *62*, 812–826. https://doi.org/10.1111/j.1467-8624.1991.tb01571.x

Cole, D. A., Maxwell, M. A., Dukewich, T. L., & Yosick, R. (2010). Targeted peer victimization and the construction of positive and negative self-cognitions: Connections to depressive symptoms in children. *Journal of Clinical Child and Adolescent Psychology*, *39*, 421–435. https://doi.org/10.1080/15374411003691776

Cooley, J. L., & Fite, P. J. (2016). Peer victimization and forms of aggression during middle childhood: The role of emotion regulation. *Journal of Abnormal Child Psychology*, *44*, 535–546. https://doi.org/10.1007/s10802-015-0051-6

Cooley, J. L., Fite, P. J., & Pederson, C. A. (2018). Bidirectional associations between peer victimization and functions of aggression in middle childhood: Further evaluation across academic years and informants. *Journal of Abnormal Child Psychology*, *46*, 99–111. https://doi.org/10.1007/s10802-017-0283-8

Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: A multi-informant approach. *Journal of Clinical and Consulting Psychology*, *66*, 337–347. https://doi.org/10.1037/0022-006X.66.2.337

DePaolis, K. J., & Williford, A. (2015). The nature and prevalence of cybervictimization among elementary school children. *Child and Youth Care Forum*, *44*, 377–393.

Dill, E. J., Vernberg, E. M., Fonagy, P., Twemlow, S. W., & Gamm, B. K. (2004). Negative affect in victimized children: The roles of social withdrawal, peer rejection, and attitudes toward bullying. *Journal of Abnormal Child Psychology*, *32*(2), 159–173. https://doi.org/10.1023/B:JACP.0000019768.31348.81

Dodge, K. A., & Coie, J. D. (1987). Social-information processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology*, *53*, 1146–1158. https://doi.org/10.1037/0022-3514.53.6.1146

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*, 405–432. https://doi.org/10.1111/j.146708624.2010.01564.x

Earnshaw, V. A., Bogart, L. M., Poteat, V. P., Reisner, S. L., & Schuster, M. A. (2016). Bullying among lesbian, gay, bisexual, and transgender youth. *Pediatric Clinics*, *63*(6), 999–1010. https://doi.org/10.1016/j.pcl.2016.07.004

Farrington, D. P., & Ttofi, M. M. (2009). How to reduce school bullying. *Victims and Offenders*, *4*, 321–326. https://doi.org/10.1080/15564880903227255

Fite, P. J., Evans, S. C., Cooley, J. L., & Rubens, S. L. (2014). Further evaluation of the associations between attention-deficit/hyperactivity and oppositional defiant disorder symptoms and bullying victimization in adolescence. *Child Psychiatry and Human Development*, *45*, 32–41. https://doi.org/10.1007/s10578-013-0376-8

Fite, P. J., Williford, A., Cooley, J. L., DePaolis, K., Rubens, S. L., & Vernberg, E. M. (2013). Patterns of victimization locations in elementary school children: Effects of grade level and gender. *Child and Youth Care Forum*, *42*, 585–597. https://doi.org/10.1007/s10566-013-9219-9

Fung, A. L. (in press). Cognitive-behavioural group therapy for pure victims with internalizing problems: An evidence-based one-year longitudinal study. *Applied Research Quality Life*, https://doi.org/10.1007/s11482-017-9553-4

Grills-Taquechel, A. E., Polifroni, R., & Pane, H. T. (2010). Methods for assessing and treating bully-victim problems for individual children and adolescents. In E. Vernberg & B. K. Biggs (Eds.), *Preventing and treating bullying and victimization* (pp. 135–160). New York, NY: Oxford University Press.

Harper, B. D. (2012). Parents' and children's beliefs about peer victimization: Attributions, coping responses, and child adjustment. *The Journal of Early Adolescence*, *32*, 387–413. https://doi.org/10.1177/0272431610396089

Hawkins, J. D., Lishner, D. M., Catalano, R. F., & Howard, M. O. (1985). Childhood predictors of adolescent substance abuse: Toward an empirically grounded theory. *Journal of Children in Contemporary Society*, *18*, 11–48. https://doi.org/10.1300/J274v18n01_03

Haynie, D. L., Nansel, T., Eitel, P., Crump, A. D., Saylor, K., Yu, K., & Simons-Morton, B. (2001). Bullies, victims, and bully/victims: Distinct groups of at-risk youth. *The Journal of Early Adolescence*, *21*(1), 29–49. https://doi.org/10.1177/0272431601021001002

Hodges, E. V. E., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology*, *35*, 94–101. https://doi.org/10.1037/0012-1649.35.1.94

Hollon, S. D., Stewart, M. O., & Strunk, D. (2006). Enduring effects for cognitive behavior therapy in the treatment of depression and anxiety. *Annual Review of Psychology*, *57*, 285–315. https://doi.org/10.1146/annurev.psych.57.102904.190044

IBM Corp (2016). *IBM SPSS Statistics for Windows. Version 24.0*. Armonk, NY: Author.

Irwin, D. E., Stucky, B., Langer, M. M., Thissen, D., DeWitt, E. M., Lai, J. S., … DeWalt, D. A. (2010). An item response analysis of the pediatric PROMIS anxiety and depressive symptoms scales. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation*, *19*(4), 595–607. https://doi.org/10.1007/s11136-010-9619-3

Jiménez-Barbero, J. A., Ruiz-Hernández, J. A., Llor-Zaragoza, L., Pérez-García, M., & LlorEsteban, B. (2016). Effectiveness of anti-bullying school programs: A meta-analysis. *Children and Youth Services Review*, *61*, 165–175. https://doi.org/10.1016/j.childyouth.2015.12.015

Juvonen, J., & Gross, E. F. (2008). Bullying experiences in cyberspace. *The Journal of School Health*, *78*, 496–505. https://doi.org/10.1111/j.1746-1561.2008.00335.x

Kochenderfer-Ladd, B. (2004). Peer victimization: The role of emotions in adaptive and maladaptive coping. *Social Development*, *13*, 329–349. https://doi.org/10.1111/j.1467-9507.2004.00271.x

Kochenderfer-Ladd, B., & Ladd, G. W. (2010). A child-by-environment framework for planning interventions with children involved in bullying. In E. M. Vernberg & B. K. Biggs (Eds.), *Preventing and treating bullying and victimization* (pp. 45–74). New York: Oxford University Press Inc.

Kochenderfer-Ladd, B., & Pelletier, M. E. (2008). Teachers' views and beliefs about bullying: Influences on classroom management strategies and students' coping with peer victimization. *Journal of School Psychology*, *46*, 431–453. https://doi.org/10.1016/j.jsp.2007.07.005

Kochenderfer-Ladd, B., & Skinner, K. (2002). Children's coping strategies: Moderators of the effects of peer victimization? *Developmental Psychology*, *38*, 267–278. https://doi.org/10.1037//0012-1649.38.2.267

Kochenderfer-Ladd, B., & Wardrop, J. L. (2001). Chronicity and instability of children's peer victimization experiences as predictors of loneliness and social satisfaction trajectories. *Child Development*, *72*(1), 134–151. https://doi.org/10.1111/1467-8624.00270

Ladd, G. W., Ettekal, I., & Kochenderfer-Ladd, B. (2017). Peer victimization trajectories from kindergarten through high school: Differential pathways for children's school engagement and achievement. *Journal of Educational Psychology*, *109*, 826–841. https://doi.org/10.1037/edu0000177

Limber, S., Kowalski, R., Agatston, P., & Huynh, H. (2016). Bullying and children with disabilities. In O. Saracho (Ed.), *Contemporary Perspectives on Research on Bullying in Early Childhood Education* (pp. 129–155). Charlotte, NC: Information Age Publishing.

Machmutow, K., Perren, S., Sticca, F., & Alsaker, F. D. (2012). Peer victimization and depressive symptoms: Can specific coping strategies buffer the negative impact of cybervictimization. *Emotional and Behavioural Difficulties*, *17*, 403–420. https://doi.org/10.1080/13632752.2012.704310

Marini, Z. A., Dane, A. V., Bosacki, S. L., & Ylc, C. (2006). Direct and indirect bully-victims: Differential psychosocial risk factors associated with adolescents involved in bullying and victimization. *Aggressive Behavior*, *32*(6), 551–569. https://doi.org/10.1146/annurev.psych.54.101601.145105

Matjasko, J. L., Vivolo-Kantor, A. M., Massetti, G. M., Holland, K. M., Holt, M. K., & Dela Cruz, J. (2012). A systematic meta-review of evaluations of youth violence prevention programs: Common and divergent findings from 25 years of meta-analyses and systematic reviews. *Aggression and Violent Behavior*, *17*, 540–552. https://doi.org/10.1016/j.avb.2012.06.006

Mattick, R. P., Peters, L., & Clarke, J. C. (1989). Exposure and cognitive restructuring for social phobia: A controlled study. *Behavior Therapy*, *20*(1), 3–23. https://doi.org/10.1016/S0005-7894(89)80115-7

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

Messer, S. C., Angold, A., Costello, E. J., Loeber, R., Van Kammen, W., & Stouthamer-Loeber, M. (1995). Development of a short questionnaire for use in epidemiological studies of depression in children and adolescents: Factor composition and structure across development. *International Journal of Methods in Psychiatric Research*, *5*, 251–262.

Monks, C. P., Robinson, S., & Worlidge, P. (2012). The emergence of cyberbullying: A survey of primary school pupils' perceptions and experiences. *School Psychology International*, *33*, 477–491. https://doi.org/10.1177/0143034312445242

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association*, *285*(16), 2094–2100. https://doi.org/10.1001/jama.285.16.2094

Newman, P. A., Fantus, S., Woodford, M. R., & Rwigema, M. J. (2017). "Pray That God Will Change You": the religious social ecology of bias-based bullying targeting sexual and gender minority youth—a qualitative study of service providers and educators. *Journal of Adolescent Research*, *33*, 523–548. https://doi.org/10.1177/0743558417712013

Patchin, J. W., & Hinduja, S. (2010). Cyberbullying and self-esteem. *Journal of School Health*, *80*, 614–621. https://doi.org/10.1111/j.1746-1561.2010.00549.x

Perren, S., Ettekal, I., & Ladd, G. (2013). The impact of peer victimization on later maladjustment: Mediating and moderating effects of hostile and self-blaming attributions. *Journal of Child Psychology and Psychiatry*, *51*, 46–55. https://doi.org/10.1111/j.1469-7610.2012.02618.x

Reijntjes, A., Kamphuis, J. H., Prinzie, P., Boelen, P. A., van der Schoot, M., & Telch, M. J. (2011). Prospective linkages between peer victimization and externalizing problems in children: A meta-analysis. *Aggressive Behavior*, *37*, 215–222. https://doi.org/10.1002/ab.20374

Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010). Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse and Neglect*, *34*, 244–252. https://doi.org/10.1016/j.chiabu.2009.07.009

Rudolph, K. D., Troop-Gordon, W., Hessel, E. T., & Schmidt, J. D. (2011). A latent growth curve analysis of early and increasing peer victimization as predictors of mental health across elementary school. *Journal of Clinical Child & Adolescent Psychology*, *40*, 111–122. https://doi.org/10.1080/15374416.2011.533413

SAS Institute Inc. (2014). SAS® University Edition, Cary, NC, USA. https://doi.org/10.1177/0734282915580763

Schacter, H. L., White, S. J., Chang, V. Y., & Juvonen, J. (2014). "Why me?": Characterological self-blame and continued victimization in the first year of middle school. *Journal of Clinical Child and Adolescent Psychology*, *44*, 446–455. https://doi.org/10.1080/15374416.2013.865194

Shelley, D., & Craig, W. M. (2010). Attribution and coping styles in reducing victimization. *Canadian Journal of School Psychology*, *25*, 84–100. https://doi.org/10.1177/0829573509357067

Sinclair, K. R., Cole, D. A., Dukewich, T., Felton, J., Weitlauf, A. S., Maxwell, M. A., … Jacky, A. (2012). Impact of physical and relational peer victimization on depressive cognitions in children and adolescents. *Journal of Clinical Child and Adolescent Psychology*, *41*(5), 570–583. https://doi.org/10.1080/15374416.2012.704841

Smith, P. K. (2012). Cyberbullying and cyber aggression. In S. R. Jimerson, A. B. Nickerson, M. J. Mayer, & M. J. Furlong (Eds.), *Handbook of school violence and school safety* (pp. 93–103). New York: Routledge.

Spence, S. H., De Young, A., Toon, C., & Bond, S. (2009). Longitudinal examination of the associations between emotional dysregulation, coping responses to peer provocation, and victimisation in children. *Australian Journal of Psychology*, *61*, 145–155. https://doi.org/10.1080/00049530802259076

Stark, K. D., & Kendall, P. C. (1996). *Treating depressed children: Therapist manual for 'Taking* Action'Ardmore, PA: Workbook Publishing.

Stark, K. D., Reynolds, W. M., & Kaslow, N. J. (1987). A comparison of the relative efficacy of self-control therapy and a behavioral problem-solving therapy for depression in children. *Journal of Abnormal Child Psychology*, *15*(1), 91–113. https://doi.org/10.1007/BF00916468

Stark, K. D., Rouse, L. W., & Livingston, R. (1991). Treatment of depression during childhood and adolescence: Cognitive-behavioral procedures for the individual and family. *Child and adolescent therapy: Cognitive-behavioral procedures* (pp. 165–206). New York, NY: Guilford Press.

Sugimura, N., Rudolph, K. D., & Agoston, A. M. (2014). Depressive symptoms following coping with peer aggression: The moderating role of negative emotionality. *Journal of Abnormal Child Psychology*, *42*, 563–575. https://doi.org/10.1007/s10802-013-9805-1

Terranova, A. M., Boxer, P., & Morris, A. S. (2010). Responding to peer victimization in middle childhood: What is a victim to do. *Journal of Aggression, Conflict, and Peace Research*, *2*(4), 15–24. https://doi.org/10.5042/jacpr.2010.0533

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

Troop-Gordon, W., Rudolph, K. D., Sugimura, N., & Little, T. D. (2015). Peer victimization in middle childhood impedes adaptive responses to stress: A pathway to depressive symptoms. *Journal of Clinical Child and Adolescent Psychology*, *44*, 432–445. https://doi.org/10.1080/15374416.2014.891225

Ttofi, M. M., & Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology*, *7*(1), 27–56. https://doi.org/10.1007/s11292-010-9109-1

Veenstra, R., Lindenberg, S., Oldehinkel, A. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2005). Bullying and victimization in elementary schools: A comparison of bullies, victims, bully/victims, and uninvolved preadolescents. *Developmental Psychology*, *41*(4), 672–682. https://doi.org/10.1037/0012-1649.40.6.1159

Vernberg, E. M. (1990). Psychological adjustment and experiences with peers during early adolescence: Reciprocal, incidental, or unidirectional relationships? *Journal of Abnormal Child Psychology*, *18*(2), 187–198. https://doi.org/10.1007/BF00910730

Vernberg, E. M., & Biggs, B. K. (Eds.), 2010 *Preventing and treating bullying and victimization*. New York, NY: Oxford University Press.

Vernberg, E. M., Jacobs, A. K., & Hershberger, S. L. (1999). Peer victimization and attitudes about violence during early adolescence. *Journal of Clinical Child Psychology*, *28*(3), 386–395. https://doi.org/10.1207/S15374424jccp280311

Yeager, D. S., Fong, C. J., Lee, H. Y., & Espelage, D. L. (2015). Declines in efficacy of anti-bullying programs among older adolescents: Theory and a three-level meta-analysis. *Journal of Applied Developmental Psychology*, *37*, 36–51. https://doi.org/10.1016/j.appdev.2014.11.005

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Roles of Gender, Forms, and Locations in Understanding Peer Victimization Experiences: Implications for Prevention and Intervention

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The experience of peer victimization, or being the target of aggression, is common throughout childhood and adolescence and often results in negative developmental outcomes. Further knowledge of peer victimization is needed for effective prevention and intervention to promote positive youth development. The current study extends the victimization literature by (a) examining victimization rates at locations both within and outside of the school context, (b) identifying the forms of victimization most prevalent in these locations, and (c) determining whether the forms of victimization vary by gender across different locations. In a sample of 278 third through fifth graders, gender differences were examined across physical, relational, and cyber victimization. Findings indicate that physical and relational victimization are likely to occur in similar locations, with the playground and home noted as frequent locations. However, cyber victimization was reported as occurring at home and on the bus. Several notable gender differences emerged when examining these locations by the form of victimization. Findings suggest that encouraging adults both within and outside of the school environment to collaborate in their efforts to prevent and intervene with peer victimization may be particularly useful. Specific ways to improve adult training efforts are discussed.

KEY WORDS: *elementary school; gender; locations; relational/physical/cyber victimization*

The experience of peer victimization is common throughout childhood and adolescence, with over 60 percent of children reporting at least some exposure during elementary school (Cooley, Fite, & Pederson, 2017; Ladd, Ettekal, & Kochenderfer-Ladd, 2017). *Peer victimization* is defined as a relationship-based pattern of behavior that involves the use of aggression to oppress, humiliate, or dominate others (Vernberg & Biggs, 2010). Experiencing peer victimization often leads to a number of negative consequences, including internalizing symptomatology (Bonanno & Hymel, 2013; Kowalski & Limber, 2013; Reijntjes, Kamphuis, Prinzie, & Telch, 2010; Sugimura & Rudolph, 2012), poor academic outcomes (Bayar & Uçanok, 2012; Fite, Cooley, Williford, Frazer, & DiPierro, 2014; Ladd et al., 2017; Nakamato & Schwartz, 2010), and externalizing problem behaviors such as aggression (Cooley et al., 2017; Reijntjes et al., 2011). Of concern, these effects for some victims persist into adulthood with recent evidence finding increased levels of psychological distress in adults who were victimized during childhood (McDougall & Vaillancourt, 2015; Takizawa, Maughan, & Arseneault, 2014). As such, it is important to identify effective prevention and early intervention strategies targeting peer victimization. Although a number of prevention and intervention approaches have been developed and tested in recent decades, the impacts of these strategies have been modest at best (Smith, 2011), especially in the United States where intervention studies often report less robust effects when compared with studies from other countries (Bradshaw, 2015). Accordingly, studies are needed to reveal nuances in peer victimization experiences that may inform more effective prevention and intervention efforts.

Research suggests that girls and boys have different developmental needs and preferences for friendship formation and playmate selection beginning in early childhood that persist throughout childhood and into adolescence (for a review, see Rose & Rudolph, 2006). Thus, their involvement in aggression and victimization has been found to differ (see Card, Stucky, Sawalani, & Little, 2008). This developmental research implies that examining gender as a factor in selecting appropriate prevention and intervention approaches may be important for refining current efforts and improving their impact on peer victimization.

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Notably, some evidence suggests that girls and boys may have different experiences with adult intervention, especially when taking the form of victimization into account. For example, teachers may not identify acts of peer victimization when such acts occur in ways that do not conform to gender role expectations (Yubero & Navarro, 2006). In other words, teachers may be less likely to identify relationally aggressive incidents among boys and physically aggressive incidents among girls. Further research has also found that girls may be more likely to report their victimization experiences to school personnel (for example, Williford, Fite, & Cooley, 2015). Thus, adults may address victimization experiences differently for boys and girls. Consequently, priming adults to look for specific forms of victimization in certain locations may help them to effectively intervene. However, examining locations by the form of victimization has yet to occur. To that end, the goals of the present study were to determine what forms of victimization occur in locations inside and outside the school and to evaluate gender differences in the forms of victimization across locations.

LITERATURE REVIEW

Peer Victimization

Multiple forms of peer victimization exist during childhood. As noted earlier, more children than not experience at least some victimization (Cooley et al., 2017; Ladd et al., 2017), with relational, physical, and cyber forms evident among elementary school youths (DePaolis & Williford, 2015; Turner, Finkelhor, Hamby, Shattuck, & Ormrod, 2011). *Physical victimization* is characterized by being the target of physical threats or attacks, such as hitting, kicking, or punching (Little, Henrich, Jones, & Hawley, 2003). *Relational victimization* targets one's social status and social relationships through exclusion from peer group activities; gossip or false rumors; and being subjected to behaviors, including eye rolls, directed laughter, or mimicking (Crick & Grotpeter, 1995). The increasing development and availability of technology has provided additional mechanisms to inflict a new form of victimization. *Cyber victimization* is generally defined as experiencing unwanted and negative acts intended to harm or create discomfort through interactive communication technologies (ICTs), such as social media sites, text messaging, and online games (Smith, 2012; Tokunaga, 2010). Notably, evidence suggests that an increasing number of children and adolescents report owning or having access to smartphones and tablets (Common Sense Media, 2013; Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013). These mobile ICTs allow youths the freedom to stay continuously connected from any location, making it difficult for them to escape the harassment. These devices also allow for content to be posted anonymously and reach a large audience quickly. As a result of these unique characteristics, many cyber victims report feeling sad, hopeless, and powerless because they cannot stop the harassment (Kowalski & Limber, 2013; Raskauskas & Stoltz, 2007).

Debate on gender differences across these forms of victimization persists. For example, studies have consistently found that boys are more likely to engage in physical forms of aggression (Card et al., 2008; Nansel et al., 2001) and, consequently, are more likely to be the victims of physical aggression. Although earlier work found that girls are more likely to aggress through relational or indirect forms (Crick & Grotpeter, 1995), more recent meta-analytic work found gender differences in indirect aggression to be negligible (Card et al., 2008). Some evidence suggests that boys and girls experience cyber aggression as both perpetrators and victims (Hinduja & Patchin, 2008; Werner, Bumpus, & Rock, 2010; Williams & Guerra, 2007), yet other evidence indicates that boys are more likely to be involved than girls (Fanti, Demetriou, & Hawa, 2012; Sourander et al., 2010). Understanding gender differences across these forms is important for identifying effective prevention and intervention strategies.

Locations of Victimization

Research regarding the locations in which victimization occurs, particularly for cyber victimization, remains limited. Although the literature is sparse, evidence suggests that victimization may occur in different locations in elementary, middle, and high school settings (Vaillancourt et al., 2010). Regardless of the age group, however, it appears that peer victimization is most likely to occur in locations in which supervision is limited, where fewer rules and constraints are imposed, and where the ratio of students to adults is high (Craig, Pepler, & Atlas, 2000; Low, Frey, & Brockman, 2010; Raskauskas, 2005). Specific to elementary school–age youths, the playground is consistently rated as a location where victimization often occurs at school (Fite et al., 2013; Vaillancourt et al., 2010). However, very few studies have examined locations of peer victimization outside

the school context. This is a notable omission considering data from a nationally representative sample that indicate approximately 27 percent of youths report only experiencing victimization outside of school (Turner et al., 2011). In one noteworthy exception, however, a study found that the home and neighborhood were common locations for victimization, with the playground being the only location more common among elementary school students (Fite et al., 2013). In addition, this study found that boys were more likely to experience victimization at a sporting event and girls were more likely to experience peer victimization at home. Thus, there is evidence to suggest that victimization occurs both inside and outside of school and may vary by form; yet, to our knowledge, no study to date has investigated locations where peer victimization occurs across relational, physical, and cyber forms or examined whether gender differences exist across these different locations by form.

CURRENT STUDY

The current study extends peer victimization literature in three ways: by (a) examining victimization rates at locations both within and outside the school context, (b) identifying the forms of victimization most prevalent in these locations, and (c) determining whether the forms of victimization vary by gender across different locations. Understanding gender differences in the context of locations within and outside the school environment addresses notable gaps in the literature and may have important implications for prevention and intervention efforts. Based on prior research, it was expected that (a) boys would experience higher levels of physical victimization than girls and (b) boys would report greater physical victimization at school-related events, whereas girls would report higher levels of exposure to relational and cyber forms of victimization at home or other locations outside the school.

METHOD

Participants

Participants included 278 third (35.6 percent), fourth (28.4 percent), and fifth (36 percent) graders from a small school district in a rural midwestern community in the United States, with all elementary school–age children from the district attending one elementary school. All full-time students not receiving special education services ($n = 387$) were recruited for participation in the study during parent–teacher conferences, which occurred in November 2013. Consent forms were also sent home to the remaining caregivers who did not attend these events. Overall, 77 percent ($n = 298$) of families completed the consent form, and permission was obtained for 72 percent ($n = 280$) of the eligible students to participate in the study. Data were missing for one student who moved prior to data collection and for another student who provided assent but did not complete the measure of peer victimization. The final sample for the current study consisted of 134 boys and 144 girls whose ages ranged from eight to 12 years ($M = 9.33$, $SD = .99$). School records indicated that most students were white, with fewer than 10 percent of the student body identifying as an ethnic or racial minority. Although socioeconomic data were not available for individual participants, 45 percent of students at the school were eligible for free or reduced-price lunch.

Measures

Peer Victimization. Child self-reports of peer victimization were assessed using a modified version of the Victimization of Self (VS) scale from the Peer Experiences Questionnaire (Vernberg, Jacobs, & Hershberger, 1999), which had previously been adapted to include language appropriate for children reading at or below a third-grade level (Dill, Vernberg, Fonagy, Twemlow, & Gamm, 2004) and to include items reflecting youths' experiences of cyber victimization (personal communication with E. Vernberg, professor, University of Kansas, Lawrence, August 1, 2014). The modified VS scale consists of four items that measure physical victimization (for example, "A kid hit, kicked, or pushed me in a mean way"), five items that measure relational victimization (for example, "A kid told lies about me so other kids wouldn't like me"), and three items that assess cyber victimization (for example, "A kid used e-mail, instant messaging, or a chat room to turn other kids against me"). Children were asked to report how often they had experienced each of these incidents since the beginning of the school year on a five-point Likert scale ranging from 1 = never to 5 = several times a week. In the current study, a dichotomous variable representing whether participants endorsed any of the aforementioned items for each form of peer victimization was created and used for location analyses. The modified VS scale has previously demonstrated

good psychometric properties in samples of elementary school–age children (Dill et al., 2004; Williford et al., 2015).

Location of Peer Victimization. Following completion of each VS subscale, participants were asked to report where these acts of victimization had occurred. Participants were given a list of six locations within with the school context (lunchroom, hallway, bathroom, classroom, playground, on the bus) and eight locations outside of the typical school context (program or club, sporting activity, babysitter's house, at home, in my neighborhood, at a party, at another fun activity, at a friend's house) that were developed for the current study, and were asked to indicate whether they had experienced that form of victimization in each of the locations.

Procedure

All study procedures were approved by the research team's institutional review board and the school district's administrators prior to data collection, which occurred approximately 10 weeks into the fall semester in November 2013. Surveys were collected using group administration in the participants' homeroom classes. After obtaining verbal assent from participants (100 percent agreed), a trained research assistant then read standardized instructions and all survey items aloud while other research assistants answered questions and assisted children who had difficulty understanding particular items. To facilitate accurate responding, no teachers or nonparticipating students were present in the classroom. All classrooms, regardless of student participation, received a $50 donation for school supplies following the data collection.

Data Analysis

All analyses were conducted using IBM SPSS 24 statistical software. No missing data were found for the items used in the present study as 100 percent of students agreed to participate and completed all items relevant to the current study during administration. Descriptive statistics, including percentage of youths who reported experiencing the various forms of victimization, were first evaluated to describe victimization within the current sample. Gender differences in the forms of victimization were evaluated using *t* tests, with Cohen's *d* effect sizes reported. An effect size of .2 indicates a small effect, .5 indicates a medium effect, and .8 indicates a large effect (Cohen, 1988). In addition, the percentages of youths experiencing each form of victimization across locations were described. Cross-tabulations were then conducted to determine if gender differences were evident for the forms of victimization in the various locations. Pearson chi-square values were reported when cells in analyses included five or more cases, and Fisher's exact test *p* values were reported when fewer than five cases were included within cells. Phi coefficient effect sizes were reported, with an effect size of .1 considered a small effect, .3 a medium effect, and .5 a large effect (Rovai, Baker, & Ponton, 2013).

RESULTS

Descriptive Statistics

Descriptive analyses found that 46.4 percent of youths reported experiencing physical victimization, 55.8 percent relational victimization, and 12.9 percent cyber victimization. Gender differences in mean levels of victimization were examined using *t*-test analyses. A small effect for boys ($M = 1.52$, $SD = 0.87$) to report higher mean levels of physical victimization than girls ($M = 1.32$, $SD = 0.60$) was found, $t = 2.167$, $p = .03$ $d = .27$. However, no gender differences in mean levels of relational (boys: $M = 1.51$, $SD = 0.91$; girls: $M = 1.50$, $SD = 0.84$) or cyber (boys: $M = 1.13$, $SD = 0.47$; girls: $M = 1.09$, $SD = 0.34$) victimization were evident ($ps > .39$, $ds < .10$).

Within the school setting, the playground was the location in which all forms of victimization were most likely to take place (see Table 1). However, fewer than 12 percent of victimized youths reported that cyber victimization took place on the playground. Other locations within the school were not as common for any form of victimization, with locations endorsed by fewer than 15 percent of youths for any type of victimization. Nonetheless, the classroom was the next common location for all three forms of victimization at school. The bus was another common location for all forms of victimization to take place, with at least 18 percent of students reporting this. Outside the school context, home was the location most commonly endorsed for all three forms of victimization. In particular, more than 50 percent of youths who reported experiencing cyber victimization said that it took place at home, whereas 31 percent reported physical victimization and 25.2 percent reported relational victimization at home. The neighborhood and at a friend's house were also common places outside the school context for all

forms of victimization, and at a fun activity was a common place for cyber victimization. Finally, a program or a club was a common location for victimization.

Gender Differences in Form of Victimization at Various Locations

Chi-square tests were used to examine gender differences in the forms of victimization experienced across the locations assessed (see Table 2). Boys and girls reported similar rates of victimization across locations (minimal to small effect sizes), with five exceptions. Boys appeared to be at more risk for physical victimization at a sporting activity and in the neighborhood than girls, and this was a small effect size. The only gender difference with regard to relational victimization was a marginally statistically significant trend for boys to be more likely to experience relational victimization in the neighborhood than girls, with the effect size of this association being small. Notably, girls were more likely than boys to report cyber victimization on the bus, and boys were more likely than girls to report cyber victimization at home, both medium effect sizes.

Table 1: Rates of Forms of Victimization in Various Locations

Location	Physical *n* = 129 %	Relational *n* = 155 %	Cyber *n* = 36 %
Lunchroom	4.7	9.0	2.8
Hallway	4.7	5.8	2.8
Bathroom	6.2	3.2	2.8
Classroom	9.3	12.3	5.6
Playground	**56.6**	**61.9**	11.1
On the bus	**18.6**	**21.9**	**25.0**
Program or club	**18.6**	11.6	11.1
Sporting activity	7.0	9.0	8.3
Babysitter's house	7.8	3.9	2.8
Home	**31.0**	**25.2**	**52.8**
Neighborhood	**20.9**	**21.3**	**16.7**
At a party	6.2	8.4	8.3
Fun activity	6.2	5.2	**16.7**
Friend's house	**17.1**	**16.1**	**19.4**

Note: Values greater than 15 percent are in boldface.

DISCUSSION

The current study advances the peer victimization literature by examining the locations in which various forms of victimization occur among elementary school–age youths, with a particular focus on gender differences. Several significant findings emerged. First, the bus, home, and neighborhood were common locations endorsed for all forms of victimization, suggesting that locations outside the school are key for understanding victimization risk. Second, boys reported greater physical victimization at a sporting activity and in the neighborhood than girls, indicating important gender differences. Next, although less common than traditional forms, both boys and girls in the present study reported cyber victimization; however, statistically and practically significant gender differences were found for several locations. Last, findings also suggest that victimization may

Table 2: Gender Differences in Forms of Victimization in Various Locations

	Physical				Relational				Cyber			
Location	Boys *n* = 70	Girls *n* = 59	*Phi*	*p*	Boys *n* = 73	Girls *n* = 82	*Phi*	*p*	Boys *n* = 21	Girls *n* = 15	*Phi*	*p*
Lunchroom	4	2	.06	.69	8	6	.06	.43	1	0	.14	1.0
Hallway	4	2	.06	.69	5	4	.04	.74	0	1	.20	.42
Bathroom	6	2	.11	.29	2	3	.03	1.0	0	1	.20	.42
Classroom	4	8	.14	.14	9	10	.00	.98	0	2	.29	.17
Playground	41	32	.04	.62	44	52	.03	.69	1	3	.24	.29
On the bus	11	13	.08	.36	12	22	.13	.12	2	7	.42	.02
Program or club	11	13	.08	.36	9	9	.02	.79	2	2	.06	1.0
Sporting activity	8	1	.19	.04	8	6	.06	.43	1	2	.15	.56
Babysitter's house	7	3	.09	.34	3	3	.01	1.0	0	1	.20	.42
Home	21	19	.02	.79	20	19	.05	.55	15	4	.44	.02
Neighborhood	20	7	.21	.02	20	13	.14	.08	2	4	.23	.21
At a party	6	2	.11	.29	6	7	.00	.94	2	1	.05	1.0
Fun activity	4	4	.02	1.0	5	3	.07	.48	2	4	.23	.21
Friend's house	12	10	.00	1.0	14	11	.08	.33	4	3	.01	1.0

Note: Number of children who endorsed "yes"; *p* values reported are for Pearson chi-square values of analyses in which cells include more than five cases, and Fisher's exact test for analyses in which cells include fewer than five cases. Significant results are in boldface.

commonly take place in locations, such as a friend's house or fun outing, where children are presumed to be engaging in activities with friends. These findings extend prior literature in several meaningful ways and have notable implications for prevention and intervention.

Findings from the present study suggest that the playground, home, neighborhood, and bus are the most common locations for any form of victimization both inside and outside the school context. Although largely consistent with prior evidence (that is, Fite et al., 2013; Turner et al., 2011; Vaillancourt et al., 2010), notable variability across the forms of victimization exists among this sample of youths. For traditional forms of victimization, results indicate that physical and relational victimization occur at similar rates in locations both inside and outside the school context, with the playground being the most common location. The bus, home, neighborhood, and a friend's house are other common locations outside the school context for experiencing these forms of victimization. Of note, prior evidence suggests that acts of physical victimization may be more likely identified by school personnel, whereas school staff may be less aware of relational victimization (Craig, Henderson, & Murphy, 2000). Thus, these findings suggest that school staff must look for both physical and relational incidents in these locations. Furthermore, bus drivers may be an important, yet underused resource in a school's response to peer victimization. In fact, deLara (2008) found that bus drivers often reported acts of bullying to school personnel, but found them often uninterested, which led some drivers to discontinue reporting incidents to the school. Thus, expanding outreach to adults on the periphery of the school, including bus drivers and parents and guardians, may be an important way to improve prevention and intervention efforts.

When examining gender differences across traditional forms of victimization, results revealed several notable differences. Boys in this sample were more likely to report both physical and relational victimization in their neighborhood and at a sporting activity when compared with girls, although the gender differences in relational victimization were only marginally statistically significant. A small effect for boys to be more likely than girls to report physical victimization at a sporting activity was also found. Although no differences were found for girls when examining locations for these traditional forms, findings suggest that the form of victimization may matter for boys. Prior evidence has found that boys report experiencing more overall victimization than girls, especially greater physical victimization (Card et al., 2008; Nansel et al., 2001). The present findings suggest that a sporting activity and the neighborhood may be important locations where physical victimization may occur. Again, these findings indicate that adults outside the school context, such as coaches, may play an important role in prevention and intervention efforts. Limited research has investigated the role of coaches in preventing peer victimization. However, one recent study found that recreation staff often received little training on addressing bullying and peer victimization within the context of sports and other recreation activities (Shannon, 2013). Thus, the present findings again suggest that further training of adults outside the school context would be a worthwhile strategy to address peer victimization.

Although participants reported higher rates of relational and physical victimization, approximately 13 percent reported experiencing cyber victimization, suggesting the need for adults to also target this form of victimization. It is important to note that a significant portion of the present study's sample was considered economically disadvantaged based on eligibility for free or reduced-price lunch. It is possible that access to technology might be more limited among this sample; thus, in more economically diverse samples, involvement in cyber victimization might be higher as seen in a prior study in which about 20 percent of elementary school students reported exposure to cyber victimization (DePaolis & Williford, 2015).

The current findings also suggest that cyber victimization occurs most often at home. The bus, neighborhood, another fun activity, and a friend's house are also locations where cyber victimization occurs. These results are consistent with evidence that suggests cyber victimization often occurs outside of school (Cassidy, Faucher, & Jackson, 2013), yet several notable gender differences emerged when examining these locations. Boys are more likely than girls to report cyber victimization at home and girls are more likely than boys to report cyber victimization on the bus, both medium effects suggesting important practical significance. It is possible that girls may be more likely to use smartphones, such as iPhones or Androids, to perpetrate cyber victimization,

whereas boys' victimization may be more likely to occur through a computer. A recent study noted that boys reported greater rates of cyber victimization through online games (DePaolis & Williford, 2015), a finding that supports the notion that boys' victimization may occur via computers or gaming devices at home. Another recent study on adolescents found that boys and girls might use technology differently to connect with friends. In this study, girls were more likely to connect with friends via social media and boys were more likely to connect with friends through online games (Pew Research Center, 2015). However, further research is needed to explore gender differences in technology use. Thus, interpretation of the present study's findings must be viewed cautiously. Notably, however, acts of cyber victimization are often not reported to adults (Tokunaga, 2010), making its prevention particularly difficult. One recent study found that only 54 percent of third- through fifth-grade students told an adult about their cyber victimization experiences (DePaolis & Williford, 2015). In a recent meta-synthesis, rates of reporting to parents were even lower, with children reporting cyber victimization less than 10 percent of the time (Tokunaga, 2010). Thus, it would be useful for adults to be mindful of certain locations, such as at home and on the bus, when seeking to prevent incidents of cyber victimization. These findings suggest that it may be important to encourage adults both within and outside of school to collaborate in their prevention and intervention efforts.

Current findings also extend previous location literature by indicating that a friend's house is a common location for all forms of victimization and that cyber victimization commonly takes place on fun outings, such as at the movies or the mall. It may be difficult for caregivers to effectively monitor behaviors within these larger spaces that contain many distractions. Furthermore, it may be that caregivers might not identify acts of victimization taking place within these contexts as easily, as children are presumed to be engaging in these activities with friends. Although having close friends has been found to be an important protective factor against peer victimization (Bollmer, Milich, Harris, & Maras, 2005; Jenkins & Demaray, 2012), close friends may also perpetrate victimization against each other (Crick & Nelson, 2002). These findings support the role of parents and guardians and other adults in effective prevention and intervention efforts.

Limitations

Several limitations exist for the present study. First, implications may be specific to middle childhood, as previous research has indicated that peer victimization may occur in different locations in middle and high school (Vaillancourt et al., 2010). Second, generalizability of the findings is limited given that the sample consisted of predominantly white children from a rural midwestern community in the United States attending one elementary school. Notably, research suggests that schools have unique climates based on a number of factors (Wang & Degol, 2016); thus, the composition of students, a school's overall climate, and its geographic location may influence victimization trends. Additional investigations are needed to examine patterns of peer victimization in diverse samples, in different geographic areas, and across different school contexts. Third, the current data are cross-sectional; it would be informative for future research to examine whether the locations of victimization change according to youths' trajectories of peer victimization over time. Finally, it was not possible to statistically evaluate differences in the forms of victimization at various locations. Although providing percentages, identifying significant differences in likelihood of victimization in a given location would elucidate even more specific implications for prevention and intervention.

Implications for Prevention and Intervention

Despite the limitations, the current study has important implications for prevention and intervention in elementary school settings. Overall, these findings further indicate the need for interventions to target not only the school, but also the larger community context. In fact, the present study findings suggest that other supportive adults, such as bus drivers, coaches, and parents and guardians, can play important roles in preventing and effectively intervening with peer victimization among youths. Consequently, a socioecological approach that involves the school in partnership with families and community providers may be most effective in addressing this problem. This kind of socioecological approach has been found to achieve meaningful reductions in bullying behavior (Espelage & Swearer, 2004; Ostrov & Kamper, 2015). Accordingly, school-based efforts to involve parents, caregivers, and community providers may be most effective in reducing exposure to victimization and promoting the well-being of students. Of note, school social

workers are an important resource for supporting the emotional, mental, and behavioral well-being of students (Franklin, Kim, & Tripodi, 2009). School social workers are also trained to appropriately broker supports for children in need. Thus, they are ideally positioned within the school environment to coordinate efforts with adults within and outside the school to prevent and intervene effectively with peer victimization.

Moreover, findings suggest that boys may need to be further monitored in the neighborhood and during a sporting activity for physical victimization and at home for cyber victimization. In contrast, girls may need additional monitoring for cyber victimization on the bus. These results suggest that prevention and intervention efforts may benefit from considering gender-specific locations for different forms of victimization. Consequently, adults both within the school building and just on its periphery (for example, bus drivers, coaches, and after-school program staff) may benefit from further training that enhances their knowledge of these gender-specific locations. As such, training efforts—that include adults both within and outside the school—would benefit from this nuanced understanding of relevant gender differences. Again, school social workers can play an important role in providing such training. In fact, capacity building, including the professional development of others, is recognized as an important aspect of school social work (Kelly et al., 2010). Accordingly, school social workers may serve as important resources for coordinating, developing, and delivering training to adults to support schools' efforts to prevent and intervene with peer victimization among students.

REFERENCES

Bayar, Y., & Uçanok, Z. (2012). School social climate and generalized peer perception in traditional and cyberbullying status. *Educational Sciences: Theory & Practice, 12*, 2352–2358.

Bollmer, J. M., Milich, R., Harris, M. J., & Maras, M. A. (2005). A friend in need: The role of friendship quality as a protective factor in peer victimization and bullying. *Journal of Interpersonal Violence, 20*, 701–712.

Bonanno, R. A., & Hymel, S. (2013). Cyber bullying and internalizing difficulties: Above and beyond the impact of traditional forms of bullying. *Journal of Youth and Adolescence, 42*, 685–697.

Bradshaw, C. P. (2015). Translating research to practice in bullying prevention. *American Psychologist, 70*, 322–332.

Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development, 79*, 1185–1229.

Cassidy, W., Faucher, C., & Jackson, M. (2013). Cyberbullying among youth: A comprehensive review of current international research and its implications and application to policy and practice. *School Psychology International, 34*, 575–612.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum.

Common Sense Media. (2013). *Zero to eight: Children's media use in America 2013*. San Francisco: Author.

Cooley, J. L., Fite, P. J., & Pederson, C. A. (2017). Bidirectional associations between peer victimization and functions of aggression in middle childhood: Further evaluation across academic years and informants. *Journal of Abnormal Child Psychology*. Advance online publication.

Craig, W. M., Henderson, K., & Murphy, J. G. (2000). Prospective teachers' attitudes about bullying and victimization. *School Psychology International, 21*(1), 5–21.

Craig, W. M., Pepler, D., & Atlas, R. (2000). Observations of bullying in the playground and in the classroom. *School Psychology International, 21*(1), 22–36.

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710–722.

Crick, N. R., & Nelson, D. A. (2002). Relational and physical victimization within friendships: Nobody told me there'd be friends like these. *Journal of Abnormal Child Psychology, 30*, 599–607.

deLara, E. W. (2008). Bullying and aggression on the school bus: School bus drivers' observations and suggestions. *Journal of School Violence, 7*(3), 48–70.

DePaolis, K. J., & Williford, A. (2015). The nature and prevalence of cybervictimization among elementary school children. *Child and Youth Care Forum, 44*, 377–393.

Dill, E. J., Vernberg, E. M., Fonagy, P., Twemlow, S. W., & Gamm, B. K. (2004). Negative affect in victimized children: The roles of social withdrawal, peer rejection, and attitudes toward bullying. *Journal of Abnormal Child Psychology, 32*, 159–173.

Espelage, D. L., & Swearer, S. M. (2004). *Bullying in American schools: A socio-ecological perspective on prevention and intervention*. Mahwah, NJ: Lawrence Erlbaum Associates.

Fanti, K. A., Demetriou, A. G., & Hawa, V. V. (2012). A longitudinal study of cyberbullying: Examining risk and protective factors. *European Journal of Developmental Psychology, 9*, 168–181.

Fite, P. J., Cooley, J. L., Williford, A., Frazer, A., & DiPierro, M. (2014). Parental school involvement as a moderator of the association between peer victimization and academic performance. *Children and Youth Services Review, 44*, 25–32.

Fite, P. J., Williford, A., Cooley, J. L., DePaolis, K., Rubens, S. L., & Vernberg, E. M. (2013). Patterns of victimization locations in elementary school children: Effects of grade level and gender. *Child and Youth Care Forum, 42*, 585–597.

Franklin, C., Kim, J. S., & Tripodi, S. J. (2009). A meta-analysis of published school social work practice studies: 1980–2007. *Research on Social Work Practice, 19*, 667–677.

Hinduja, S., & Patchin, J. W. (2008). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant Behavior, 29*(2), 129–156.

Jenkins, L. N., & Demaray, M. K. (2012). Social support and self-concept in relation to peer victimization and peer aggression. *Journal of School Violence, 11*, 56–74.

Kelly, M. S., Frey, A. J., Alvarez, M., Berzin, S. C., Shaffer, G., & O'Brien, K. (2010). School social work practice and response to intervention. *Children & Schools, 32*, 201–209.

Kowalski, R. M., & Limber, S. P. (2013). Psychological, physical, and academic correlates ofcyberbullying and traditional bullying. *Journal of Adolescent Health, 53*, S13–S20.
Ladd, G. W., Ettekal, I., & Kochenderfer-Ladd, B. (2017). Peer victimization trajectories from kindergarten through high school: Differential pathways for children's school engagement and achievement? *Journal of Educational Psychology*. Advance online publication. doi:10.1037/edu0000177
Little, T., Henrich, C., Jones, S., & Hawley, P. (2003). Disentangling the "whys" from the "whats" of aggressive behaviour. *International Journal of Behavioral Development, 27*(2), 122–133.
Low, S., Frey, K. S., & Brockman, C. J. (2010). Gossip on the playground: Changes associated with universal intervention, retaliation beliefs, and supportive friends. *School Psychology Review, 39*, 536–551.
Madden, M., Lenhart, A., Duggan, M., Cortesi, S., & Gasser, U. (2013). *Teens and technology 2013*. Retrieved from http://www.pewinternet.org/2013/03/13/teens-and-technology-2013/
McDougall, P., & Vaillancourt, T. (2015). Long-term adult outcomes of peer victimization in childhood and adolescence: Pathways to adjustment and maladjustment. *American Psychologist, 70*, 300–310.
Nakamato, J., & Schwartz, D. (2010). Is peer victimization associated with academic achievement? A meta-analytic review. *Social Development, 19*, 221–242.
Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *JAMA, 285*, 2094–2100.
Ostrov, J. M., & Kamper, K. E. (2015). Future directions for research on the development of relational and physical peer victimization. *Journal of Clinical Child & Adolescent Psychology, 44*, 509–519.
Pew Research Center. (2015). *Teens, technology, and friendship*. Retrieved from http://www.pewinternet.org/2015/08/06/teens-technology-and-friendships/
Raskauskas, J. (2005). Bullying on the school bus: A video analysis. *Journal of School Violence, 4*(3), 93–107.
Raskauskas, J., & Stoltz, A. D. (2007). Involvement in traditional and electronic bullying among adolescents. *Developmental Psychology, 43*, 564–575. doi:10.1037/0012-1649.43.3.564
Reijntjes, A., Kamphuis, J. H., Prinzie, P., Boelen, P. A., van der Schoot, M., & Telch, M. J. (2011). Prospective linkages between peer victimization and externalizing problems in children: A meta-analysis. *Aggressive Behavior, 37*, 215–222.
Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010). Peer victimization and internalizing problems in children: A meta-analysis. *Child Abuse & Neglect, 34*, 244–252.
Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin, 132*(1), 98–131.
Rovai, A. P., Baker, J. D., & Ponton, M. K. (2013). *Social science research design and statistics: A practitioner's guide to research methods and SPSS analysis*. Chesapeake, VA: Watertree Press.
Shannon, C. (2013). Bullying in recreation and sports: Exploring risk factors, prevention efforts, and intervention strategies. *Journal of Park and Recreation Administration, 31*, 15–33.
Smith, P. K. (2011). Why interventions to reduce bullying and violence in schools may (or may not) succeed: Comments on this Special Section. *International Journal of Behavioral Development, 35*, 419–423.
Smith, P. K. (2012). Cyberbullying and cyber aggression. In S. R. Jimerson, A. B. Nickerson, M. J. Mayer, & M. J. Furlong (Eds.), *Handbook of school violence and school safety* (pp. 93–103). New York: Routledge.
Sourander, A., Brunstein Klomek, A., Ikonen, M., Lindroos, J., Luntamo, T., Koskelainen, M., et al. (2010). Psychosocial risk factors associated with cyberbullying among adolescents. *Archives of General Psychiatry, 67*, 720–728.
Sugimura, N., & Rudolph, K. D. (2012). Temperamental differences in children's reactions to peer victimization. *Journal of Clinical Child & Adolescent Psychology, 41*, 314–328.
Takizawa, R., Maughan, B., & Arseneault, L. (2014). Adult health outcomes of childhood bullying victimization: Evidence from a five-decade longitudinal British birth cohort. *American Journal of Psychiatry, 171*, 777–784.
Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior, 26*, 277–287.
Turner, H. A., Finkelhor, D., Hamby, S. L., Shattuck, A., & Ormrod, R. K. (2011). Specifying type and location of peer victimization in a national sample of children and youth. *Journal of Youth and Adolescence, 40*, 1052–1067.
Vaillancourt, T., Brittain, H., Bennett, L., Arnocky, S., McDougall, P., Hymel, S., et al. (2010). Places to avoid: Population-based study of reports of unsafe and high bullying areas at school. *Canadian Journal of School Psychology, 25*, 40–54.
Vernberg, E. M., & Biggs, B. (2010). *Preventing and treating bullying and victimization*. New York: Oxford University Press.
Vernberg, E. M., Jacobs, A. K., & Hershberger, S. L. (1999). Peer victimization and attitudes about violence during early adolescence. *Journal of Clinical Child Psychology, 28*, 386–395. doi:10.1207/S15374424jccp280311
Wang, M., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational Psychology Review, 28*, 315–352.
Werner, N. E., Bumpus, M. F., & Rock, D. (2010). Involvement in Internet aggression during early adolescence. *Journal of Youth and Adolescence, 39*, 607–619.
Williams, K. R., & Guerra, N. G. (2007). Prevalence and predictors of Internet bullying. *Journal of Adolescent Health, 41*(6), S14–S21.
Williford, A., Fite, P. J., & Cooley, J. L. (2015). Student–teacher congruence in reported rates of physical and relational victimization among elementary-school-age children: The moderating role of gender and age. *Journal of School Violence, 14*, 177–195.
Yubero, S., & Navarro, R. (2006). Students' and teachers' views of gender-related aspects of aggression. *School Psychology International, 27*, 488–512.

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Understanding the Psychology of Bullying: Moving Toward a Social-Ecological Diathesis–Stress Model

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Understanding the Psychology of Bullying:
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Abstract

With growing recognition that bullying is a complex phenomenon, influenced by multiple factors, research findings to date have been understood within a social-ecological framework. Consistent with this model, we review research on the known correlates and contributing factors in bullying/victimization within the individual, family, peer group, school and community. Recognizing the fluid and dynamic nature of involvement in bullying, we then expand on this model and consider research on the consequences of bullying involvement, as either victim or bully or both, and propose a social-ecological, diathesis–stress model for understanding the bullying dynamic and its impact. Specifically, we frame involvement in bullying as a stressful life event for both children who bully and those who are victimized, serving as a catalyst for a diathesis–stress connection between bullying, victimization, and psychosocial difficulties. Against this backdrop, we suggest that effective bullying prevention and intervention efforts must take into account the complexities of the human experience, addressing both individual characteristics and history of involvement in bullying, risk and protective factors, and the contexts in which bullying occurs, in order to promote healthier social relationships.

Keywords: bullying, victimization, diathesis–stress, social-ecological

Bullying is a unique but complex form of interpersonal aggression, which takes many forms, serves different functions, and is manifested in different patterns of relationships. Bullying is not simply a dyadic problem between a bully and a victim, but is recognized as a group phenomenon, occurring in a social context in which various factors serve to promote, maintain, or suppress such behavior (e.g., Olweus, 2001; Rodkin & Hodges, 2003; Salmivalli, 2001). Accordingly, researchers have argued for the utility of a social-ecological framework in understanding school bullying (Espelage, Rao, & de la Rue, 2013; Espelage & Swearer, 2010; Hong & Garbarino, 2012; Swearer & Espelage, 2004; Swearer et al., 2012). Social ecological theory (Bronfenbrenner, 1979) conceptualizes human development as a bidirectional interaction between individuals and the multiple systems in which they operate—home, neighborhood, school, community, and society. Thus, bullying behavior is not just the result of individual characteristics, but is influenced by multiple relationships with peers, families, teachers, neighbors, and interactions with societal influences (e.g., media, technology). Peer witnesses to bullying are also at risk for negative outcomes (Rivers, Poteat, Noret, & Ashurst, 2009), even after controlling for involvement as bullies or victim (Bonanno & Hymel, 2006).

Complicating our understanding of the consequences of bullying and victimization is recent research documenting the dynamic and fluid nature of children's involvement in bullying across roles and over time. Among youth who are involved in bullying, Ryoo, Wang, and Swearer (2014) found that frequent victims and frequent perpetrators were the least stable subgroups, and that students assumed different roles in bullying across school years. Indeed, youth can observe bullying (i.e., bystanders), experience bullying (i.e., victims), and perpetrate bullying (i.e., bullies) across different situations and/or over time. Across contexts, for instance, a student may be victimized by classmates at school but bully his or her siblings at home. Longitudinal studies by Haltigan and Vaillancourt (2014) and Barker, Arseneault, Brendgen, Fontaine, and Maughan (2008) explored the joint trajectories of

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involvement in bullying and victimization over time among 9- to 12-year-old and 11- to 16-year-olds, respectively, with similar results. Most students (73% and 75%, respectively) showed low levels of bullying and victimization over time (low/uninvolved students), and 11% (both studies) showed trajectories that would identify them as bullies. Another 10% and 3% of students, respectively, would be classified as victims and 2% (Barker et al. only) as bully-victims. However, 6% and 3% of students, respectively, showed a pattern of declining victimization and increased bullying over time (victim to bully subgroup), a trajectory that was more likely than one in which bullies are increasingly victimized. Importantly, these distinct patterns of involvement are associated with different mental health outcomes.

Researchers have long demonstrated that being involved as both a perpetrator and victim seems to compound the impact of bullying, with bully-victims experiencing worse outcomes than either bullies or victims, being at greater risk for anxiety, depression, low self-esteem, self-harm, suicidal ideation and suicidality, physical injury, substance abuse, negative attitudes toward school, absenteeism, poor perceptions of school safety, aggression, and delinquency (e.g., Berkowitz & Benbenishty, 2012; Copeland, Wolke, Angold, & Costello, 2013; Kumpulainen, Räsänen, & Puura, 2001; Srabstein & Piazza, 2008). In their trajectory analysis, Haltigan and Vaillancourt (2014) further demonstrated that, relative to low-involvement students and after controlling for initial psychopathology, stable victims showed elevated levels of depression, attention-deficit hyperactivity disorder, and anxiety, whereas stable bullies reported higher levels of anxiety, and those who shifted from victimization to bullying reported more anxiety, depression, and somatization. Such findings underscore the importance of considering a child's history of involvement in bullying over time, and to move beyond the "dyadic bias" (Espelage & Swearer, 2003) and view bullying as a dynamic experience, influenced by the social ecology. In this article, we summarize some of these complexities in support of a social-ecological perspective on bullying, and then expand our lens to propose the application of a diathesis–stress model that can further our understanding of the dynamics of bullying among children and youth.

Correlates and Contributing Factors in the Bullying/Victimization Dynamic

Individual Influences

In terms of individual factors, bullying perpetration has been associated with callous-unemotional traits (Muñoz, Qualter, & Padgett, 2011; Viding, Simmonds, Petrides, & Frederickson, 2009), psychopathic tendencies (Fanti & Kimonis, 2012), endorsement of masculine traits (Gini & Pozzoli, 2006; Navarro, Larrañaga, & Yubero, 2011), conduct problems (Cook, Williams, Guerra, Kim, & Sadek, 2010), antisocial personality traits (Ferguson, San Miguel, & Hartley, 2009; Vaughn et al., 2010), susceptibility to peer pressure (Monks & Smith, 2006; Pepler, Craig, & O'Connell, 2010), anxiety (e.g., Craig, 1998; Kaltiala-Heino, Rimpelä, Rantanen, & Rimpelä, 2000), and depression (e.g., Ferguson et al., 2009). At least some students who bully their peers have been found to be higher in social intelligence (Björkqvist, Österman, & Kaukiainen, 2000; Sutton, Smith, & Swettenham, 1999a, 1999b) and social status (Vaillancourt, Hymel, & McDougall, 2003), with researchers distinguishing between socially integrated and socially marginalized bullies (e.g., Farmer et al., 2010; see Rodkin, Espelage, & Hanish, 2015).

Being bullied by peers (victimization) has been linked with poor physical health (e.g., Gini & Pozzoli, 2013; Knack, Jensen-Campbell, & Baum, 2011) and poor school adjustment, including being unhappy, feeling unsafe, being truant, performing poorly and, in some cases, dropping out of school (e.g., Card, Isaacs, & Hodges, 2007; Graham, Bellmore, & Juvonen, 2007; Juvonen, Nishina, & Graham, 2000; Konishi, Hymel, Zumbo, & Li, 2010; Slee & Rigby, 1993; Smith, Talamelli, Cowie, Naylor, & Chauhan, 2004). Victimization has also been associated with a host of internalizing and externalizing difficulties (see Card et al., 2007, and Espelage & Holt, 2001,for reviews), including loneliness and withdrawal (e.g., Graham & Juvonen, 1998a; Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä, & Rantanen, 1999), anxiety and social avoidance (Craig, 1998; Espelage & Holt, 2001; Graham, & Juvonen, 1998b), depression (e.g., Craig, 1998; Kaltiala-Heino et al., 1999), and suicidal ideation (Bonanno & Hymel, 2010; Kaltiala-Heino et al., 1999), as well as hyperactivity (Kumpulainen et al., 2001), delinquency, and aggression (e.g., Hanish & Guerra, 2000). Victims are also less well liked (e.g., Spriggs, Iannotti, Nansel, & Haynie, 2007), less accepted, and more rejected by peers (Cullerton-Sen & Crick, 2005; Graham et al., 2007; Veenstra et al., 2007).

Unfortunately, the causal nature of these relationships is unclear. Given the multidirectionality of the social-ecological model and the principles of equifinality and

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multifinality (Cicchetti & Rogosch, 1996), it is likely that context influences the extent to which these individual factors function as antecedents, contributing factors, or consequences of involvement in bullying. An aggressive youth diagnosed with conduct disorder might bully others because of a predisposing trait related to the diagnosis of conduct disorder. Alternatively, youth who are "rewarded" for bullying behaviors (e.g., through enhanced status or popularity, access to goods) may continue bullying, develop further aggressive behaviors, and eventually meet criteria for a diagnosis of conduct disorder. Shy youth might appear more vulnerable, making them appealing targets of victimization. Alternatively, someone who is bullied may develop a shy and withdrawn, perhaps anxious, demeanor as a result of such treatment. Thus, our understanding of the psychology of bullying/victimization is much like the "chicken or egg" conundrum.

Family Influences

A number of family characteristics have been linked to bullying perpetration, including family members' involvement in gangs, poor parental supervision, negative family environment, parental conflict, domestic violence, low parental communication, lack of parent emotional support, authoritarian parenting, inappropriate discipline, and parental abuse (Baldry, 2003; Baldry & Farrington, 1999; Barboza et al., 2009; Bowes et al., 2009; Cook et al., 2010; Espelage, Bosworth, & Simon, 2000; Espelage & Swearer, 2010; Ferguson et al., 2009; Pepler, Jiang, Craig, & Connolly, 2008). Although such findings are consistent with arguments that aggressive modeling and poor parental supervision contribute to bullying, causal direction has not been clearly established and the impact of families after controlling for hereditary influences remains unclear, as genetic factors have been shown to account for 61% of the variation in bullying behavior (Ball et al., 2008). Family influences on victimization have been more elusive, but include links to abuse, neglect, and overprotective parenting (see Duncan, 2011).

Peer Influences

Youth spend much of the day interacting with peers in schools, neighborhoods, communities, and through social media, and bullying behaviors almost always occur within the peer context (Pepler et al., 2010). Bullying and victimization are more likely in classrooms characterized by peer norms that support bullying (e.g., Craig & Pepler, 1997; Salmivalli & Voeten, 2004), and by high peer conflict (Pepler et al., 2010). Affiliation with aggressive peers is also associated with greater bullying perpetration (Espelage, Holt, & Henkel, 2003; Ferguson et al., 2009), as is peer victimization (Barboza et al., 2009), and negative relationships with classmates (Bacchini, Esposito, & Affuso, 2009). Again, however, the correlational nature of these studies makes causal interpretation difficult, and several of these associations may simply reflect *homophily*, the tendency to affiliate with similar peers.

One of the most extensively researched peer influences on school bullying is that of bystanders. Observational studies have shown that, on average, two to four peers are present in the vast majority (85% to 88%) of bullying incidents (O'Connell, Pepler, & Craig, 1999; Pepler et al., 2010). Bystanders, however, often respond in ways that encourage rather than discourage bullying (Doll, Song, & Siemers, 2004; Pellegrini & Long, 2004). For example, Craig and Pepler (1997; and see O'Connell et al., 1999) observed that peer bystanders actively joined in with bullying 21% of the time, only intervened on behalf of victims in 25% of incidents, and were most often observed to passively watch (54%)—a response that may well be interpreted as condoning such behavior. According to peer perceptions (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996), about 20% of students are viewed as encouraging bullying, and another 7% as actively supporting or participating in the bullying. Only 17% of students, mostly girls, are identified by peers as defenders who intervened on behalf of victims. Given these findings, many focus on bystanders as a critical resource in antibullying efforts (e.g., Hazler, 1996), with peer support emphasized as a key component in school-based antibullying efforts (e.g., Salmivalli, Kärnä, & Poskiparta, 2010). Unfortunately, with age, bystanders become increasingly passive in their responses and less likely to advocate for victims (Marsh et al., 2011; Trach, Hymel, Waterhouse, & Neale, 2010). Those who defend victims have greater empathy (at least boys) and greater social self-efficacy (Gini, Albiero, Benelli, & Altoè, 2007, 2008), are usually higher in social status (popularity) and better liked (e.g., Caravita, DiBlasio, & Salmivalli, 2009; Salmivalli et al., 1996), not only by the victims they defend but also by the broader peer group (Sainio, Veenstra, Huitsing, & Salmivalli, 2011). High social status may lend confidence to one's capacity to intervene and reduce concerns about retaliation. Bystanders are also more likely to defend victims

if they feel angry (Rocke Henderson & Hymel, 2011; Sokol, Bussey, & Rapee, 2014), what Vitaglione and Barnett (2003) refer as *empathic anger* in adults.

School Influences

Bullying has been most studied in the school context, and the positive or negative climate of the school impacts the frequency of bullying and victimization (e.g., Gendron, Williams, & Guerra, 2011; Marsh et al., 2012; Richard, Schneider, & Mallet, 2011; Wang, Berry, & Swearer, 2013). Higher levels of bullying and victimization have been linked to inappropriate teacher responses (e.g., Bauman & Del Rio, 2006), poor teacher–student relationships (Bacchini et al., 2009; Doll et al., 2004; Richard et al., 2011), lack of teacher support, and lack of engagement in school activities (Barboza et al., 2009). Students are also less likely to report bullying if they see their school climate as negative (Unnever & Cornell, 2004). The relationship between school climate and bullying/victimization may be bidirectional, however, with poor school climate contributing to bullying and vice versa.

Community/Cultural Influences

Beyond families, peers, and schools, there is the influence of communities and the larger society, with higher levels of bullying linked to negative or unsafe neighborhoods (e.g., Chaux, Molano, & Podlesky, 2009; Espelage et al., 2000), gang affiliation (e.g., White & Mason, 2012), and poverty (Bradshaw, Sawyer, & O'Brennan, 2009). Research has also linked bullying perpetration to exposure to violent TV (Barboza et al., 2009) and video games (Ferguson et al., 2009; Janssen, Boyce, & Pickett, 2012; Olson et al., 2009). Generally, increased bullying and victimization are found in communities in which violence is modeled and/or condoned, although, again, the causal nature of these relationships remains unclear.

Summary

As these findings suggest, bullying and victimization do not occur in isolation. Rather, bullying stems from complex interactions between individuals and the contexts in which they function, both proximal (i.e., family, peers, school climate) and distal (i.e., societal, cultural influences). Accordingly, multiple systems must be targeted in order for bullying prevention and intervention programs to be effective (e.g., O'Donnell, Hawkins, & Abbott, 1995; Rodkin, 2004; Swearer & Espelage, 2004). Although demonstrations of causality remain an important task for future research, these findings begin to set out a road map that guides prevention and intervention efforts, both in schools and communities (see Bradshaw, 2015).

Consequences of Bullying/Victimization

Although it is widely understood that involvement in bullying causes problems for victims (see McDougall & Vaillancourt, 2015), children and youth who bully are also at risk for many of the same problems. Studies addressing issues of causality have found that bullying perpetration often leads to anxiety and depression (Baldry, 2004), social withdrawal and delinquent behavior (Bender & Lösel, 2011), poor academic achievement (Ma, Phelps, Lerner, & Lerner, 2009), and adult diagnosis of antisocial personality disorder (Copeland et al., 2013). Thus, bully perpetrators experience adverse psychosocial consequences, a result that does not garner much empathy, given the public's advocacy for suspension, expulsion, and incarceration for aggressive behavior. To understand how involvement in bullying/victimization can lead to such diverse outcomes, we consider a diathesis–stress model, borrowed from developmental psychopathology, magnifying the social-ecological lens.

Understanding the Relationship Between Psychopathology and Bullying/Victimization

Diathesis–stress models propose that psychopathology occurs as the result of the combination of individual cognitive or biological vulnerabilities (i.e., diatheses) and certain environmental stressors (Cicchetti & Toth, 1998; Lazarus, 1993). Further, these models posit that both negative life events and one's cognitions about those events contribute to the development of internalizing and externalizing psychopathology. In exploring the utility of a diathesis–stress model in understanding school bullying, we consider involvement in bullying, as either a victim or perpetrator, as a negative life event that, when mixed with certain cognitive, biological, and social vulnerabilities (i.e., diatheses), leads to the development of internalizing and externalizing psychopathology and impaired social relationships. Diathesis–stress models have received considerable empirical support (e.g., Garber & Hilsman, 1992; Gibb & Alloy, 2006), and have contributed to our understanding of relational stressors and depressive symptoms (Chango, McElhaney, Allen, Schad, & Marston, 2012), peer exclusion (Gazelle & Ladd, 2003), and compulsive Internet use (van der Aa et al., 2009). We view bullying as a stressful life event that places vulnerable youth at risk for a host of negative outcomes (Ferguson et al., 2009; Kaltiala-Heino et al., 2000), regardless of type of involvement (e.g., bully, bully-victim, victim).

Diathesis–Stress and Internalizing Problems

Stressful life events play a primary role in the development of depression (Garber & Horowitz, 2002; Hammen & Rudolph, 2003), anxiety (Leen-Feldner, Zvolensky, & Feldner, 2006), and posttraumatic stress disorder (Bernstein et al., 2005). For example, major negative life events (e.g., parental loss or divorce, peer problems) are related to the onset and maintenance of depressive symptoms (Hammen, 1991; Hammen & Rudolph, 2003) that, in cyclical fashion, lead to additional negative life events and later depressive symptoms (e.g., Potthoff, Holahan, & Joiner, 1995). Negative life events are also related to the onset and maintenance of anxiety disorders, with anxious individuals seeing the world as a threatening place, and interpreting events through a lens of worry and fear (Beck, Emery, & Greenberg, 1985). Gazelle

and Ladd (2003) suggest that children's feelings of anxiety about social situations, when paired with behavioral inhibition, can serve as a cognitive diathesis, with peer victimization functioning as an added stressor. Schmidt, Polak, and Spooner (2001) found that the experience of stressful life events, such as peer rejection, by individuals with a genetic diathesis can lead to different physiological reactions (e.g., changes in heart rate, cortisol, electroencephalogram [EEG] activity), which are too uncomfortable for the individual to maintain engagement in the social situation. Negative peer experiences, in turn, confirm that the world is a threatening place, leading to more worry about peer interactions, which, in turn, are linked to internalizing and externalizing difficulties (Kearney, 2001).

One rather clear example of the potential applicability of a diathesis–stress model to the outcomes associated with the stress of peer victimization considers the impact of a biological vulnerability. Consistent with a diathesis–stress model, recent research on the biological factors underlying depression has documented the moderating role played by the serotonin transporter gene, 5-HTTLPR, in the relationship between stress and depression (Karg, Burmeister, Shedden, & Sen, 2011). For example, Caspi and colleagues (2003) found that maltreated children who possess a "short-short" allele for the 5-HTTLPR polymorphism were far more likely to be depressed as adults than those with a short-long or long-long allele, who were found to be no more risk for depression than nonmaltreated children. Extending the diathesis–stress model of depression to our understanding of childhood peer victimization, researchers have shown that victimized children with the short-short allele are more likely to be depressed than those with the long-long allele (Benjet, Thompson, & Gotlib, 2010; Iyer, Dougall, & Jensen-Campbell, 2013). Longitudinally, victimized children with the short-short allele for 5HTTLPR have also been found to be at greater risk for emotional problems (Sugden et al., 2010; see Vaillancourt, Hymel, & McDougall, 2013, for a fuller discussion).

Consistent with our arguments for consideration of both a diathesis–stress model and a social-ecological model of peer victimization, recent twin research by Brendgen and colleagues has shown how the impact of genetic predispositions can vary as a function of school context. Specifically, they found that a genetic disposition for aggression placed students at greater risk for peer victimization in classes in which norms for aggressive behavior were negative, but seemed to operate as a protective factor, reducing the likelihood of peer victimization, when students were in classrooms with norms favoring aggression (Brendgen, Girard, Vitaro, Dionne, & Boivin, 2013a). Brendgen et al. (2011) also found that a positive teacher–student relationship mitigated the link between peer victimization and a genetic predisposition for aggression. Thus, the diathesis–stress model, in combination with a social-ecological framework, holds promise in understanding peer victimization, but what about bully perpetration?

Diathesis–Stress and Externalizing Problems

Ferguson and Dyck (2012) argue for the application of a diathesis–stress model to explain the development of aggression, suggesting that the approach has greater explanatory power for understanding aggressive behavior than social–cognitive and social learning theories, and offers an important heuristic for understanding the complexities of aggression. Some research has begun to examine externalizing behavior from a diathesis–stress perspective. For example, parental psychopathology and maltreatment are diatheses for the development of externalizing problems in youth (Walker, Downey, & Bergman, 1989), and disengaged coping mediates the relationship between peer stress and overt aggression among boys (Sontag & Graber, 2010). Increased aggression has also been associated with greater depression, mediated by peer rejection in school (Panak & Garber, 1992). In a study examining the link between peer victimization and child aggression among 506 6-year-old twins, Brendgen et al. (2008) found support for a diathesis–stress model, with peer victimization as a diathesis for the development of aggression in boys, regardless of genetic vulnerability. Finally, Brendgen, Girard, Vitaro, Dionne, and Boivin (2013b) found that a strong genetic predisposition for physical aggression was more likely to be expressed when peer group norms favored aggressive behavior but not when peer norms disfavored such behavior. Thus, a diathesis–stress model takes into account the interaction of individual vulnerabilities, specific life stressors, and aggression. Of interest here is whether the model can be applied to bullying perpetration, a subcategory of aggression.

At least two lines of research demonstrate the potential utility of applying diathesis–stress models to our understanding of peer bullying—one considering a potential biological vulnerability (the hereditable tendency for psychopathy) and the other considering a cognitive vulnerability (the capacity for moral disengagement). With regard to the former, studies have demonstrated links between bullying perpetration among youth and callous-unemotional traits (e.g., Thornton, Frick, Crapanzano, & Terranova, 2013; Viding et al., 2009), indifference to the harm caused to others (Rigby & Slee, 1993), and willingness to manipulate others for one's own gain (Sutton & Keogh, 2001). More recently, Fanti and Kimonis (2012) followed 1,416 adolescents in Greece-Cyprus from Grades 7 through 9 to investigate the links between bullying and the three traits identified as core characteristics of psychopathy in youth—callous-unemotional traits, narcissism, and impulsivity. Impulsivity and narcissism predicted high levels of bullying in early adolescence, regardless of levels of callousness or conduct problems. However, all three psychopathic traits contributed to greater levels of reported bullying, and the combination of callous-unemotional traits and conduct problems predicted the highest levels of bullying, even as levels of bullying generally declined with age. Thus, for a small subsample of bullies, early psychopathic tendencies may serve as a diathesis for bullying

perpetration, a tendency that Cullen (2009) suggests in explaining the 1998 Columbine massacre.

With regard to the latter—cognitive vulnerability—a recent meta-analysis by Gini, Pozzoli, and Hymel (2014) documents the tendency for children and youth who bully others to *morally disengage*, a cognitive mechanism that allows individuals to justify and rationalize cruel behavior in ways that make it seem less harmful (see Bandura, 1999, 2002; Hymel & Bonanno, 2014; Hymel, Schonert-Reichl, Bonanno, Vaillancourt, & Rocke Henderson, 2010). Although the tendency to morally disengage may function as a cognitive vulnerability (diathesis) contributing to the likelihood of bullying, this tendency is also affected by peer experiences with victimization, underscoring the utility of also considering a social-ecological framework. Specifically, in one of the early studies examining bullying involvement and moral disengagement, Hymel, Rocke Henderson, and Bonanno (2005) found that youth who never bullied reported low levels of moral disengagement for bullying, and youth who bullied frequently reported high levels of moral disengagement, but youth who reported that they sometimes bullied others varied in level of moral disengagement as a function of their experiences with victimization. The more often they experienced victimization themselves, the less likely they were to morally disengage regarding bullying. Thus, emerging research suggests that a diathesis–stress model, considered within a social-ecological framework, may serve as a useful heuristic for understanding involvement in bullying and may provide greater explanatory power for research findings on the bully-victim phenomenon.

A Social-Ecological Diathesis–Stress Model of Bullying: Applications and Limitations

According to diathesis–stress models, the development of psychological difficulties occurs through the interaction of an individual's biological and cognitive vulnerabilities and stressful life experiences. Involvement in bullying is conceptualized as a stressful life event, influenced by multiple social stressors. However, the presence of social stressors does not fully explain the development of psychological difficulties like depression, anxiety, and aggression. Rather, stressful life events can be exacerbated by biological vulnerabilities and can activate cognitive vulnerabilities, leading to more significant, negative outcomes. Cognitive diathesis is conceptualized as a distorted lens through which individuals interpret life events (Chango et al., 2012; Hammen & Rudolph, 2003). If negative events are attributed to global, stable, and internal cognitive schemas, and negative beliefs about self, world, and future, individuals are at increased risk for internalizing and externalizing problems. In one study that supports the utility of a social-ecological, diathesis–stress model of peer victimization, Bonanno and Hymel (2010) explored why some victimized youth are more vulnerable to suicidal ideation than others, finding more suicidal ideation among victims who felt more socially hopeless (cognitive diathesis) and who reported less family support (an environmental protective factor).

Beliefs about the self, world, and future are rooted in early experiences, with stable cognitive structures beginning to solidify around the age of 9 (Stark et al., 1996). By adolescence, abstract thinking becomes more advanced, allowing youth to develop more stable concepts about themselves, the world, and the future. Negative self-concept has been shown to be a critical element in predicting involvement in both bullying and victimization (Marsh, Parada, Yeung, & Healey, 2001). Peer victimization can activate negative self-schemas (e.g., "I'm a loser; everyone hates me"), leading to perceptions of the self as unlovable and/or worthless (characterological self-blame; Graham & Juvonen, 1998b), to experiencing the world as hostile, and to the development of a negative outlook on the future, enhancing one's risk for depression (Stark et al., 1996). Alternatively, bullying perpetration might result from activation of a threat schema (e.g., "Everyone is going to bully me"), which can promote negative self–other beliefs (e.g., "I'd better ruin her reputation before she ruins mine"), leading the individual to become aggressive in social relationships in order to maintain power and control. Individuals who bully others might also operate from hostile schemas about self or others (e.g., "I deserve what I can take from others" or "Losers deserve what they get"), leading to negative beliefs about others and a sense of entitlement, supporting the tendency to morally disengage regarding bullying.

In this article, we have argued for the integration of a social-ecological diathesis–stress model to address bullying and victimization, one which recognizes the complex and dynamic nature of bullying involvement across multiple settings (i.e., home, neighborhood, school, and community) and over time. The social-ecology model takes into account the interconnections in a child's world, and the diathesis–stress model allows for an understanding of the complexity of stressors and risk/protective factors that influence both engagement and intervention in bullying. We recognize, however, that the proposed integrated model is primarily applicable in cases in which bullying and victimization contribute to significant psychological and mental health difficulties. For many children and youth, bullying involvement reflects developing capacities for social engagement and explorations of the exercise of power, and for these youth, bullying may be best addressed though educational efforts to enhance the social skills and awareness needed for effective and positive interpersonal relationships (see http://www.prevnet.ca and http://www.casel.org). When bullying and victimization lead to clinical difficulties, however, we believe that application of a social-ecological diathesis–stress perspective holds considerable promise. Future research is needed to test the applicability of this integrated model, and our hope is that this review helps stimulate such research and enhance our efforts to understand and address the complexity of bullying among children and youth.

References

Bacchini, E., Esposito, G., & Affuso, G. (2009). School experience and school bullying. *Journal of Community & Applied Social Psychology*, *19*, 17–32. doi: 10.1002/casp.975

Baldry, A. C. (2003). Bullying in schools and exposure to domestic violence. *Child Abuse & Neglect*, *27*, 713–732. doi: 10.1016/S0145-2134(03)00114-5

Baldry, A. C. (2004). The impact of direct and indirect bullying on the mental and physical health of Italian youngsters. *Aggressive Behavior*, *30*, 343–355. doi: 10.1002/ab.20043

Baldry, A. C., & Farrington, D. P. (1999). Brief report: Types of bullying among Italian school children. *Journal of Adolescence*, *22*, 423–426. doi: 10.1006/jado.1999.0234

Ball, H. A., Arseneault, L., Taylor, A., Maughan, B., Caspi, A., & Moffitt, T. E. (2008). Genetic and environmental influences on victims, bullies and bully-victims in childhood. *Journal of Child Psychology and Psychiatry*, *49*, 104–112. doi: 10.1111/j.1469-7610.2007.01821.x

Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, *3*, 193–209. doi: 10.1207/s15327957pspr0303_3

Bandura, A. (2002). Selective moral disengagement in the exercise of moral agency. *Journal of Moral Education*, *31*, 101–119. doi: 10.1080/0305724022014322

Barboza, G. E., Schiamberg, L. B., Oehmke, J., Korzeniewski, S. J., Post, L. A., & Heraux, C. G. (2009). Individual characteristics and the multiple contexts of adolescent bullying: An ecological perspective. *Journal of Youth and Adolescence*, *38*, 101–121. doi: 10.1007/s10964-008-9271-1

Barker, E. D., Arseneault, L., Brendgen, M., Fontaine, N., & Maughan, B. (2008). Joint development of bullying and victimization in adolescence: Relations to delinquency and self-harm. *Journal of the American Academy of Child & Adolescent Psychiatry*, *47*, 1030–1038.

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

Beck, A. T., Emery, G., & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York, NY: Basic Books.

Bender, D., & Lösel, F. (2011). Bullying at school as a predictor of delinquency, violence and other anti-social behaviour in adulthood. *Criminal Behaviour and Mental Health*, *21*, 99–106. doi: 10.1002/cbm.799

Benjet, C., Thompson, R. J., & Gotlib, I. H. (2010). 5-HTTLPR moderates the effect of relational peer victimization on depressive symptoms in adolescent girls. *Journal of Child Psychology and Psychiatry*, *51*, 173–179. doi: 10.1111/j.1469-7610.2009.02149.x

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

Bernstein, A., Zvolensky, M. J., Feldner, M. T., Lewis, S. F., Fauber, A. L., Leen-Feldner, E. W., & Vujanovic, A. A. (2005). Anxiety sensitivity taxon and trauma: Discriminant associations for posttraumatic stress and panic symptomatology among young adults. *Depression and Anxiety*, *22*, 138–149. doi: 10.1002/da.20091

Björkqvist, K., Österman, K., & Kaukiainen, A. (2000). Social intelligence – Empathy = aggression? *Aggression and Violent Behavior*, *5*, 191–200. doi: 10.1016/S1359-1789(98)00029-9

Bonanno, R., & Hymel, S. (2006, July). *Exposure to school violence: The impact of bullying on witnesses*. Paper presented at the biennial meeting of the International Society for the Study of Behavior Development, Melbourne, Australia.

Bonanno, R., & Hymel, S. (2010). Beyond hurt feelings: Investigating why some victims of bullying are at greater risk for suicidal ideation. *Merrill-Palmer Quarterly*, *56*, 420–440. doi: 10.1353/mpq.0.0051

Bowes, L., Arseneault, L., Maughan, B., Taylor, A., Caspi, A., & Moffitt, T. E. (2009). School, neighborhood, and family factors are associated with children's bullying involvement: A nationally representative longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *48*, 545–553. doi: 10.1097/CHI.0b013e31819cb017

Bradshaw, C. P. (2015). Translating research to practice in bullying prevention. *American Psychologist*, *70*, 322–332. doi: 10.1037/a0039114

Bradshaw, C. P., Sawyer, A. L., & O'Brennan, L. M. (2009). A social disorganization perspective on bullying-related attitudes and behaviors: The influence of school context. *American Journal of Community Psychology*, *43*, 204–220. doi: 10.1007/s10464-009-9240-1

Brendgen, M., Boivin, M., Dionne, G., Barker, E. D., Vitaro, F., Girard, A., … Pérusse, D. (2011). Gene-environment processes linking aggression, peer victimization, and the teacher-child relationship. *Child Development*, *82*, 2021–2036. doi: 10.1111/j.1467-8624.2011.01644.x

Brendgen, M., Boivin, M., Vitaro, F., Girard, A., Dionne, G., & Pérusse, D. (2008). Gene-environment interaction between peer victimization and child aggression. *Development and Psychopathology*, *20*, 455–471. doi: 10.1017/S0954579408000229

Brendgen, M., & Girard, A., Vitaro, F., Dionne, G., & Boivin, M. (2013a). Gene-environment correlation linking aggression and peer victimization: Do classroom behavioral norms matter? *Abnormal Child Psychology*, *43*, 19–21. doi: 10.1007/s10802-013–9807-z

Brendgen, M., Girard, A., Vitaro, F., Dionne, G., & Boivin, M. (2013b). Do peer group norms moderate the expression of genetic risk for aggression? *Journal of Criminal Justice*, *41*, 324–330. doi: 10.1016/j.jcrimjus.2013.06.004

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Caravita, S., DiBlasio, P., & Salmivalli, C. (2009). Unique and interactive effects of empathy and social status on involvement in bullying. *Social Development*, *18*, 140–163. doi: 10.1111/j.1467-9507.2008.00465.x

Card, N. A., Isaacs, J., & Hodges, E. V. E. (2007). Correlates of school victimization: Implications for prevention and intervention. In J. E. Zins, M. J. Elias, & C. A. Maher (eds.), *Bullying, victimization, and peer harassment: A handbook of prevention and intervention* (pp. 339–366). New York, NY: Haworth Press.

Caspi, A., Sugden, K., Moffitt, T. E., Taylor, A., Craig, I. W., Harrington, H., … Poulton, R. (2003). Influence of life stress on depression: Moderation by a polymorphism in the 5-HTT gene. *Science*, *301*, 386–389. doi: 10.1126/science.1083968

Chango, J. M., McElhaney, K. B., Allen, J. P., Schad, M. M., & Marston, E. (2012). Relational stressors and depressive symptoms in late adolescence: Rejection sensitivity as a vulnerability. *Journal of Abnormal Child Psychology*, *40*, 369–379. doi: 10.1007/s10802-011-9570-y

Chaux, E., Molano, A., & Podlesky, P. (2009). Socio-economic, socio-political and socio-emotional variables explaining school bullying: A country-wide multilevel analysis. *Aggressive Behavior*, *35*, 520–529. doi: 10.1002/ab.20320

Cicchetti, D., & Rogosch, F. A. (1996). Equifinality and multifinality in developmental psychopathology. *Development and Psychopathology*, *8*, 597–600. doi: 10.1017/S0954579400007318

Cicchetti, D., & Toth, S. L. (1998). The development of depression in children and adolescents. *American Psychologist*, *53*, 221–241. doi: 10.1037/0003-066X.53.2.221

Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School Psychology Quarterly*, *25*, 65–83. doi: 10.1037/a0020149

Copeland, W. E., Wolke, D., Angold, A., & Costello, E. J. (2013). Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. *JAMA Psychiatry*, *70*, 419–426. doi: 10.1001/jamapsychiatry.2013.504

Craig, W. M. (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences*, *24*, 123–130. doi: 10.1016/S0191-8869(97)00145-1

Craig, W. M., & Pepler, D. J. (1998). Observations of bullying and victimization in the school yard. *Canadian Journal of School Psychology*, *13*, 41–59. doi: 10.1177/082957359801300205

Cullen, D. (2009). *Columbine*. New York, NY: Hachette Book Group.

Cullerton-Sen, C., & Crick, N. R. (2005). Understanding the effects of physical and relational victimization: The utility of multiple perspectives in predicting social-emotional adjustment. *School Psychology Review*, *34*, 147–160.

Doll, B., Song, S., & Siemers, E. (2004). "Classroom ecologies that support or discourage bullying," in D. L. Espelage & S. M. Swearer (eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 161–183). Mahwah, NJ: Erlbaum.

Duncan, R. D. (2011). "Family relationships of bullies and victims," in D. L. Espelage & S. M. Swearer (eds.), *Bullying in North American schools* (2nd ed., pp. 191–204). New York, NY: Routledge.

Espelage, D. L., Bosworth, K., & Simon, T. R. (2000). Examining the social context of bullying behaviors in early adolescence. *Journal of Counseling & Development*, *78*, 326–333. doi: 10.1002/j.1556-6676.2000.tb01914.x

Espelage, D. L., & Holt, M. K. (2001). Bullying and victimization during early adolescence: Peer influences and psychosocial correlates. *Journal of Emotional Abuse*, *2*, 123–142. doi: 10.1300/J135v02n02_08

Espelage, D. L., Holt, M. K., & Henkel, R. R. (2003). Examination of peer-group contextual effects on aggression during early adolescence. *Child Development*, *74*, 205–220. doi: 10.1111/1467-8624.00531

Espelage, D. L., Rao, M. A., & de la Rue, L. (2013). Current research on school-based bullying: A social-ecological perspective. *Journal of Social Distress and the Homeless*, *22*, 21–27. doi: 10.1179/1053078913Z.0000000002

Espelage, D. L., & Swearer, S. M. (2003). Research on bullying and victimization: What have we learned and where do we go from here? *School Psychology Review*, *32*, 365–383.

Espelage, D. L., & Swearer, S. M. (2010). "A social-ecological model for bullying prevention and intervention: Understanding the impact of adults in the social ecology of youngsters," in S. R. Jimerson, S. M. Swearer, & D. L. Espelage (eds.), *Handbook of bullying in schools: An international perspective* (pp. 61–72). New York, NY: Routledge.

Fanti, K. A., & Kimonis, E. R. (2012). Bullying and victimization: The role of conduct problems and psychopathic traits. *Journal of Research on Adolescence*, *22*, 617–631. doi: 10.1111/j.1532-7795.2012.00809.x

Farmer, T. W., Petrin, R., Robertson, D., Fraser, M., Hall, C., Day, S., & Dadisman, K. (2010). Peer relations of bullies, bully-victims, and victims: The two social worlds of bullying in second-grade classrooms. *The Elementary School Journal*, *110*, 364–392. doi: 10.1086/648983

Ferguson, C. J., & Dyck, D. (2012). Paradigm change in aggression research: The time has come to retire the general aggression model. *Aggression and Violent Behavior*, *17*, 220–228. doi: 10.1016/j.avb.2012.02.007

Ferguson, C. J., San Miguel, C., & Hartley, R. D. (2009). A multivariate analysis of youth violence and aggression: The influence of family, peers, depression, and media violence. *The Journal of Pediatrics*, *155*, 904–908. e3. doi: 10.1016/j.jpeds.2009.06.021

Garber, J., & Hilsman, R. (1992). Cognitions, stress, and depression in children and adolescents. *Child and Adolescent Psychiatric Clinics of North America*, *1*, 129–167.

Garber, J., & Horowitz, J. L. (2002). "Depression in children," in I. H. Gotlib & C. L. Hammen (eds.), *Handbook of depression* (pp. 510–540). New York, NY.

Gazelle, H., & Ladd, G. W. (2003). Anxious solitude and peer exclusion: A diathesis–stress model of internalizing trajectories in childhood. *Child Development*, *74*, 257–278. doi: 10.1111/1467-8624.00534

Gendron, B., Williams, K., & Guerra, N. (2011). An analysis of bullying among students within schools: Estimating the effects of individual normative beliefs, self-esteem, and school climate. *Journal of School Violence*, *10*, 150–164. doi: 10.1080/15388220.2010.539166

Gibb, B. E., & Alloy, L. B. (2006). A prospective test of the hopelessness theory of depression in children. *Journal of Clinical Child and Adolescent Psychology*, *35*, 264–274. doi: 10.1207/s15374424jccp3502_10

Gini, G., Albiero, P., Benelli, B., & Altoè, G. (2007). Does empathy predict adolescents' bullying and defending behavior? *Aggressive Behavior*, *33*, 467–476. doi: 10.1002/ab.20204

Gini, G., Albiero, P., Benelli, B., & Altoè, G. (2008). Determinants of adolescents' active defending and passive bystanding behavior in bullying. *Journal of Adolescence*, *31*, 93–105. doi: 10.1016/j.adolescence.2007.05.002

Gini, G., & Pozzoli, T. (2006). The role of masculinity in children's bullying. *Sex Roles*, *54*, 585–588. doi: 10.1007/s11199-006-9015-1

Gini, G., & Pozzoli, T. (2013). Bullied children and psychosomatic problems: A meta-analysis. *Pediatrics*, *132*, 720–729. doi: 10.1542/peds.2013-0614

Gini, G., Pozzoli, T., & Hymel, S. (2014). Moral disengagement among children and youth: A meta-analytic review of links to aggressive behavior. *Aggressive Behavior*, *40*, 56–68. doi: 10.1002/ab.21502

Graham, S., Bellmore, A., & Juvonen, J. (2007). "Peer victimization in middle school: When self- and peer views diverge," in J. E. Zins, M. J. Elias, & C. A. Maher (eds.), *Bullying, victimization, and peer harassment: A handbook of prevention and intervention* (pp. 121–141). New York, NY: Haworth Press.

Graham, S., & Juvonen, J. (1998a). "A social-cognitive perspective on peer aggression and victimization," in R. Vasta (ed.), *Annals of child development* (pp. 23–70). London, UK: Jessica Kingsley.

Graham, S., & Juvonen, J. (1998b). Self-blame and peer victimization in middle school: An attributional analysis. *Developmental Psychology*, *34*, 587–599. doi: 10.1037/0012-1649.34.3.587

Haltigan, J. D., & Vaillancourt, T. (2014). Joint trajectories of bullying and peer victimization across elementary and middle school and associations with symptoms of psychopathology. *Developmental Psychology*, *50*, 2426–2436. doi: 10.1037/a0038030

Hammen, C. (1991). Generation of stress in the course of unipolar depression. *Journal of Abnormal Psychology*, *100*, 555–561. doi: 10.1037/0021-843X.100.4.555

Hammen, C., & Rudolph, K. D. (2003). "Childhood mood disorders," in E. J. Mash & R. A. Barkley (eds.), *Child psychopathology* (2nd ed., pp. 233–278). New York, NY: Guilford Press.

Hanish, L. D., & Guerra, N. G. (2000). Predictors of peer victimization among urban youth. *Social Development*, *9*, 521–543. doi: 10.1111/1467-9507.00141

Hazler, R. J. (1996). Bystanders: An overlooked factor in peer on peer abuse. *Journal for the Professional Counselor*, *11*, 11–21.

Hong, J. S., & Garbarino, J. (2012). Risk and protective factors for homophobic bullying in schools: An application of the social-ecological framework. *Educational Psychology Review*, *24*, 271–285. doi: 10.1007/s10648-012-9194-y

Hymel, S., & Bonanno, R. (2014). Moral disengagement processes in bullying. *Theory into Practice*, *53*, 278–285. doi: 10.1080/00405841.2014.947219

Hymel, S., Rocke Henderson, N., & Bonanno, R. A. (2005). Moral disengagement: A framework for understanding bullying among adolescents. *Journal of Social Sciences*, *8*, 1–11.

Hymel, S., Schonert-Reichl, K. A., Bonanno, R. A., Vaillancourt, T., & Rocke Henderson, N. (2010). "Bullying and morality: Understanding how good kids can behave badly," in S. Jimerson, S. M. Swearer, & D. L. Espelage (eds.), *The handbook of bullying in schools: An international perspective* (pp. 101–118). New York, NY: Routledge.

Iyer, P. A., Dougall, A. L., & Jensen-Campbell, L. A. (2013). Are some adolescents differentially susceptible to the influence of bullying on depression? *Journal of Research in Personality*, *47*, 272–281. doi: 10.1016/j.jrp.2013.02.004

Janssen, I., Boyce, W. F., & Pickett, W. (2012). Screen time and physical violence in 10- to 16-year-old Canadian youth. *International Journal of Public Health*, *57*, 325–331. doi: 10.1007/s00038-010-0221-9

Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology*, *92*, 349–359. doi: 10.1037/0022-0663.92.2.349

Kaltiala-Heino, R., Rimpelä, M., Marttunen, M., Rimpelä, A., & Rantanen, P. (1999). Bullying, depression, and suicidal ideation in Finnish adolescents: School survey. *British Medical Journal*, *319*, 348–351. doi: 10.1136/bmj.319.7206.348

Kaltiala-Heino, R., Rimpelä, M., Rantanen, P., & Rimpelä, A. (2000). Bullying at school—An indicator of adolescents at risk for mental disorders. *Journal of Adolescence*, *23*, 661–674. doi: 10.1006/jado.2000.0351

Karg, K., Burmeister, M., Shedden, K., & Sen, S. (2011). The serotonin transporter promoter variant (5-HTTLPR), stress, and depression meta-analysis revisited: Evidence of genetic moderation. *Archives of General Psychiatry*, *68*, 444–454. doi: 10.1001/archgenpsychiatry.2010.189

Kearney, C. A. (2001). *School refusal behavior in youth: A functional approach to assessment and treatment*. Washington, DC: American Psychological Association. doi: 10.1037/10426-000

Knack, J. M., Jensen-Campbell, L. A., & Baum, A. (2011). Worse than sticks and stones? Bullying is associated with altered HPA axis functioning and poorer health. *Brain and Cognition*, *77*, 183–190. doi: 10.1016/j.bandc.2011.06.011

Konishi, C., Hymel, S., Zumbo, B. D., & Li, Z. (2010). Do school bullying and student-teacher relations matter for academic achievement? A multilevel analysis. *Canadian Journal of School Psychology*, *25*, 19–39.

Kumpulainen, K., Räsänen, E., & Puura, K. (2001). Psychiatric disorders and the use of mental health services among children involved in bullying. *Aggressive Behavior*, *27*, 102–110. doi: 10.1002/ab.3

Lazarus, R. S. (1993). From psychological stress to the emotions: A history of changing outlooks. *Annual Review of Psychology*, *44*, 1–21. doi: 10.1146/annurev.psych.44.1.1

Leen-Feldner, E. W., Zvolensky, M. J., & Feldner, M. T. (2006). "A test of a cognitive diathesis–stress model of panic vulnerability among adolescents," in A. J. Sanfelippo (ed.), *Panic disorders: New research* (pp. 41–64). Hauppauge, NY: Nova Biomedical Books.

Ma, L., Phelps, E., Lerner, J. V., & Lerner, R. M. (2009). Academic competence for adolescents who bully and who are bullied: Findings from the 4-H study of positive youth development. *The Journal of Early Adolescence*, *29*, 862–897. doi: 10.1177/0272431609332667

Marsh, H. W., Lüdtke, O., Nagengast, B., Trautwein, U., Morin, A., Abduljabbar, A., & Köller, O. (2012). Classroom climate and contextual effects: Conceptual and methodological issues in the evaluation of group-level effects. *Educational Psychologist*, *47*, 106–124. doi: 10.1080/00461520.2012.670488

Marsh, H. W., Nagengast, B., Morin, A. J. S., Parada, R. H., Craven, R. G., & Hamilton, L. R. (2011). Construct validity of the multidimensional structure of bullying and victimization: An application of exploratory structural equation modeling. *Journal of Educational Psychology*, *103*, 701–732. doi: 10.1037/a0024122

Marsh, H. W., Parada, R. H., Yeung, A., & Healey, J. (2001). Aggressive school troublemakers and victims: A longitudinal model examining the pivotal role of self-concept. *Journal of Educational Psychology*, *93*, 411–419. doi: 10.1037/0022-0663.93.2.411

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

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

Muñoz, L. C., Qualter, P., & Padgett, G. (2011). Empathy and bullying: Exploring the influence of callous-unemotional traits. *Child Psychiatry and Human Development*, *42*, 183–196. doi: 10.1007/s10578-010-0206-1

Navarro, R., Larrañaga, E., & Yubero, S. (2011). Bullying-victimization problems and aggressive tendencies in Spanish secondary school students: The role of gender stereotypical traits. *Social Psychology of Education*, *14*, 457–473. doi: 10.1007/s11218-011-9163-1

O'Connell, P., Pepler, D., & Craig, W. (1999). Peer involvement in bullying: Insights and challenges for intervention. *Journal of Adolescence*, *22*, 437–452. doi: 10.1006/jado.1999.0238

O'Donnell, J., Hawkins, J. D., & Abbott, R. D. (1995). Predicting serious delinquency and substance use among aggressive boys. *Journal of Consulting and Clinical Psychology*, *63*, 529–537. doi: 10.1037/0022-006X.63.4.529

Olson, C. K., Kutner, L. A., Baer, L., Beresin, E. V., Warner, D. E., & Nicholi, A. M., Jr. (2009). M-rated video games and aggressive or problem behavior among young adolescents. *Applied Developmental Science*, *13*, 188–198. doi: 10.1080/10888690903288748

Olweus, D. (2001). "Peer harassment: A critical analysis and some important questions," in J. Juvonen & S. Graham (eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 3–20). New York, NY: Guilford Press.

Panak, W. F., & Garber, J. (1992). Role of aggression, rejection, and attributions in the prediction of depression in children. *Development and Psychopathology*, *4*, 145–165. doi: 10.1017/S0954579400005617

Pellegrini, A. D., & Long, J. D. (2004). "Part of the solution and part of the problem: The role of peers in bullying, dominance, and victimization during the transition from primary school through secondary school," in D. L. Espelage & S. M. Swearer (eds.), *Bullying in American schools* (pp. 107–117). Mahwah, NJ: Erlbaum.

Pepler, D., Craig, W., & O'Connell, P. (2010). "Peer processes in bullying: Informing prevention and intervention strategies," in S. R. Jimerson, S. M. Swearer, & D. L. Espelage (eds.), *Handbook of bullying in schools: An international perspective* (pp. 469–479). New York, NY: Routledge.

Pepler, D., Jiang, D., Craig, W., & Connolly, J. (2008). Developmental trajectories of bullying and associated factors. *Child Development*, *79*, 325–338. doi: 10.1111/j.1467-8624.2007.01128.x

Potthoff, J. G., Holahan, C. J., & Joiner, T. E., Jr. (1995). Reassurance seeking, stress generation, and depressive symptoms: An integrative model. *Journal of Personality and Social Psychology*, *68*, 664–670. doi: 10.1037/0022-3514.68.4.664

Richard, J. F., Schneider, B. H., & Mallet, P. (2011). Revisiting the whole school approach to bullying: Really looking at the whole school. *School Psychology International*, *33*, 263–284. doi: 10.1177/0143034311415906

Rigby, K., & Slee, P. T. (1993). Dimensions of interpersonal relation among Australian children and implications for psychological well-being. *The Journal of Social Psychology*, *133*, 33–42. doi: 10.1080/00224545.1993.9712116

Rivers, I., Poteat, V. P., Noret, N., & Ashurst, N. (2009). Observing bullying at school: The mental health implications of witness status. *School Psychology Quarterly*, *24*, 211–223. doi: 10.1037/a0018164

Rocke Henderson, N., & Hymel, S. (2011). *Peer responses to school bullying: The role of emotions and friendships in early adolescents bystander problem-solving*. Paper presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.

Rodkin, P. C. (2004). "Peer ecologies of aggression and bullying," in D. L. Espelage & S. M. Swearer (eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 87–106). Mahwah, NJ: Erlbaum.

Rodkin, P. C., Espelage, D. L., & Hanish, L. D. (2015). A relational framework for understanding bullying: Developmental antecedents and outcomes. *American Psychologist*, *70*, 311–321. doi: 10.1037/a0038658

Rodkin, P. C., & Hodges, E. V. E. (2003). Bullies and victims in the peer ecology: Four questions for school service providers and social developmental research. *School Psychology Review*, *32*, 384–400.

Ryoo, J. H., Wang, C., & Swearer, S. M. (2014). Examination of the change in latent statuses in bullying behaviors across time. *School Psychology Quarterly*. Advance online publication. doi: 10.1037/spq0000082

Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2011). Victims and their defenders: A dyadic approach. *International Journal of Behavioral Development*, *35*, 144–151. doi: 10.1177/0165025410378068

Salmivalli, C. (2001). "Group view on victimization: Empirical findings and their implications," in J. Juvonen & S. Graham (eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 398–419). New York, NY: Guilford Press.

Salmivalli, C., Kärnä, A., & Poskiparta, E. (2010). "From peer putdowns to peer support: A theoretical model and how it translated into a national anti-bullying program," in S. Jimerson, S. Swearer, & D. Espelage (eds.), *Handbook of bullying in schools: An international perspective* (pp. 441–454). New York, NY: Routledge.

Salmivalli, C., Lagerspetz, K., Bjorkqvist, K., Osterman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior*, *22*, 1–15. doi: 10.1002/(SICI)1098-2337(1996)22:1<1::AID-AB1>3.0.CO;2-T

Salmivalli, C., & Voeten, M. (2004). Connections between attitudes, group norms, and behaviour in bullying situations. *International Journal of Behavioral Development*, *28*, 246–258. doi: 10.1080/01650250344000488

Schmidt, L. A., Polak, C. P., & Spooner, A. L. (2001). "Biological and environmental contributions to childhood shyness: A diathesis–stress model," in W. Crozier & L. E. Alden (eds.), *International handbook of social anxiety: Concepts, research and interventions relating to the self and shyness* (pp. 29–51). New York, NY: Wiley.

Slee, P. T., & Rigby, K. (1993). Australian school children's self appraisal of interpersonal relations: The bullying experience. *Child Psychiatry and Human Development*, *23*, 273–282. doi: 10.1007/BF00707680

Smith, P. K., Talamelli, L., Cowie, H., Naylor, P., & Chauhan, P. (2004). Profiles of non-victims, escaped victims, continuing victims and new victims of school bullying. *British Journal of Educational Psychology*, *74*, 565–581. doi: 10.1348/0007099042376427

Sokol, N., Bussey, K., & Rapee, R. (2014). *The effect of victims' responses to overt bullying on peer bystander reactions*. Manuscript submitted for publication.

Sontag, L. M., & Graber, J. A. (2010). Coping with perceived peer stress: Gender-specific and common pathways to symptoms of psychopathology. *Developmental Psychology*, *46*, 1605–1620. doi: 10.1037/a0020617

Spriggs, A. L., Iannotti, R. J., Nansel, T. R., & Haynie, D. L. (2007). Adolescent bullying involvement and perceived family, peer and school relations: Commonalities and differences across race/ethnicity. *Journal of Adolescent Health*, *41*, 283–293. doi: 10.1016/j.jadohealth.2007.04.009

Srabstein, J., & Piazza, T. (2008). Public health, safety and educational risks associated with bullying behaviors in American adolescents. *International Journal of Adolescent Medicine and Health*, *20*, 223–233. doi: 10.1515/IJAMH.2008.20.2.223

Stark, K. D., Napolitano, S., Swearer, S., Schmidt, K., Jaramillo, D., & Hoyle, J. (1996). Issues in the treatment of depressed children. *Applied & Preventive Psychology*, *5*, 59–83. doi: 10.1016/S0962-1849(96)80001-1

Sugden, K., Arseneault, L., Harrington, H., Moffitt, T. E., Williams, B., & Caspi, A. (2010). Serotonin transporter gene moderates the development of emotional problems among children following bullying victimization. *Journal of the Academy of Child and Adolescent Psychiatry*, *49*, 830–840. doi: 10.1016/j.jaac.2010.01.024

Sutton, J., & Keogh, E. (2001). Components of Machiavellian beliefs in children Relationships with personality. *Personality and Individual Differences*, *30*, 137–148. doi: 10.1016/S0191-8869(00)00017-9

Sutton, J., Smith, P. K., & Swettenham, J. (1999a). Bullying and "theory of mind": A critique of the social skills deficit view of anti-social behavior. *Social Development*, *8*, 117–127. doi: 10.1111/1467-9507.00083

Sutton, J., Smith, P. K., & Swettenham, J. (1999b). Social cognition and bullying: Social inadequacy or skilled manipulation? *British Journal of Developmental Psychology*, *17*, 435–450. doi: 10.1348/026151099165384

Swearer, S. M., & Espelage, D. L. (2004). "A social-ecological framework of bullying among youth," in D. L. Espelage & S. M. Swearer (eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 1–12). Mahwah, NJ: Erlbaum.

Swearer, S. M., Espelage, D. L., Koenig, B., Berry, B., Collins, A., & Lembeck, P. (2012). "A social-ecological model of bullying prevention and intervention in early adolescence," in S. R. Jimerson, A. B. Nickerson, M. J. Mayer, & M. J. Furlong (eds.), *Handbook of school violence and school safety* (pp. 333–355). New York, NY: Routledge.

Thornton, L. C., Frick, P. J., Crapanzano, A. M., & Terranova, A. M. (2013). The incremental utility of callous-unemotional traits and conduct problems in predicting aggression and bullying in a community sample of boys and girls. *Psychological Assessment*, *25*, 366–378. doi: 10.1037/a0031153

Trach, J., Hymel, S., Waterhouse, T., & Neale, K. (2010). Bystander responses to school bullying: A cross-sectional investigation of grade and sex differences. *Canadian Journal of School Psychology*, *25*, 114–130. doi: 10.1177/0829573509357553

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

Vaillancourt, T., Hymel, S., & McDougall, P. (2003). Bullying is power: Implications for school-based intervention strategies. *Journal of Applied School Psychology*, *19*, 157–176. doi: 10.1300/J008v19n02_10

Vaillancourt, T., Hymel, S., & McDougall, P. (2013). The biological underpinnings of peer victimization: Understanding why and how the effects of bullying can last a lifetime. *Theory Into Practice*, *52*, 241–248. doi: 10.1080/00405841.2013.829726

van der Aa, N., Overbeek, G., Engels, R. C., Scholte, R. H., Meerkerk, G. J., & Van den Eijnden, R. J. (2009). Daily and compulsive internet use and well-being in adolescence: A diathesis–stress model based on big five personality traits. *Journal of Youth and Adolescence*, *38*, 765–776. doi: 10.1007/s10964-008-9298-3

Vaughn, M. G., Fu, Q., Bender, K., DeLisi, M., Beaver, K. M., Perron, B. E., & Howard, M. O. (2010). Psychiatric correlates of bullying in the United States: Findings from a national sample. *Psychiatric Quarterly*, *81*, 183–195. doi: 10.1007/s11126-010-9128-0

Veenstra, R., Lindenberg, S., Zijlstra, B. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2007). The dyadic nature of bullying and victimization: Testing a dual-perspective theory. *Child Development*, *78*, 1843–1854. doi: 10.1111/j.1467-8624.2007.01102.x

Viding, E., Simmonds, E., Petrides, K. V., & Frederickson, N. (2009). The contribution of callous-unemotional traits and conduct problems to bullying in early adolescence. *Journal of Child Psychology and Psychiatry*, *50*, 471–481. doi: 10.1111/j.1469-7610.2008.02012.x

Vitaglione, G., & Barnett, M. (2003). Assessing a new dimension of empathy: Empathic anger as a predictor of helping and punishing desires. *Motivation and Emotion*, *27*, 301–325. doi: 10.1023/A:1026231622102

Walker, E., Downey, G., & Bergman, A. (1989). The effects of parental psychopathology and maltreatment on child behavior: A test of the diathesis–stress model. *Child Development*, *60*, 15–24. doi: 10.2307/1131067

Wang, C., Berry, B., & Swearer, S. M. (2013). The critical role of school climate in effective bullying prevention. *Theory Into Practice*, *52*, 296–302. doi: 10.1080/00405841.2013.829735

White, R., & Mason, R. (2012). Bullying and gangs. *International Journal of Adolescent Medicine and Health*, *24*, 57–62. doi: 10.1515/ijamh.2012.008

WEB TABLES

U.S. DEPARTMENT OF EDUCATION
NCES 2019-054 JULY 2019

Student Reports of Bullying: Results From the 2017 School Crime Supplement to the National Crime Victimization Survey

The tables in this report include data from the 2017 School Crime Supplement (SCS) to the National Crime Victimization Survey (NCVS).[1] These tables show the extent to which students with different characteristics report being bullied, including estimates by student sex, race/ethnicity, grade, and household income. The U.S. Census Bureau (Census) appended additional data from the 2015–16 Common Core of Data (CCD) and the 2015–16 Private School Universe Survey (PSS) to the SCS data to show the extent to which bullying victimization is reported by students in schools with different characteristics.[2] School characteristics appended to the file are region; sector (public or private); locale; level; enrollment size; student-to-full-time-equivalent (FTE) teacher ratio; the percentage of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races; and the percentage of students eligible for free or reduced-priced lunch. Not all respondents in the SCS data file could be matched to a school in the CCD or the PSS.

The SCS tables show the relationship between reported bullying victimization and other crime-related variables, such as reported presence of gangs, guns, drugs, alcohol, and hate-related graffiti at school; selected school security measures; student criminal victimization; and personal fear, avoidance behaviors, fighting, and weapon carrying at school.

The tables are grouped into three sections.

Section 1 is an overview table, showing the number and percentage of students ages 12 through 18 who reported being bullied at school, by type of bullying experienced (table 1.1).

Section 2 displays detailed information on student-reported experiences of being bullied, including location, repetition, power imbalance, type of bullying, and impacts of bullying victimization reported by students ages 12 through 18, by selected student and school characteristics (tables 2.1–2.14).

Section 3 displays the percentages of students who reported being bullied at school, by student reports of other unfavorable school conditions; selected school security measures; criminal victimization at school; and personal fear, avoidance behaviors, fighting, and weapon carrying at school (tables 3.1–3.4).

RELATED NATIONAL CENTER FOR EDUCATION STATISTICS (NCES) REPORTS

Student Reports of Bullying: Results From the 2015 School Crime Supplement to the National

These Web Tables were prepared for the National Center for Education Statistics under Contract No. ED-IES-12D-0010/0004 with Synergy Enterprises, Incorporated (SEI). Mention of trade names, commercial products, or organizations does not imply endorsement by the U.S. Government. This Web Tables Report was prepared by Melissa Seldin and Christina Yanez of SEI.

ies NATIONAL CENTER FOR EDUCATION STATISTICS
Institute of Education Sciences

Crime Victimization Survey (NCES 2017-015). https://nces.ed.gov/pubs2017/2017015.pdf

Student Victimization in U.S. Schools: Results From the 2015 School Crime Supplement to the National Crime Victimization Survey (NCES 2018-106rev). https://nces.ed.gov/pubs2018/2018106REV.pdf

Repetition and Power Imbalance in Bullying Victimization at School (NCES 2018-093). https://nces.ed.gov/pubs2018/2018093.pdf

Changes in Bullying Victimization and Hate-Related Words at School Since 2007 (NCES 2018-095). https://nces.ed.gov/pubs2018/2018095.pdf

Students' Relationships in School and Feelings About Personal Safety at School (NCES 2018-096). https://nces.ed.gov/pubs2018/2018096.pdf

Indicators of School Crime and Safety: 2017 (NCES 2018-036). https://nces.ed.gov pubs2018/2018036.pdf

DATA

The estimates presented in the tables originate from the 2017 SCS to the NCVS. The SCS collects information about student and school characteristics related to criminal victimization on a national level. The SCS was conducted in 1989, in 1995, and biennially since 1999 as a supplement to the NCVS. Census selects addresses for the NCVS using a stratified, multistage cluster sampling design. Within the sample, all persons in the household ages 12 and older participate in the NCVS every 6 months (for a total of seven interviews over a 3-year period) to determine the extent of their victimization during the 6 months preceding the interview.

Respondents complete the SCS after finishing the NCVS. All NCVS respondents ages 12 through 18 are eligible to complete the SCS. The SCS is administered between January and June of the year of data collection. In 2017, approximately 93,700 sampled households were eligible to participate in the NCVS, and those NCVS households included 13,695 members ages 12 through 18. After completing the NCVS, youth ages 12 through 18 in participating households must also meet certain criteria specified in a set of SCS screening questions. These criteria require students to be currently enrolled in a primary or secondary education program leading to a high school diploma or enrolled sometime during the school year of the interview, not enrolled in fifth grade or under,[3] and not exclusively homeschooled during the school year.[4]

For students to be included in this report, additional criteria were applied. Students had to be enrolled in grades 6 through 12 and could not have received any part of their education through homeschooling during the school year.

In 2017, a total of 7,146 NCVS respondents were screened for the 2017 SCS, 6,189 met the criteria for completing the survey, and 6,117 met the additional criteria for inclusion in this report.[5] Details about specific variables used to define the report criteria appear in the Variables Used table.

All interviews for the 2017 NCVS/SCS are administered using computer-assisted interviewing. Among newly sampled NCVS households, the NCVS/SCS interview is administered face-to-face while interviews with recurring households are administered face-to-face or by telephone.

The survey data file used to produce the SCS estimates, as well as the SCS questionnaire, is available for download through the Inter-University Consortium for Political and Social Research (ICPSR) via the Student Surveys link at the NCES Crime and Safety Surveys portal, located at http://nces.ed.gov/programs/crime. The final data file is available in multiple software formats and contains variables collected in the SCS and cleared for release. Additionally, selected variables that were collected in the NCVS Basic Screen Questionnaire (NCVS-1) and NCVS Crime Incident Report (NCVS-2), and selected school characteristics from the CCD or PSS, are appended to the SCS data file.

Nationally representative estimates were computed using the weight variable SCS PERSON WEIGHT. The specific model applied in the calculation of standard errors was the Taylor series method using replacement and clustering (variables PSEUDOSTRATUM and SEUCODE).

RESPONSE RATES

Because the SCS interview is conducted with students after their households have responded to the NCVS, the unit completion rate for the SCS reflects both the household interview completion rate (76.9 percent) and the student interview completion rate (52.5 percent). The overall weighted SCS unit response rate (calculated by multiplying the household completion rate by the student completion rate) was 40.3 percent.

Furthermore, as in most surveys, some individuals did not give a response to every item. However, individual item response rates for the 2017 SCS were high—the unweighted item response rates for all respondents on all items included in this report exceeded 85 percent. On the majority of items, the response rate was 95 percent or higher.

NCES requires that any stage of data collection within a survey that has a base-weighted response rate of less than 85 percent be evaluated for nonresponse bias before the data or any analyses are released. In 2017, the analysis of unit nonresponse bias[6] found the race/ethnicity and census region variables showed significant differences in response rates between different race/ethnicity and census region subgroups. Respondent and nonrespondent distributions are significantly different for only the race/ethnicity subgroup. However, after using weights adjusted for person nonresponse, there is no evidence that these response differences introduced nonresponse bias in the final victimization estimates.

OTHER DATA SOURCES

The characteristics of the schools attended by SCS respondents appear in tables 2.2, 2.4, 2.6, 2.8, 2.10, 2.12, and 2.14. In the SCS interview, respondents provided the school name, school location, and other information that was linked to school data in the 2015–16 CCD or 2015–16 PSS. Census captured the school characteristics from those external datasets and appended school characteristic variables into the SCS dataset. Further information about the CCD is available at http://nces.ed.gov/ccd/, and information on the PSS is available at http://nces.ed.gov/surveys/pss/. Readers should note that data are weighted to be representative of youth ages 12 through 18 in U.S. households only. School characteristics are not included in the weighting process, and estimates by school characteristics are presented for descriptive purposes only.

MISSING DATA

When calculating column totals, readers should note that there are several sources of missing data. Among the 6,117 students who completed the SCS and were eligible to be included in this analysis, 80 student records were missing responses on all subparts of the bullying victimization indicator (SC134–SC140). These students were excluded from all tables and represent a total weighted number of about 373,000 students with missing bullying victimization information. The total weighted number of students with bullying victimization data is 24,650,000. Due to the missing data, table details do not reflect the total weighted student population (25,023,000). Among the 6,037 SCS students included in the bullying analysis, 5,746 (or 95.5 percent) were matched to schools on the CCD or PSS files. The remaining 291 students, who represent approximately 1,338,000 students when sample weights are applied, could not be matched to schools and were excluded from the tables showing school characteristics (tables 2.2, 2.4, 2.6, 2.8, 2.10, 2.12, and 2.14). Additional sources of missing data should be considered when examining the tables. In the SCS data file, only student characteristic variables taken from the NCVS (sex, race, and income) include edited and imputed values. All school characteristic and student response variables may have missing values that are not shown in these tables.

VARIABLES USED

All variables used in these tables appear in this table. The 2017 School Crime Supplement (SCS) data file contains the variables used here, additional variables collected in the SCS questionnaire, and selected variables collected in the National Crime Victimization Survey (NCVS) Basic Screen Questionnaire (NCVS-1) and the NCVS Crime Incident Report (NCVS-2). The SCS data file and questionnaire can be downloaded from the Inter-University Consortium for Political and Social Research (ICPSR) via the Student Surveys link at the National Center for Education Statistics (NCES) Crime and Safety Surveys portal, located at http://nces.ed.gov/programs/crime/surveys.asp. The NCVS questionnaires are also available through ICPSR.

The estimates appearing in tables 2.2, 2.4, 2.6, 2.8, 2.10, 2.12, and 2.14 show the characteristics of schools attended by SCS respondents. These tables include variables taken from the 2015–16 Common Core of Data (CCD) and the 2015–16 Private School Universe Survey (PSS).

Label	Name	Source
Household income	SC214A	NCVS-1
Race/ethnicity, Hispanic origin	SC412R, SC413	NCVS-1
Sex	SC407A	NCVS-1
Type of victimization	TOCNEW_1–TOCNEW_5	NCVS-1
Adult notification	SC147	SCS
Alcohol at school	SC040	SCS
Avoided a specific place at school	SC069–073	SCS
Avoided school activities	SC078	SCS
Bullied	SC134–SC140	SCS
Carried a weapon	SC082–SC084	SCS
Drugs at school	SC041, SC159, SCS209	SCS
Engaged in a physical fight	SC103	SCS
Feared attack or harm	SC079, SC080	SCS
Frequency of bullying	SC214SCS, SC215SCS	SCS
Gangs present at school	SC058	SCS
Grade	SC008	SCS
Hate-related graffiti	SC066	SCS
Location of bullying (a classroom at school, hallway or stairwell at school, bathroom or locker room at school, somewhere else inside the school building, outside on school grounds, on a school bus, in a cafeteria or lunchroom at school, and online or by text)	SC143, SC168, SC169, SC146, SC144, SC145, SC173, SC211SCS	SCS
Multiple persons bullying	SC217SCS, SC218SCS	SCS
Negative effect reported	SC196SCS–SC199SCS	SCS
Perceived relation of bullying	SC201SCS–SC206SCS	SCS
Power imbalance of bullying	SC219SCS–SC223SCS	SCS
Recurrence of bullying	SC216SCS	SCS
Saw student with a gun	SC086	SCS
Security cameras	SC095	SCS

Continued on next page

VARIABLES USED—CONTINUED

Label	Name	Source
Security guards or assigned police officers	SC028	SCS
Skipped class	SC077	SCS
Skipped school	SC078	SCS
Staff supervision in hallways	SC029	SCS
Student code of conduct	SC096	SCS
Type of bullying	SC134–SC140	SCS
Enrollment size	SC218SCS	CCD/PSS
Level	SC217SCS	CCD/PSS
Percentage of students eligible for free or reduced-price lunch	221SCS	CCD
Locale	SC216SCS	CCD/PSS
Region	214SCS	CCD/PSS
Percentage of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/ Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races	SCS220	CCD/PSS
Sector ratio	SC215SCS	CCD/PSS
Student-to-full-time-equivalent (FTE) teacher ratio	SC219SCS	CCD/PSS

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ENDNOTES

[1] The School Crime Supplement (SCS) data are available for download through the Inter-University Consortium for Political and Social Research (ICPSR) via the Student Surveys link at the National Center for Education Statistics (NCES) Crime and Safety Surveys portal, located at http://nces.ed.gov/programs/crime.

[2] Prior to 2015, appended school characteristic data were not available for public use. Estimates of responses by school characteristic data were provided by the U.S. Census Bureau (Census) for reports prior to 2015.

[3] Students in ungraded programs can complete the SCS.

[4] Persons who have dropped out of school, have been expelled or suspended from school, or are temporarily absent from school for any other reason, such as illness or vacation, can complete the SCS as long as they have attended school at any time during the school year of the interview.

[5] The 88 respondents who completed the survey but did not meet the criteria for inclusion in the report are 68 partially homeschooled students, 4 students in ungraded classrooms, and 16 students for whom grades were missing.

[6] U.S. Department of Justice, Bureau of Justice Statistics. (forthcoming). *National Crime Victimization Survey: School Crime Supplement 2017: Codebook* (ICPSR 36982). Ann Arbor: MIC: Inter-University Consortium for Political and Social Research, located at https://www.icpsr.umich.edu/icpsrweb/NACJD/studies/36982.

Table 1.1. Number and percentage distribution of students ages 12 through 18 and percentage who reported being bullied at school, by type of bullying and student and school characteristics: School year 2016–17

Type of bullying reported, student and school characteristics	Estimated number of students	Percent of students	Percent reported being bullied at school
Total bullied and not bullied	24,650,000	100.0	20.2
Bullied	4,986,000	20.2	†
Made fun of, called names, or insulted	3,208,000	13.0	†
Subject of rumors	3,284,000	13.3	†
Threatened with harm	959,000	3.9	†
Pushed, shoved, tripped, or spit on	1,298,000	5.3	†
Tried to make do things they did not want to do	466,000	1.9	†
Excluded from activities on purpose	1,270,000	5.2	†
Property destroyed on purpose	348,000	1.4	†
Not bullied	19,664,000	79.8	†
Sex			
Male	12,540,000	50.9	16.7
Female	12,110,000	49.1	23.8
Race/ethnicity[1]			
White, not Hispanic or Latino	12,988,000	52.7	22.8
Black, not Hispanic or Latino	3,357,000	13.6	22.9
Hispanic or Latino	5,946,000	24.1	15.7
Asian, not Hispanic or Latino	1,446,000	5.9	7.3
All other races, not Hispanic or Latino	912,000	3.7	23.3
Grade[2]			
6th	2,101,000	8.5	29.5
7th	3,835,000	15.6	24.4
8th	4,105,000	16.7	25.3
9th	3,740,000	15.2	19.3
10th	3,789,000	15.4	18.9
11th	3,574,000	14.5	14.7
12th	3,507,000	14.2	12.2
Household income			
Less than $7,500	661,000	2.7	26.2
$7,500–14,999	1,185,000	4.8	26.6
$15,000–24,999	2,361,000	9.6	22.4
$25,000–34,999	2,468,000	10.0	21.0
$35,000–49,999	3,583,000	14.5	16.6
$50,000 or more	14,392,000	58.4	19.8

See notes at end of table.

Table 1.1. Number and percentage distribution of students ages 12 through 18 and percentage who reported being bullied at school, by type of bullying and student and school characteristics: School year 2016–17—Continued

Type of bullying reported, student and school characteristics	Estimated number of students	Percent of students	Percent reported being bullied at school
Region			
Northeast	3,429,000	14.6	18.0
Midwest	5,093,000	21.8	23.5
South	9,027,000	38.6	20.6
West	5,862,000	25.0	19.9
Sector			
Public	21,796,000	93.1	21.1
Private	1,616,000	6.9	15.0
Catholic	615,000	2.6	12.4 !
Other religious	300,000	1.3	13.3 !
Nonsectarian	339,000	1.4	16.3 !
Locale			
City	6,863,000	29.3	19.9
Suburb	9,386,000	40.1	18.1
Town	2,531,000	10.8	26.9
Rural	4,565,000	19.5	23.8
Level[3]			
Primary	1,290,000	5.5	25.3
Middle	7,148,000	30.5	26.7
High	13,206,000	56.4	16.8
Other	1,763,000	7.5	21.8
Enrollment size			
Less than 300	2,432,000	10.5	26.1
300–599	3,937,000	16.9	24.1
600–999	5,587,000	24.1	24.1
1,000–1,499	4,610,000	19.8	18.3
1,500–1,999	3,147,000	13.5	18.5
2,000 or more	3,515,000	15.1	12.3
Student-to-full-time-equivalent (FTE) teacher ratio			
Less than 13 students	3,714,000	15.9	22.7
13 to less than 16 students	5,941,000	25.5	22.4
16 to less than 20 students	7,385,000	31.7	19.9
20 or more students	5,277,000	22.7	18.5

See notes at end of table.

Table 1.1. Number and percentage distribution of students ages 12 through 18 and percentage who reported being bullied at school, by type of bullying and student and school characteristics: School year 2016–17—Continued

Type of bullying reported, student and school characteristics	Estimated number of students	Percent of students	Percent reported being bullied at school
Percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races			
Less than 5 percent	1,198,000	5.1	19.9
5 to less than 20 percent	4,828,000	20.6	22.7
20 to less than 50 percent	6,460,000	27.6	22.7
50 percent or more	10,452,000	44.6	18.6
Percent of students eligible for free or reduced-price lunch[4]			
0 to less than 20 percent	3,817,000	16.3	20.4
20 to less than 50 percent	8,068,000	34.5	19.8
50 percent or more	9,281,000	39.6	22.5

† Not applicable.
! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
[1] Respondents who identified themselves as being of Hispanic or Latino origin were classified as "Hispanic or Latino," regardless of their race. "Black, not Hispanic or Latino" includes African Americans. "All other races, not Hispanic or Latino" includes Native Hawaiians or Other Pacific Islanders, American Indians or Alaska Natives, and respondents of Two or more races (3.7 percent of all respondents).
[2] The School Crime Supplement sample includes students ages 12–18 and, therefore, might not be representative of students in 6th grade. Comparisons between students in 6th grade and those in other grades should be made with caution.
[3] The School Crime Supplement sample includes students ages 12–18 who were enrolled in grades 6–12 and, therefore, might not be representative of students in primary schools. Comparisons between students in primary schools and those in other school levels should be made with caution.
[4] Data on free or reduced-price lunch eligibility are only available for public schools.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. Bullied "at school" includes the school building, school property, school bus, or going to and from school. Numbers reporting bullying types sum to more than total reported because students could have reported more than one type of bullying. Total bullied and not bullied is based on respondents for whom data on bullying are available. Population estimates for student characteristics are based on the 2017 School Crime Supplement for all respondents for whom data on bullying are available (98.5 percent of students). Population estimates for school characteristics are based on respondents for whom data on school and bullying are available (93.6 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S1.1. Standard errors for Table 1.1: Number and percentage distribution of students ages 12 through 18 and percentage who reported being bullied at school, by type of bullying and student and school characteristics: School year 2016–17

Type of bullying reported, student and school characteristics	Estimated number of students	Percent of students	Percent reported being bullied at school
Total bullied and not bullied	573,900	†	0.71
Bullied	215,500	0.71	†
Made fun of, called names, or insulted	150,600	0.56	†
Subject of rumors	163,300	0.59	†
Threatened with harm	82,800	0.31	†
Pushed, shoved, tripped, or spit on	98,200	0.37	†
Tried to make do things they did not want to do	56,100	0.23	†
Excluded from activities on purpose	99,800	0.39	†
Property destroyed on purpose	39,200	0.16	†
Not bullied	480,700	0.71	†
Sex			
Male	371,600	0.79	0.87
Female	322,400	0.79	1.01
Race/ethnicity			
White, not Hispanic or Latino	413,800	1.12	1.02
Black, not Hispanic or Latino	208,600	0.81	1.98
Hispanic or Latino	280,300	0.94	1.12
Asian, not Hispanic or Latino	112,700	0.45	1.56
All other races, not Hispanic or Latino	93,300	0.36	2.69
Grade			
6th	105,000	0.41	2.79
7th	157,200	0.55	1.60
8th	183,900	0.54	1.69
9th	158,600	0.52	1.52
10th	153,400	0.54	1.67
11th	147,900	0.51	1.45
12th	150,300	0.51	1.34
Household income			
Less than $7,500	79,000	0.31	3.88
$7,500–14,999	90,100	0.36	3.21
$15,000–24,999	150,600	0.56	2.18
$25,000–34,999	144,200	0.54	2.14
$35,000–49,999	184,000	0.66	1.57
$50,000 or more	394,900	0.87	0.92

See notes at end of table.

Table S1.1. Standard errors for Table 1.1: Number and percentage distribution of students ages 12 through 18 and percentage who reported being bullied at school, by type of bullying and student and school characteristics: School year 2016–17—Continued

Type of bullying reported, student and school characteristics	Estimated number of students	Percent of students	Percent reported being bullied at school
Region			
Northeast	228,100	0.87	1.79
Midwest	253,300	0.98	1.56
South	286,000	1.02	1.04
West	306,900	1.07	1.52
Sector			
Public	536,900	0.46	0.76
Private	113,400	0.46	2.47
Catholic	70,900	0.30	3.83
Other religious	46,100	0.20	4.03
Nonsectarian	47,100	0.20	5.10
Locale			
City	284,100	1.10	1.35
Suburb	309,100	1.07	0.90
Town	260,500	1.05	1.75
Rural	274,500	0.98	1.56
Level			
Primary	106,700	0.43	3.39
Middle	248,900	0.77	1.33
High	349,000	0.85	0.87
Other	146,700	0.56	2.56
Enrollment size			
Less than 300	230,600	0.89	2.56
300–599	205,600	0.77	1.50
600–999	217,400	0.82	1.37
1,000–1,499	210,800	0.82	1.39
1,500–1,999	167,700	0.68	1.79
2,000 or more	176,800	0.67	1.31
Student-to-full-time-equivalent (FTE) teacher ratio			
Less than 13 students	238,200	0.93	2.14
13 to less than 16 students	240,100	0.88	1.38
16 to less than 20 students	272,300	0.88	1.15
20 or more students	220,400	0.81	1.47

See notes at end of table.

Table S1.1. Standard errors for Table 1.1: Number and percentage distribution of students ages 12 through 18 and percentage who reported being bullied at school, by type of bullying and student and school characteristics: School year 2016–17—Continued

Type of bullying reported, student and school characteristics	Estimated number of students	Percent of students	Percent reported being bullied at school
Percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races			
Less than 5 percent	114,600	0.49	3.20
5 to less than 20 percent	311,100	1.13	1.55
20 to less than 50 percent	257,400	1.03	1.18
50 percent or more	377,200	1.22	1.12
Percent of students eligible for free or reduced-price lunch			
0 to less than 20 percent	174,700	0.71	1.74
20 to less than 50 percent	315,300	1.11	1.17
50 percent or more	386,400	1.19	1.11

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.1. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by location of bullying and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied: Location of bullying						
			In a classroom	In a hallway or stairwell	In a bathroom/locker room	Cafeteria at school	Outside on school grounds	School bus	Online or by text
Total bullied and not bullied	79.8	20.2	42.1	43.4	12.1	26.8	21.9	8.0	15.3
Sex									
Male	83.3	16.7	40.9	43.1	13.5	26.4	23.1	8.5	6.8
Female	76.2	23.8	43.1	43.6	11.1	27.0	20.9	7.6	21.4
Race/ethnicity[1]									
White, not Hispanic or Latino	77.2	22.8	43.4	41.2	11.9	26.2	20.6	8.7	17.4
Black, not Hispanic or Latino	77.1	22.9	46.2	45.3	13.6	25.6	25.6	10.5	12.1
Hispanic or Latino	84.3	15.7	35.8	44.8	9.8	24.7	23.9	2.7	12.8
Asian, not Hispanic or Latino	92.7	7.3	24.2 !	64.8	‡	36.9	‡	‡	12.2 !
All other races, not Hispanic or Latino	76.7	23.3	47.5	49.0	21.1	42.7	22.1	13.0 !	9.7 !
Grade[2]									
6th	70.5	29.5	47.2	47.9	10.8 !	28.6	30.2	8.9	6.7 !
7th	75.6	24.4	44.5	43.0	13.1	33.4	21.4	7.7	13.1
8th	74.7	25.3	40.8	39.9	12.2	22.2	18.5	8.3	12.5
9th	80.7	19.3	41.4	40.2	15.8	28.2	19.9	8.3	19.7
10th	81.1	18.9	39.1	41.5	12.6	25.3	25.5	8.3 !	22.0
11th	85.3	14.7	42.6	51.6	7.5 !	28.0	17.6	8.8 !	22.3
12th	87.8	12.2	38.9	44.5	10.0 !	19.2	21.3	4.7 !	11.5
Household income									
Less than $7,500	73.8	26.2	45.4	45.5	11.0 !	39.3	12.0 !	9.0 !	‡
$7,500–14,999	73.4	26.6	39.7	55.5	16.7 !	27.0	26.0	12.8 !	17.5
$15,000–24,999	77.6	22.4	47.0	44.3	9.6	25.1	14.6	9.2 !	10.4
$25,000–34,999	79.0	21.0	48.1	42.9	13.6 !	28.6	21.5	11.9	15.8
$35,000–49,999	83.4	16.6	40.7	44.0	7.8	26.5	25.8	3.7 !	12.7
$50,000 or more	80.2	19.8	40.5	41.7	12.7	26.0	22.6	7.4	16.5

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.
[1] Respondents who identified themselves as being of Hispanic or Latino origin were classified as "Hispanic or Latino," regardless of their race. "Black, not Hispanic or Latino" includes African Americans. "All other races, not Hispanic or Latino" includes Native Hawaiians or Other Pacific Islanders, American Indians or Alaska Natives, and respondents of Two or more races (3.7 percent of all respondents).
[2] The School Crime Supplement sample includes students ages 12–18 and, therefore, might not be representative of students in 6th grade. Comparisons between students in 6th grade and those in other grades should be made with caution.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Location totals may sum to more than 100 percent because students could have been bullied in more than one location. Location percentages do not include students who responded they did not know or refused to answer for locations of bullying. Detail may not sum to totals because of rounding and missing student characteristic data. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.1. Standard errors for Table 2.1: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by location of bullying and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied: Location of bullying						
			In a class-room	In a hallway or stairwell	In a bath-room/ locker room	Cafeteria at school	Outside on school grounds	School bus	Online or by text
Total bullied and not bullied	0.71	0.71	1.41	1.77	1.26	1.60	1.51	0.92	1.15
Sex									
Male	0.87	0.87	2.50	2.71	1.84	2.25	2.44	1.42	1.15
Female	1.01	1.01	1.85	2.26	1.56	2.08	1.74	1.20	1.90
Race/ethnicity									
White, not Hispanic or Latino	1.02	1.02	1.96	2.17	1.62	1.66	1.90	1.23	1.73
Black, not Hispanic or Latino	1.98	1.98	4.37	5.24	3.59	4.33	4.24	2.98	3.06
Hispanic or Latino	1.12	1.12	2.94	3.72	2.02	3.38	2.96	0.78	2.37
Asian, not Hispanic or Latino	1.56	1.56	8.80	9.25	†	10.29	†	†	5.72
All other races, not Hispanic or Latino	2.69	2.69	7.19	7.35	6.03	8.68	6.24	5.67	3.36
Grade									
6th	2.79	2.79	5.10	4.82	3.81	4.85	4.47	2.35	2.28
7th	1.60	1.60	3.42	3.26	2.82	4.10	3.01	1.83	2.86
8th	1.69	1.69	3.56	3.84	2.80	2.83	2.86	2.00	2.53
9th	1.52	1.52	3.98	4.04	3.23	4.11	3.62	2.43	3.59
10th	1.67	1.67	4.17	4.47	2.96	3.44	4.35	2.51	3.47
11th	1.45	1.45	5.06	5.35	2.75	4.99	3.35	3.23	4.37
12th	1.34	1.34	5.58	5.33	3.25	4.17	5.17	1.54	3.31
Household income									
Less than $7,500	3.88	3.88	8.98	8.46	4.42	9.33	4.94	3.52	†
$7,500–14,999	3.21	3.21	6.47	7.12	5.50	6.52	5.49	4.43	5.17
$15,000–24,999	2.18	2.18	4.70	5.46	2.16	4.65	3.35	3.07	2.63
$25,000–34,999	2.14	2.14	5.41	5.50	4.54	5.25	5.37	3.48	3.27
$35,000–49,999	1.57	1.57	4.41	4.60	2.32	4.63	5.30	1.65	3.30
$50,000 or more	0.92	0.92	1.90	2.05	1.58	2.02	1.82	1.15	1.62

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.2. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by location of bullying and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Location of bullying						
			In a classroom	In a hallway or stairwell	In a bathroom/ locker room	Cafeteria at school	Outside on school grounds	School bus	Online or by text
Total bullied and not bullied	79.3	20.7	42.2	43.3	11.8	26.4	21.5	8.0	15.5
Region									
Northeast	82.0	18.0	45.8	43.2	10.8	22.4	9.4 !	12.9	10.2
Midwest	76.5	23.5	41.3	51.3	10.5	27.7	20.4	7.9	14.4
South	79.4	20.6	43.3	42.6	14.7	29.5	18.1	8.9	17.5
West	80.1	19.9	39.5	36.1	8.8	22.2	34.6	4.0 !	16.1
Sector									
Public	78.9	21.1	41.8	43.2	10.9	26.2	21.3	8.2	15.5
Private	85.0	15.0	49.6	43.4	27.1	29.2	25.2 !	‡	14.5 !
Catholic	87.6	12.4 !	52.8	45.4 !	‡	49.8	42.1 !	‡	‡
Other religious	86.7	13.3 !	85.8	41.3 !	‡	‡	‡	#	#
Nonsectarian	83.7	16.3 !	52.8 !	‡	‡	‡	‡	#	‡
Locale									
City	80.1	19.9	39.9	45.6	10.9	23.2	26.4	7.8	15.1
Suburb	81.9	18.1	41.9	46.4	11.8	29.1	15.9	9.0	16.6
Town	73.1	26.9	48.4	35.9	10.8	26.8	27.8	5.3 !	14.1
Rural	76.2	23.8	41.7	40.3	13.4	26.1	20.3	7.8	15.0
Level[1]									
Primary	74.7	25.3	47.1	44.7	11.7 !	32.7	33.8	7.0 !	11.4 !
Middle	73.3	26.7	42.3	41.5	11.7	27.6	20.4	9.7	12.2
High	83.2	16.8	39.7	43.9	11.9	25.5	20.9	7.3	18.8
Other	78.2	21.8	51.7	46.6	11.5!	20.3	20.9	4.5 !	16.5 !
Enrollment size									
Less than 300	73.9	26.1	46.5	39.9	10.9 !	21.6	26.2	6.1 !	15.9
300–599	75.9	24.1	46.6	44.4	14.2	24.7	26.4	5.1 !	15.4
600–999	75.9	24.1	42.1	43.8	14.5	26.9	18.5	9.4	13.7
1,000–1,499	81.7	18.3	41.1	41.8	9.3	29.0	18.2	11.1	12.9
1,500–1,999	81.5	18.5	33.7	46.5	6.8 !	32.0	19.9	10.7	18.2
2,000 or more	87.7	12.3	39.3	41.2	8.7 !	20.7	21.4	‡	21.7
Student-to-full-time-equivalent (FTE) teacher ratio									
Less than 13 students	77.4	22.7	49.2	41.5	13.9	18.6	21.7	6.4 !	14.3
13 to less than 16 students	77.6	22.4	40.8	48.6	10.7	27.4	15.5	9.8	12.4
16 to less than 20 students	80.1	19.9	43.3	42.6	10.8	31.6	23.8	9.5	18.6
20 or more students	81.5	18.5	40.8	36.3	12.6	21.9	26.7	5.5 !	17.2

See notes at end of table.

Table 2.2. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by location of bullying and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Location of bullying						
			In a classroom	In a hallway or stairwell	In a bathroom/ locker room	Cafeteria at school	Outside on school grounds	School bus	Online or by text
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races									
Less than 5 percent	80.1	19.9	53.2	26.3	‡	24.8	16.0 !	6.4 !	20.5 !
5 to less than 20 percent	77.3	22.7	44.2	44.2	12.0	27.3	20.1	9.8	17.6
20 to less than 50 percent	77.3	22.7	41.1	41.3	11.5	25.6	18.3	7.1	18.0
50 percent or more	81.4	18.6	41.2	45.2	11.5	26.2	25.3	7.8	11.9
Percent of students eligible for free or reduced-price lunch[2]									
0 to less than 20 percent	79.6	20.4	45.0	38.3	8.1	27.1	16.2	8.1	24.1
20 to less than 50 percent	80.2	19.8	39.2	45.3	10.8	26.2	20.1	10.0	17.2
50 percent or more	77.5	22.5	41.0	43.7	12.1	25.8	24.5	7.1	11.2

Rounds to zero.

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

[1] The School Crime Supplement sample includes students ages 12–18 who were enrolled in grades 6–12 and, therefore, might not be representative of students in primary schools. Comparisons between students in primary schools and those in other school levels should be made with caution.

[2] Data on free or reduced-price lunch eligibility are only available for public schools.

NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Location totals may sum to more than 100 percent because students could have been bullied in more than one location. No school match was available for 1,338,000 students. Additional missing and not applicable school characteristic data are not shown for locale; school level; enrollment size; student-to-FTE teacher ratio; percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races; and percent of students eligible for free or reduced-price lunch. Detail may not sum to totals because of rounding and these missing data. Total bullied and not bullied is based on respondents for whom data on school and bullying are available (93.6 percent of students).

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.2. Standard errors for Table 2.2: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by location of bullying and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Location of bullying						
			In a class-room	In a hallway or stairwell	In a bath-room/ locker room	Cafeteria at school	Outside on school grounds	School bus	Online or by text
Total bullied and not bullied	0.74	0.74	1.41	1.80	1.29	1.64	1.53	0.95	1.16
Region									
Northeast	1.79	1.79	5.76	5.95	3.13	3.80	3.33	3.48	2.53
Midwest	1.56	1.56	3.13	3.50	2.34	3.02	2.95	1.88	1.90
South	1.04	1.04	2.49	2.69	2.08	2.83	1.95	1.65	2.41
West	1.52	1.52	3.72	3.08	2.24	3.13	3.85	1.37	2.36
Sector									
Public	0.76	0.76	1.55	1.93	1.23	1.70	1.53	1.00	1.19
Private	2.47	2.47	7.93	7.76	6.85	7.06	8.16	†	5.79
Catholic	3.83	3.83	13.09	13.94	†	13.46	17.79	†	†
Other religious	4.03	4.03	10.14	15.85	†	†	†	†	†
Nonsectarian	5.10	5.10	16.97	†	†	†	†	†	†
Locale									
City	1.35	1.35	3.38	3.28	2.33	3.02	3.32	1.88	2.67
Suburb	0.90	0.90	2.46	2.83	1.82	2.44	2.06	1.72	1.93
Town	1.75	1.75	4.97	5.14	3.19	4.16	5.14	1.91	3.52
Rural	1.56	1.56	3.21	3.75	2.40	3.28	3.03	1.86	2.31
Level									
Primary	3.39	3.39	8.35	6.86	4.93	6.02	6.05	3.17	5.48
Middle	1.33	1.33	2.15	2.79	1.68	2.63	2.41	1.55	1.68
High	0.87	0.87	2.27	2.60	1.77	2.47	2.13	1.32	1.85
Other	2.56	2.56	6.44	5.33	4.06	4.60	4.96	1.98	4.95
Enrollment size									
Less than 300	2.56	2.56	4.14	4.37	3.28	4.09	5.18	2.10	4.08
300–599	1.50	1.50	4.45	3.77	3.13	3.78	3.61	1.66	2.90
600–999	1.37	1.37	2.78	3.07	2.22	2.86	2.19	1.81	2.24
1,000–1,499	1.39	1.39	3.56	3.93	2.40	3.76	3.01	2.50	2.36
1,500–1,999	1.79	1.79	5.08	5.15	2.45	5.23	4.57	2.87	4.60
2,000 or more	1.31	1.31	5.52	5.60	3.23	4.54	4.56	†	4.30
Student-to-full-time-equivalent (FTE) teacher ratio									
Less than 13 students	2.14	2.14	4.14	4.30	3.08	3.03	3.99	2.01	2.87
13 to less than 16 students	1.38	1.38	2.95	3.17	1.91	2.78	2.43	1.78	2.15
16 to less than 20 students	1.15	1.15	3.24	2.94	2.01	3.16	2.36	1.75	2.69
20 or more students	1.47	1.47	3.83	4.04	2.91	3.15	4.19	1.67	2.14

See notes at end of table.

Table S2.2. Standard errors for Table 2.2: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by location of bullying and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Location of bullying						
			In a class-room	In a hallway or stairwell	In a bath-room/ locker room	Cafeteria at school	Outside on school grounds	School bus	Online or by text
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races									
Less than 5 percent	3.20	3.20	6.90	5.73	†	6.51	5.44	2.40	6.18
5 to less than 20 percent	1.55	1.55	3.42	3.73	2.35	3.39	2.88	2.47	2.73
20 to less than 50 percent	1.18	1.18	2.92	2.73	2.00	2.48	2.50	1.40	2.38
50 percent or more	1.12	1.12	2.30	3.42	2.06	2.70	2.64	1.37	1.58
Percent of students eligible for free or reduced-price lunch									
0 to less than 20 percent	1.74	1.74	4.00	3.97	2.39	3.18	3.28	2.36	3.93
20 to less than 50 percent	1.17	1.17	2.88	2.84	2.09	2.67	2.84	1.65	2.14
50 percent or more	1.11	1.11	2.24	3.00	1.76	2.43	2.50	1.20	1.60

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

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Table 2.3. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the frequency of bullying, whether they thought bullying would happen again, and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied: Percentage distribution of the frequency of bullying[1]: One day: Once	One day: More than once	One day: Don't know	Two days	Three to 10 days	More than 10 days	Thinks the bullying would happen again
Total bullied and not bullied	79.8	20.2	23.8	4.1	2.8	18.6	30.0	20.4	41.4
Sex									
Male	83.3	16.7	27.7	4.0	3.7	18.0	29.6	16.7	38.7
Female	76.2	23.8	21.0	4.2	2.1 !	19.1	30.3	23.1	43.4
Race/ethnicity[2]									
White, not Hispanic or Latino	77.2	22.8	22.6	3.2	2.4	17.6	29.6	24.3	46.9
Black, not Hispanic or Latino	77.1	22.9	23.8	4.1 !	4.6 !	24.9	29.1	13.5	31.8
Hispanic or Latino	84.3	15.7	27.2	5.3 !	3.0 !	16.6	33.2	14.4	33.3
Asian, not Hispanic or Latino	92.7	7.3	23.8 !	‡	‡	25.7 !	21.3 !	‡	34.8
All other races, not Hispanic or Latino	76.7	23.3	25.7	‡	‡	16.0 !	29.1	20.4	37.8
Grade[3]									
6th	70.5	29.5	17.7	‡	‡	19.2	36.1	23.9	38.3
7th	75.6	24.4	17.9	4.0 !	1.9 !	21.3	32.6	21.8	42.8
8th	74.7	25.3	30.9	4.8 !	4.2 !	17.5	28.0	14.4	37.4
9th	80.7	19.3	25.3	‡	‡	13.2	38.3	18.7	46.4
10th	81.1	18.9	29.9	6.7 !	4.6 !	16.6	20.4	21.7	39.4
11th	85.3	14.7	13.9	‡	‡	19.2	29.7	32.2	53.6
12th	87.8	12.2	27.9	5.1 !	‡	26.4	22.6	13.4	32.6
Household income									
Less than $7,500	73.8	26.2	18.1 !	‡	#	35.2	24.9	16.6 !	46.2
$7,500–14,999	73.4	26.6	20.8	‡	‡	11.4 !	33.1	26.5	50.9
$15,000–24,999	77.6	22.4	34.2	‡	5.4 !	15.0	22.1	20.1	38.4
$25,000–34,999	79.0	21.0	24.8	‡	‡	22.2	29.7	20.4	42.6
$35,000–49,999	83.4	16.6	23.6	4.5 !	‡	21.3	26.0	23.2	43.6
$50,000 or more	80.2	19.8	22.5	4.8	3.0	17.9	32.3	19.5	40.0

Rounds to zero.

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

[1] Students who responded "Don't know" when asked about how many days they were bullied are treated as missing in calculating frequencies (1 percent of students).

[2] Respondents who identified themselves as being of Hispanic or Latino origin were classified as "Hispanic or Latino" regardless of their race. "Black, not Hispanic or Latino" includes African Americans. "All other races, not Hispanic or Latino" includes Native Hawaiians or Other Pacific Islanders, American Indians or Alaska Natives, and respondents of Two or more races (3.7 percent of all respondents).

[3] The School Crime Supplement sample includes students ages 12–18 and, therefore, might not be representative of students in 6th grade. Comparisons between students in 6th grade and those in other grades should be made with caution.

NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Missing data are not shown for household income. Detail may not sum to totals because of rounding and missing student characteristic data. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.3. Standard errors for Table 2.3: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the frequency of bullying, whether they thought bullying would happen again, and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied: Percentage distribution of the frequency of bullying: One day: Once	One day: More than once	One day: Don't know	Two days	Three to 10 days	More than 10 days	Thinks the bullying would happen again
Total bullied and not bullied	0.71	0.71	1.73	0.65	0.56	1.33	1.63	1.36	1.81
Sex									
Male	0.87	0.87	2.65	1.00	1.01	2.07	2.65	1.67	2.64
Female	1.01	1.01	1.84	0.83	0.64	1.78	1.90	2.07	2.26
Race/ethnicity									
White, not Hispanic or Latino	1.02	1.02	1.87	0.69	0.64	1.58	1.97	1.89	2.22
Black, not Hispanic or Latino	1.98	1.98	5.61	1.74	1.91	4.26	4.47	3.10	4.23
Hispanic or Latino	1.12	1.12	3.35	1.64	1.24	2.72	3.56	2.19	3.56
Asian, not Hispanic or Latino	1.56	1.56	8.46	†	†	8.98	8.25	†	9.03
All other races, not Hispanic or Latino	2.69	2.69	6.41	†	†	5.67	6.71	5.85	7.10
Grade									
6th	2.79	2.79	3.81	†	†	3.96	4.63	4.09	5.24
7th	1.60	1.60	2.94	1.38	0.95	3.11	3.72	2.81	3.51
8th	1.69	1.69	4.03	1.57	1.73	2.78	3.41	2.60	3.62
9th	1.52	1.52	4.41	†	†	2.92	4.38	3.45	4.87
10th	1.67	1.67	4.03	2.11	1.63	3.46	3.62	4.08	4.49
11th	1.45	1.45	3.93	†	†	3.97	4.56	4.78	5.73
12th	1.34	1.34	4.78	2.10	†	5.11	4.48	3.47	5.27
Household income									
Less than $7,500	3.88	3.88	5.54	†	†	8.53	6.80	6.10	8.39
$7,500–14,999	3.21	3.21	5.89	†	†	4.35	6.37	6.29	7.94
$15,000–24,999	2.18	2.18	6.09	†	2.25	3.81	3.84	3.83	4.60
$25,000–34,999	2.14	2.14	5.20	†	†	4.34	4.64	3.74	5.06
$35,000–49,999	1.57	1.57	4.06	1.91	†	3.59	4.32	4.05	4.69
$50,000 or more	0.92	0.92	1.86	0.95	0.82	1.68	2.08	1.70	2.16

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.4. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the frequency of bullying, whether they thought bullying would happen again, and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Percentage distribution of the frequency of bullying[1]						Thinks the bullying would happen again
			One day						
			Once	More than once	Don't know	Two days	Three to 10 days	More than 10 days	
Total bullied and not bullied	79.3	20.7	23.7	4.1	2.9	18.8	30.1	20.2	41.2
Region									
Northeast	82.0	18.0	20.6	‡	‡	16.2	32.7	22.7	41.8
Midwest	76.5	23.5	24.9	3.0 !	2.6 !	16.7	32.7	19.8	43.2
South	79.4	20.6	25.2	3.8	3.6	20.3	27.2	19.7	38.5
West	80.1	19.9	21.6	6.1	1.5 !	20.1	30.7	20.0	43.4
Sector									
Public	78.9	21.1	24.6	4.2	3.0	18.9	29.3	19.9	40.8
Private	85.0	15.0	7.0 !	‡	‡	17.8 !	45.4	25.0	48.3
Catholic	87.6	12.4 !	‡	#	‡	21.4 !	56.8	‡	58.6
Other religious	86.7	13.3 !	‡	‡	#	46.5 !	‡	‡	31.1 !
Nonsectarian	83.7	16.3 !	‡	‡	#	‡	‡	55.5	51.7 !
Locale									
City	80.1	19.9	22.7	3.1	4.3 !	17.6	33.5	18.7	39.4
Suburb	81.9	18.1	22.9	5.3	3.2	20.3	28.8	19.4	40.8
Town	73.1	26.9	30.7	5.6 !	‡	16.8	25.6	20.7	45.1
Rural	76.2	23.8	21.8	2.8 !	2.1 !	19.5	30.6	22.6	41.8
Level[2]									
Primary	74.7	25.3	‡	‡	‡	26.8	42.0	19.9	58.9
Middle	73.3	26.7	25.9	3.9	2.9 !	18.1	28.8	20.0	36.1
High	83.2	16.8	24.7	4.5	3.4	19.2	28.0	20.1	42.2
Other	78.2	21.8	22.5	‡	‡	13.7	38.8	21.5	46.7
Enrollment size									
Less than 300	73.9	26.1	17.2	3.6 !	‡	23.5	32.2	21.2	42.7
300–599	75.9	24.1	21.1	3.3 !	3.4 !	16.2	32.4	23.1	48.2
600–999	75.9	24.1	23.0	5.7	2.8 !	17.9	30.3	20.1	39.9
1,000–1,499	81.7	18.3	30.9	2.8 !	‡	18.0	26.9	18.4	34.0
1,500–1,999	81.5	18.5	25.4	3.5 !	‡	21.1	31.8	17.1	46.5
2,000 or more	87.7	12.3	25.5	‡	5.7 !	19.7	22.8	20.6	32.4
Student-to-full-time-equivalent (FTE) teacher ratio									
Less than 13 students	77.4	22.7	19.6	2.9 !	‡	18.6	33.2	22.8	46.3
13 to less than 16 students	77.6	22.4	22.7	4.4	2.9 !	19.2	28.0	22.5	37.3
16 to less than 20 students	80.1	19.9	25.9	2.8	3.9	19.0	27.3	20.8	42.8
20 or more students	81.5	18.5	25.2	6.4	1.8 !	20.7	30.7	15.3	39.8

See notes at end of table.

Table 2.4. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the frequency of bullying, whether they thought bullying would happen again, and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Percentage distribution of the frequency of bullying[1]: One day: Once	One day: More than once	One day: Don't know	Two days	Three to 10 days	More than 10 days	Thinks the bullying would happen again
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races									
Less than 5 percent	80.1	19.9	24.6	‡	‡	19.8 !	29.0	13.8!	53.3
5 to less than 20 percent	77.3	22.7	20.6	3.6 !	2.1	18.0	29.4	26.1	39.2
20 to less than 50 percent	77.3	22.7	26.9	2.6 !	3.8 !	17.9	30.5	18.2	43.9
50 percent or more	81.4	18.6	23.5	5.0	2.8 !	20.3	28.7	19.5	38.4
Percent of students eligible for free or reduced-price lunch[3]									
0 to less than 20 percent	79.6	20.4	25.2	4.3 !	2.1 !	18.2	30.7	19.5	39.6
20 to less than 50 percent	80.2	19.8	23.7	4.3	2.5 !	17.3	31.1	21.0	44.8
50 percent or more	77.5	22.5	25.7	3.9	3.8	20.4	26.6	19.3	37.5

Rounds to zero.
! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.
[1] Students who responded "Don't know" when asked about how many days they were bullied are treated as missing in calculating frequencies (1 percent of bullied students).
[2] The School Crime Supplement sample includes students ages 12–18 who were enrolled in grades 6–12 and, therefore, might not be representative of students in primary schools. Comparisons between students in primary schools and those in other school levels should be made with caution.
[3] Data on free or reduced-price lunch eligibility are only available for public schools.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. No school match was available for 1,338,000 students. Additional missing and not applicable school characteristic data are not shown for locale; school level; enrollment size; student-to-FTE teacher ratio; percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races; and percent of students eligible for free or reduced-price lunch. Detail may not sum to totals because of rounding and these missing data. Total bullied and not bullied is based on respondents for whom data on school and bullying are available (93.6 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.4. Standard errors for Table 2.4: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the frequency of bullying, whether they thought bullying would happen again, and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Percentage distribution of the frequency of bullying: One day: Once	One day: More than once	One day: Don't know	Two days	Three to 10 days	More than 10 days	Thinks the bullying would happen again
Total bullied and not bullied	0.74	0.74	1.79	0.63	0.58	1.36	1.66	1.42	1.85
Region									
Northeast	1.79	1.79	4.10	†	†	3.99	5.91	4.27	4.84
Midwest	1.56	1.56	2.48	1.09	0.86	2.10	2.91	2.42	3.40
South	1.04	1.04	3.30	0.90	1.06	2.39	2.33	2.19	3.08
West	1.52	1.52	3.07	1.55	0.70	2.60	3.23	2.95	3.74
Sector									
Public	0.76	0.76	1.83	0.64	0.61	1.41	1.73	1.49	1.90
Private	2.47	2.47	3.36	†	†	5.52	7.13	6.9	6.94
Catholic	3.83	3.83	†	†	†	9.17	12.58	†	12.13
Other religious	4.03	4.03	†	†	†	18.5	†	†	14.76
Nonsectarian	5.10	5.10	†	†	†	†	†	16.1	16.89
Locale									
City	1.35	1.35	2.77	0.89	1.51	2.44	3.18	2.65	3.71
Suburb	0.90	0.90	2.58	1.30	0.93	2.22	2.39	2.18	2.36
Town	1.75	1.75	4.36	2.16	†	2.91	4.64	3.95	4.51
Rural	1.56	1.56	3.06	1.14	0.85	2.99	3.20	2.86	3.55
Level									
Primary	3.39	3.39	†	†	†	6.84	5.69	4.75	7.53
Middle	1.33	1.33	2.71	0.98	0.98	2.15	2.48	2.22	2.55
High	0.87	0.87	2.35	1.04	0.89	1.89	2.36	2.21	2.66
Other	2.56	2.56	5.38	†	†	3.91	6.38	5.14	6.46
Enrollment size									
Less than 300	2.56	2.56	3.31	1.69	†	4.94	4.41	4.12	4.60
300–599	1.50	1.50	3.57	1.46	1.55	2.85	3.84	3.14	4.65
600–999	1.37	1.37	3.00	1.48	1.07	2.26	2.84	2.60	3.01
1,000–1,499	1.39	1.39	3.51	0.90	†	3.25	3.39	3.17	4.14
1,500–1,999	1.79	1.79	4.91	1.18	†	4.32	4.56	3.62	5.56
2,000 or more	1.31	1.31	4.84	†	2.64	4.45	4.27	5.13	5.68
Student-to-full-time-equivalent (FTE) teacher ratio									
Less than 13 students	2.14	2.14	3.25	1.45	†	3.20	3.78	3.37	3.91
13 to less than 16 students	1.38	1.38	3.01	1.30	1.17	2.89	3.12	2.85	3.21
16 to less than 20 students	1.15	1.15	2.91	0.82	1.17	2.44	2.72	2.48	3.21
20 or more students	1.47	1.47	3.86	1.87	0.81	2.54	3.57	2.61	3.46

See notes at end of table.

Table S2.4. Standard errors for Table 2.4: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the frequency of bullying, whether they thought bullying would happen again, and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Percentage distribution of the frequency of bullying: One day: Once	One day: More than once	One day: Don't know	Two days	Three to 10 days	More than 10 days	Thinks the bullying would happen again
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races									
Less than 5 percent	3.20	3.20	5.91	†	†	7.12	6.32	4.46	8.11
5 to less than 20 percent	1.55	1.55	3.07	1.18	0.61	2.64	3.16	3.42	3.46
20 to less than 50 percent	1.18	1.18	2.99	0.84	1.23	2.23	2.79	2.61	3.02
50 percent or more	1.12	1.12	2.85	1.15	0.95	2.33	2.57	2.21	2.91
Percent of students eligible for free or reduced-price lunch									
0 to less than 20 percent	1.74	1.74	3.88	1.73	1.07	3.31	4.17	3.60	4.32
20 to less than 50 percent	1.17	1.17	2.74	1.04	0.79	2.31	2.48	2.42	3.12
50 percent or more	1.11	1.11	2.81	0.98	1.08	2.18	2.16	1.97	2.79

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.5. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by type of bullying and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Type of bullying reported: Made fun of, called names, or insulted	Spread rumors	Threatened with harm	Pushed, shoved, tripped, or spit on	Tried to make do things they did not want to do	Excluded from activities on purpose	Property destroyed on purpose
Total bullied and not bullied	79.8	20.2	13.0	13.4	3.9	5.3	1.9	5.2	1.4
Sex									
Male	83.3	16.7	10.3	9.3	4.2	6.1	1.9	3.5	1.3
Female	76.2	23.8	15.8	17.5	3.6	4.4	1.9	6.9	1.5
Race/ethnicity[1]									
White, not Hispanic or Latino	77.2	22.8	15.0	15.2	4.2	5.4	2.1	6.7	1.8
Black, not Hispanic or Latino	77.1	22.9	16.0	14.5	5.4	6.5	2.4	3.9	1.7
Hispanic or Latino	84.3	15.7	8.9	10.6	2.6	4.6	1.4	3.3	0.6 !
Asian, not Hispanic or Latino	92.7	7.3	5.3	4.7	‡	1.7 !	‡	‡	‡
All other races, not Hispanic or Latino	76.7	23.3	13.0	14.4	7.4	8.4	‡	6.8	2.6 !
Grade[2]									
6th	70.5	29.5	23.1	17.1	8.5	10.5	2.1 !	8.4	3.5
7th	75.6	24.4	17.7	14.2	4.9	8.2	3.0	7.6	1.7
8th	74.7	25.3	16.3	16.0	4.4	6.9	1.8	5.7	1.6
9th	80.7	19.3	12.5	12.3	3.7	5.4	2.2	4.3	1.1 !
10th	81.1	18.9	9.4	16.1	3.6	3.7	2.1	4.4	1.5 !
11th	85.3	14.7	9.5	9.6	2.5	3.3	1.6 !	3.2	0.9 !
12th	87.8	12.2	6.0	9.1	1.3 !	0.7 !	0.4 !	3.5	0.5 !
Household income									
Less than $7,500	73.8	26.2	21.8	17.5	4.5 !	7.5	3.7 !	7.3 !	‡
$7,500–14,999	73.4	26.6	17.4	21.1	5.1 !	5.9	2.8 !	6.6	‡
$15,000–24,999	77.6	22.4	12.8	14.2	6.0	7.8	1.2 !	3.6 !	2.3
$25,000–34,999	79.0	21.0	13.8	13.5	4.5	6.9	2.0 !	5.7	1.5 !
$35,000–49,999	83.4	16.6	10.4	10.3	4.4	5.3	1.5 !	5.1	1.2 !
$50,000 or more	80.2	19.8	12.8	13.1	3.2	4.4	1.9	5.1	1.3

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.
[1] Respondents who identified themselves as being of Hispanic or Latino origin were classified as "Hispanic or Latino," regardless of their race. "Black, not Hispanic or Latino" includes African Americans. "All other races, not Hispanic or Latino" includes Native Hawaiians or Other Pacific Islanders, American Indians or Alaska Natives, and respondents of Two or more races (3.7 percent of all respondents).
[2] The School Crime Supplement sample includes students ages 12–18 and, therefore, might not be representative of students in 6th grade. Comparisons between students in 6th grade and those in other grades should be made with caution.
NOTE: "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Bullying types may sum to more than total because students could have experienced more than one type of bullying. Missing data are not shown for household income. Detail may not sum to totals because of rounding and missing student characteristic data. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.5. Standard errors for Table 2.5: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by type of bullying and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Type of bullying reported: Made fun of, called names, or insulted	Spread rumors	Threatened with harm	Pushed, shoved, tripped, or spit on	Tried to make do things they did not want to do	Excluded from activities on purpose	Property destroyed on purpose
Total bullied and not bullied	0.71	0.71	0.56	0.59	0.32	0.37	0.23	0.39	0.16
Sex									
Male	0.87	0.87	0.63	0.59	0.44	0.50	0.30	0.42	0.20
Female	1.01	1.01	0.84	0.91	0.39	0.45	0.33	0.65	0.22
Race/ethnicity									
White, not Hispanic or Latino	1.02	1.02	0.80	0.86	0.41	0.48	0.33	0.55	0.25
Black, not Hispanic or Latino	1.98	1.98	1.93	1.44	0.90	1.26	0.70	0.91	0.47
Hispanic or Latino	1.12	1.12	0.81	0.82	0.45	0.62	0.41	0.52	0.19
Asian, not Hispanic or Latino	1.56	1.56	1.29	1.32	†	0.68	†	†	†
All other races, not Hispanic or Latino	2.69	2.69	2.11	2.52	1.77	1.84	†	1.80	1.21
Grade									
6th	2.79	2.79	2.70	2.17	1.82	1.76	0.73	1.68	0.97
7th	1.60	1.60	1.45	1.28	0.79	1.03	0.61	0.97	0.43
8th	1.69	1.69	1.44	1.16	0.74	0.95	0.46	0.82	0.42
9th	1.52	1.52	1.27	1.17	0.70	0.92	0.55	0.82	0.42
10th	1.67	1.67	1.19	1.60	0.81	0.74	0.63	0.86	0.50
11th	1.45	1.45	1.22	1.18	0.65	0.85	0.57	0.68	0.38
12th	1.34	1.34	0.93	1.19	0.40	0.25	0.16	0.70	0.24
Household income									
Less than $7,500	3.88	3.88	3.48	3.57	1.76	2.11	1.61	2.60	†
$7,500–14,999	3.21	3.21	2.74	2.87	1.71	1.72	1.05	1.69	†
$15,000–24,999	2.18	2.18	1.68	1.81	1.13	1.31	0.36	1.15	0.65
$25,000–34,999	2.14	2.14	1.80	1.64	1.12	1.29	0.76	1.26	0.57
$35,000–49,999	1.57	1.57	1.27	1.14	0.87	1.00	0.52	0.85	0.46
$50,000 or more	0.92	0.92	0.75	0.76	0.38	0.44	0.31	0.44	0.22

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.6. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by type of bullying and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Type of bullying reported: Made fun of, called names, or insulted	Spread rumors	Threatened with harm	Pushed, shoved, tripped, or spit on	Tried to make do things they did not want to do	Excluded from activities on purpose	Property destroyed on purpose
Total bullied and not bullied	79.3	20.7	13.3	13.6	4.0	5.4	1.9	5.2	1.5
Region									
Northeast	82.0	18.0	13.3	10.9	2.8	3.9	‡	6.3	1.3
Midwest	76.5	23.5	15.3	16.0	4.9	5.3	2.3	5.0	1.4
South	79.4	20.6	12.9	13.8	4.6	6.0	2.4	4.6	1.3
West	80.1	19.9	12.4	12.7	3.0	5.6	1.6	5.7	1.9
Sector									
Public	78.9	21.1	13.5	13.8	4.1	5.5	1.9	5.2	1.5
Private	85.0	15.0	10.9	10.3	‡	4.3 !	1.8 !	5.2	‡
Catholic	87.6	12.4 !	9.3 !	10.2 !	‡	‡	‡	6.0 !	#
Other religious	86.7	13.3 !	9.5 !	6.9 !	‡	‡	‡	7.7 !	‡
Nonsectarian	83.7	16.3 !	5.8 !	13.1 !	‡	‡	‡	‡	‡
Locale									
City	80.1	19.9	13.4	12.5	5.2	5.8	2.6	5.2	1.3
Suburb	81.9	18.1	11.7	11.7	3.1	4.4	1.2	4.8	1.3
Town	73.1	26.9	16.4	15.6	4.0	6.9	1.9	7.8	2.1 !
Rural	76.2	23.8	15.0	17.9	4.2	6.1	2.3	4.8	1.8
Level[1]									
Primary	74.7	25.3	19.9	16.2	4.8 !	8.4	‡	7.9	4.6
Middle	73.3	26.7	18.8	15.6	5.7	8.5	2.4	6.5	1.8
High	83.2	16.8	9.8	12.1	2.9	3.3	1.6	4.1	0.9
Other	78.2	21.8	12.8	15.0	5.2	6.4	2.8 !	6.5	2.1 !
Enrollment size									
Less than 300	73.9	26.1	15.6	18.5	4.9	6.5	2.0 !	7.1	2.0 !
300–599	75.9	24.1	17.2	16.7	4.7	7.6	2.5	7.0	2.2
600–999	75.9	24.1	16.7	15.0	4.3	6.3	1.8	5.6	1.5
1,000–1,499	81.7	18.3	11.7	11.3	3.7	4.4	1.6	4.0	0.9
1,500–1,999	81.5	18.5	12.0	11.5	3.7	4.5	2.3 !	4.8	1.4 !
2,000 or more	87.7	12.3	5.6	9.6	2.9	3.0	1.4 !	3.0	1.1
Student-to-full-time-equivalent (FTE) teacher ratio									
Less than 13 students	77.4	22.7	14.8	16.5	5.2	6.1	2.3 !	6.5	1.7 !
13 to less than 16 students	77.6	22.4	14.9	15.0	4.2	6.5	2.4	6.2	1.4
16 to less than 20 students	80.1	19.9	12.6	13.2	4.4	4.9	2.0	4.4	1.6
20 or more students	81.5	18.5	11.3	11.2	2.9	5.0	1.0	4.4	1.0

See notes at end of table.

Table 2.6. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by type of bullying and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Type of bullying reported: Made fun of, called names, or insulted	Spread rumors	Threatened with harm	Pushed, shoved, tripped, or spit on	Tried to make do things they did not want to do	Excluded from activities on purpose	Property destroyed on purpose
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races									
Less than 5 percent	80.1	19.9	12.5	13.2	2.5 !	3.6	‡	4.3 !	‡
5 to less than 20 percent	77.3	22.7	13.4	15.8	4.3	5.3	1.6	6.4	1.2
20 to less than 50 percent	77.3	22.7	14.4	14.9	3.6	5.5	1.9	6.4	1.8
50 percent or more	81.4	18.6	12.6	12.0	4.5	5.7	2.0	4.1	1.5
Percent of students eligible for free or reduced-price lunch[2]									
0 to less than 20 percent	79.6	20.4	12.9	13.1	3.0	3.6	0.8 !	5.9	1.8
20 to less than 50 percent	80.2	19.8	12.6	13.9	3.2	4.8	1.9	5.3	1.4
50 percent or more	77.5	22.5	14.7	14.3	5.4	6.9	2.3	4.6	1.5

Rounds to zero.
! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.
[1] The School Crime Supplement sample includes students ages 12–18 who were enrolled in grades 6–12 and, therefore, might not be representative of students in primary schools. Comparisons between students in primary schools and those in other school levels should be made with caution.
[2] Data on free or reduced-price lunch eligibility are only available for public schools.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Bullying types may sum to more than total because students could have experienced more than one type of bullying. No school match was available for 1,338,000 students. Additional missing and not applicable school characteristic data are not shown for locale; school level; enrollment size; student-to-FTE teacher ratio; percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races; and percent of students eligible for free or reduced-price lunch. Detail may not sum to totals because of rounding and these missing data. Total bullied and not bullied is based on respondents for whom data on school and bullying are available (93.6 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.6. Standard errors for Table 2.6: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by type of bullying and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Type of bullying reported: Made fun of, called names, or insulted	Spread rumors	Threatened with harm	Pushed, shoved, tripped, or spit on	Tried to make do things they did not want to do	Excluded from activities on purpose	Property destroyed on purpose
Total bullied and not bullied	0.74	0.74	0.59	0.61	0.33	0.38	0.24	0.41	0.16
Region									
Northeast	1.79	1.79	1.47	1.53	0.69	0.89	†	1.15	0.53
Midwest	1.56	1.56	1.12	1.36	0.79	0.75	0.60	0.65	0.36
South	1.04	1.04	0.79	0.94	0.52	0.60	0.40	0.63	0.28
West	1.52	1.52	1.33	1.09	0.58	0.75	0.41	0.85	0.34
Sector									
Public	0.76	0.76	0.59	0.65	0.34	0.37	0.25	0.43	0.18
Private	2.47	2.47	2.16	1.77	†	1.70	0.84	1.48	†
Catholic	3.83	3.83	3.69	3.22	†	†	†	2.90	†
Other religious	4.03	4.03	3.72	2.53	†	†	†	3.74	†
Nonsectarian	5.10	5.10	2.62	4.76	†	†	†	†	†
Locale									
City	1.35	1.35	1.16	1.12	0.74	0.69	0.53	0.76	0.34
Suburb	0.90	0.90	0.73	0.79	0.39	0.50	0.27	0.50	0.24
Town	1.75	1.75	1.89	1.66	1.04	1.30	0.56	1.37	0.65
Rural	1.56	1.56	1.17	1.57	0.71	0.90	0.59	0.93	0.42
Level									
Primary	3.39	3.39	3.13	2.47	2.11	2.48	†	2.30	1.34
Middle	1.33	1.33	1.13	1.00	0.71	0.83	0.38	0.66	0.37
High	0.87	0.87	0.57	0.74	0.36	0.36	0.32	0.46	0.15
Other	2.56	2.56	1.98	2.07	1.25	1.45	0.91	1.49	0.95
Enrollment size									
Less than 300	2.56	2.56	1.75	2.09	1.07	1.39	0.93	1.67	0.68
300–599	1.50	1.50	1.47	1.43	0.81	1.00	0.59	0.96	0.58
600–999	1.37	1.37	1.16	1.16	0.57	0.73	0.39	0.65	0.28
1,000–1,499	1.39	1.39	1.17	1.06	0.74	0.63	0.44	0.72	0.25
1,500–1,999	1.79	1.79	1.53	1.38	0.83	0.89	0.83	0.88	0.49
2,000 or more	1.31	1.31	0.92	1.28	0.67	0.66	0.48	0.77	0.32
Student-to-full-time-equivalent (FTE) teacher ratio									
Less than 13 students	2.14	2.14	1.66	1.90	1.02	1.16	0.70	1.16	0.57
13 to less than 16 students	1.38	1.38	1.09	1.19	0.59	0.82	0.50	0.77	0.30
16 to less than 20 students	1.15	1.15	0.90	0.97	0.59	0.61	0.41	0.53	0.30
20 or more students	1.47	1.47	1.28	0.99	0.58	0.71	0.29	0.77	0.31

See notes at end of table.

Table S2.6. Standard errors for Table 2.6: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by type of bullying and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Type of bullying reported: Made fun of, called names, or insulted	Spread rumors	Threatened with harm	Pushed, shoved, tripped, or spit on	Tried to make do things they did not want to do	Excluded from activities on purpose	Property destroyed on purpose
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races									
Less than 5 percent	3.20	3.20	2.41	2.59	0.78	1.01	†	1.55	†
5 to less than 20 percent	1.55	1.55	1.13	1.41	0.69	0.88	0.45	0.84	0.31
20 to less than 50 percent	1.18	1.18	1.02	0.94	0.53	0.58	0.37	0.79	0.34
50 percent or more	1.12	1.12	0.98	0.80	0.56	0.55	0.36	0.57	0.29
Percent of students eligible for free or reduced-price lunch									
0 to less than 20 percent	1.74	1.74	1.34	1.49	0.61	0.72	0.35	0.89	0.42
20 to less than 50 percent	1.17	1.17	0.96	1.00	0.51	0.52	0.39	0.68	0.32
50 percent or more	1.11	1.11	0.93	0.95	0.58	0.63	0.38	0.60	0.28

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.7. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by reported negative effects, whether an adult was notified, and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied				
			Negative effect reported[1]				
			School work	Relationships with family and friends	Feelings about self	Physical health	Adult was notified
Total bullied and not bullied	79.8	20.2	19.4	18.6	26.8	13.7	46.3
Sex							
Male	83.3	16.7	18.2	12.7	21.0	9.7	43.1
Female	76.2	23.8	20.3	22.9	30.9	16.7	48.7
Race/ethnicity[2]							
White, not Hispanic or Latino	77.2	22.8	18.1	20.3	29.2	15.1	47.6
Black, not Hispanic or Latino	77.1	22.9	20.3	14.8	23.9	14.5	50.5
Hispanic or Latino	84.3	15.7	21.5	15.2	20.7	8.6	42.5
Asian, not Hispanic or Latino	92.7	7.3	26.6 !	35.5	41.6	22.1 !	49.8
All other races, not Hispanic or Latino	76.7	23.3	21.2 !	15.2 !	21.5	10.0 !	28.2
Grade[3]							
6th	70.5	29.5	25.4	19.5	23.8	21.3	57.2
7th	75.6	24.4	20.1	16.8	24.4	13.9	57.5
8th	74.7	25.3	14.7	17.6	30.1	11.7	47.0
9th	80.7	19.3	20.0	18.2	27.6	14.7	38.7
10th	81.1	18.9	18.8	20.8	22.2	17.0	38.1
11th	85.3	14.7	22.9	19.3	35.2	7.6 !	45.3
12th	87.8	12.2	16.5	20.0	23.6	7.6 !	32.9
Household income							
Less than $7,500	73.8	26.2	23.7	22.0 !	33.8	18.5 !	58.9
$7,500–14,999	73.4	26.6	31.7	23.7	30.5	25.7	60.6
$15,000–24,999	77.6	22.4	21.9	20.8	16.7	10.2 !	42.3
$25,000–34,999	79.0	21.0	22.8	16.4	24.8	18.3	47.0
$35,000–49,999	83.4	16.6	16.5	21.5	27.7	13.8	45.0
$50,000 or more	80.2	19.8	17.3	17.3	27.9	11.9	44.9

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
[1] Includes students who reported being affected "somewhat" or "a lot."
[2] Respondents who identified themselves as being of Hispanic or Latino origin were classified as "Hispanic or Latino," regardless of their race. "Black, not Hispanic or Latino" includes African Americans. "All other races, not Hispanic or Latino" includes Native Hawaiians or Other Pacific Islanders, American Indians or Alaska Natives, and respondents of Two or more races (3.7 percent of all respondents).
[3] The School Crime Supplement sample includes students ages 12–18 and, therefore, might not be representative of students in 6th grade. Comparisons between students in 6th grade and those in other grades should be made with caution.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Effect types may sum to more than total because students could have experienced more than one type of effect. Missing data are not shown for household income. Detail may not sum to totals because of rounding and missing student characteristic data. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

National Center for Education Statistics

Table S2.7. Standard errors for Table 2.7: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by reported negative effects, whether an adult was notified, and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied				
			Negative effect reported				
			School work	Relationships with family and friends	Feelings about self	Physical health	Adult was notified
Total bullied and not bullied	0.71	0.71	1.40	1.52	1.54	1.18	1.41
Sex							
Male	0.87	0.87	1.88	1.61	2.15	1.65	2.44
Female	1.01	1.01	1.74	2.26	1.97	1.70	2.06
Race/ethnicity							
White, not Hispanic or Latino	1.02	1.02	1.63	1.86	2.12	1.49	1.82
Black, not Hispanic or Latino	1.98	1.98	4.50	3.33	4.11	3.43	4.70
Hispanic or Latino	1.12	1.12	2.92	2.89	2.45	1.84	3.37
Asian, not Hispanic or Latino	1.56	1.56	9.14	10.29	10.57	9.09	10.94
All other races, not Hispanic or Latino	2.69	2.69	6.55	5.28	5.49	3.97	7.34
Grade							
6th	2.79	2.79	4.73	3.73	4.40	4.82	5.37
7th	1.60	1.60	3.01	3.57	3.07	3.23	3.52
8th	1.69	1.69	2.56	3.13	3.37	2.02	4.07
9th	1.52	1.52	3.54	3.57	4.30	3.35	4.09
10th	1.67	1.67	3.55	3.75	3.21	3.33	4.40
11th	1.45	1.45	4.41	4.12	5.19	2.32	5.57
12th	1.34	1.34	3.93	4.82	4.70	2.74	5.27
Household income							
Less than $7,500	3.88	3.88	6.78	7.87	7.91	7.87	8.36
$7,500–14,999	3.21	3.21	6.52	5.68	6.89	6.63	7.15
$15,000–24,999	2.18	2.18	4.75	5.05	3.67	3.23	5.53
$25,000–34,999	2.14	2.14	4.63	3.29	4.81	4.47	5.31
$35,000–49,999	1.57	1.57	3.66	3.89	4.04	3.50	4.41
$50,000 or more	0.92	0.92	1.77	1.77	1.89	1.27	2.03

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.8. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by reported negative effects, whether an adult was notified, and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied				
			Negative effect reported[1]				
			School work	Relationships with family and friends	Feelings about self	Physical health	Adult was notified
Total bullied and not bullied	79.3	20.7	19.4	18.6	26.5	13.8	45.6
Region							
Northeast	82.0	18.0	23.4	21.3	35.8	14.8	54.2
Midwest	76.5	23.5	17.4	16.4	25.0	15.1	42.7
South	79.4	20.6	18.3	19.5	24.6	11.0	48.9
West	80.1	19.9	21.3	18.1	26.1	16.2	38.8
Sector							
Public	78.9	21.1	19.3	19.0	26.0	13.4	45.0
Private	85.0	15.0	21.5 !	11.6 !	36.5	20.2 !	57.0
Catholic	87.6	12.4 !	48.1	‡	55.3	32.8 !	79.2
Other religious	86.7	13.3 !	‡	‡	21.8 !	‡	62.0
Nonsectarian	83.7	16.3 !	‡	‡	43.6 !	‡	40.1!
Locale							
City	80.1	19.9	22.5	19.8	26.7	17.3	45.5
Suburb	81.9	18.1	20.1	17.4	27.4	11.2	43.6
Town	73.1	26.9	13.2	17.5	26.5	15.1	42.7
Rural	76.2	23.8	18.6	19.8	24.7	12.6	50.4
Level[2]							
Primary	74.7	25.3	32.3	19.1	45.0	38.2	60.3
Middle	73.3	26.7	17.5	17.2	22.6	11.3	51.7
High	83.2	16.8	19.4	20.3	27.2	12.1	38.8
Other	78.2	21.8	18.7	15.7	26.8	15.2 !	42.8
Enrollment size							
Less than 300	73.9	26.1	13.4	13.9	30.4	13.7	49.4
300–599	75.9	24.1	25.2	24.8	28.4	21.1	55.2
600–999	75.9	24.1	18.7	16.3	23.6	11.8	47.6
1,000–1,499	81.7	18.3	19.3	16.1	25.5	14.5	45.9
1,500–1,999	81.5	18.5	13.6	18.6	23.0	5.1 !	37.4
2,000 or more	87.7	12.3	24.1	25.1	30.3	13.8	23.1
Student-to-full-time-equivalent (FTE) teacher ratio							
Less than 13 students	77.4	22.7	18.5	22.6	28.0	17.2	52.1
13 to less than 16 students	77.6	22.4	23.0	19.6	30.8	14.0	50.4
16 to less than 20 students	80.1	19.9	15.4	16.6	22.3	12.7	44.9
20 or more students	81.5	18.5	20.9	19.1	27.3	12.1	36.3

See notes at end of table.

Table 2.8. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by reported negative effects, whether an adult was notified, and selected student characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied				
			Negative effect reported[1]				
			School work	Relationships with family and friends	Feelings about self	Physical health	Adult was notified
Percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races							
Less than 5 percent	80.1	19.9	10.4 !	18.6 !	17.7	8.2 !	44.0
5 to less than 20 percent	77.3	22.7	14.1	23.3	29.9	13.6	45.9
20 to less than 50 percent	77.3	22.7	17.7	16.2	27.7	14.1	41.9
50 percent or more	81.4	18.6	24.7	18.5	25.0	14.4	48.9
Percent of students eligible for free or reduced-price lunch[3]							
0 to less than 20 percent	79.6	20.4	19.5	22.3	29.9	7.9	44.4
20 to less than 50 percent	80.2	19.8	17.3	18.0	28.3	14.5	42.6
50 percent or more	77.5	22.5	19.7	18.5	21.4	14.3	47.5

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.
[1] Includes students who reported being affected "somewhat" or "a lot."
[2] The School Crime Supplement sample includes students ages 12–18 who were enrolled in grades 6–12 and, therefore, might not be representative of students in primary schools. Comparisons between students in primary schools and those in other school levels should be made with caution.
[3] Data on free or reduced-price lunch eligibility are only available for public schools.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Effect types may sum to more than total because students could have experienced more than one type of effect. No school match was available for 1,338,000 students. Additional missing and not applicable school characteristic data are not shown for locale; school level; enrollment size; student-to-FTE teacher ratio; percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races; and percent of students eligible for free or reduced-price lunch. Detail may not sum to totals because of rounding and these missing data. Total bullied and not bullied is based on respondents for whom data on school and bullying are available (93.6 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.8. Standard errors for Table 2.8: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by reported negative effects, whether an adult was notified, and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied				
			Negative effect reported				
			School work	Relationships with family and friends	Feelings about self	Physical health	Adult was notified
Total bullied and not bullied	0.74	0.74	1.42	1.55	1.56	1.21	1.44
Region							
Northeast	1.79	1.79	4.85	5.06	4.62	3.69	4.16
Midwest	1.56	1.56	2.56	2.25	2.74	2.34	2.48
South	1.04	1.04	2.17	2.63	2.62	1.73	2.73
West	1.52	1.52	2.59	2.57	2.76	2.77	2.98
Sector							
Public	0.76	0.76	1.42	1.62	1.53	1.20	1.40
Private	2.47	2.47	6.91	4.83	8.76	6.48	9.43
Catholic	3.83	3.83	13.72	†	12.55	15.47	9.50
Other religious	4.03	4.03	†	†	10.85	†	15.94
Nonsectarian	5.10	5.10	†	†	17.21	†	17.06
Locale							
City	1.35	1.35	3.19	2.87	2.97	2.85	2.93
Suburb	0.90	0.90	2.15	2.16	2.20	1.89	2.80
Town	1.75	1.75	3.21	3.44	3.23	3.81	3.59
Rural	1.56	1.56	2.57	3.24	3.62	2.28	3.34
Level							
Primary	3.39	3.39	7.10	5.18	6.54	8.40	5.13
Middle	1.33	1.33	1.92	2.10	2.10	1.61	2.62
High	0.87	0.87	2.04	2.16	2.43	1.70	2.19
Other	2.56	2.56	4.43	4.44	5.27	4.95	6.44
Enrollment size							
Less than 300	2.56	2.56	3.37	3.40	4.75	3.66	5.26
300–599	1.50	1.50	3.47	3.61	3.68	3.38	3.61
600–999	1.37	1.37	2.58	2.34	2.84	1.83	2.71
1,000–1,499	1.39	1.39	2.88	2.91	3.33	2.71	3.68
1,500–1,999	1.79	1.79	3.60	4.48	4.59	2.21	5.20
2,000 or more	1.31	1.31	5.63	5.09	5.70	4.05	4.78
Student-to-full-time-equivalent (FTE) teacher ratio							
Less than 13 students	2.14	2.14	3.98	4.40	4.78	3.18	3.81
13 to less than 16 students	1.38	1.38	3.14	2.65	3.33	2.11	3.02
16 to less than 20 students	1.15	1.15	1.97	2.63	2.67	2.28	3.14
20 or more students	1.47	1.47	2.97	2.87	3.27	2.53	3.54

See notes at end of table.

Table S2.8. Standard errors for Table 2.8: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by reported negative effects, whether an adult was notified, and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied				
			Negative effect reported				
			School work	Relationships with family and friends	Feelings about self	Physical health	Adult was notified
Percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races							
Less than 5 percent	3.20	3.20	3.70	6.02	4.80	3.46	7.21
5 to less than 20 percent	1.55	1.55	2.66	3.03	3.47	2.13	3.17
20 to less than 50 percent	1.18	1.18	2.14	2.05	2.51	2.24	2.72
50 percent or more	1.12	1.12	2.66	2.55	2.58	2.12	2.43
Percent of students eligible for free or reduced-price lunch							
0 to less than 20 percent	1.74	1.74	3.70	3.35	3.91	2.35	4.94
20 to less than 50 percent	1.17	1.17	2.24	2.22	2.56	2.47	2.94
50 percent or more	1.11	1.11	2.16	2.43	2.18	1.89	2.44

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.9. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by perceived relationship of bullying to personal characteristics and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied: Perceived relationship of bullying to						
			Race	Religion	Ethnic origin	Disability	Gender	Sexual orientation	Appearance
Total bullied and not bullied	79.8	20.2	9.5	4.5	7.3	7.3	7.5	3.6	29.7
Sex									
Male	83.3	16.7	11.1	6.0	8.8	7.4	2.6 !	2.7	26.2
Female	76.2	23.8	8.3	3.4	6.2	7.2	11.1	4.3	32.1
Race/ethnicity[1]									
White, not Hispanic or Latino	77.2	22.8	5.5	4.4	3.2	8.0	8.2	4.1	28.9
Black, not Hispanic or Latino	77.1	22.9	11.6	‡	6.3 !	10.2	7.5 !	3.8 !	32.3
Hispanic or Latino	84.3	15.7	17.1	4.3 !	15.9	3.0 !	6.6 !	‡	30.8
Asian, not Hispanic or Latino	92.7	7.3	29.2 !	24.4 !	40.4	#	‡	‡	20.8 !
All other races, not Hispanic or Latino	76.7	23.3	16.7 !	‡	13.5	9.6 !	‡	‡	29.2
Grade[2]									
6th	70.5	29.5	8.6 !	2.2 !	5.4 !	10.4	7.3 !	‡	32.5
7th	75.6	24.4	11.4	6.3 !	7.7	7.4	5.5	2.9 !	28.3
8th	74.7	25.3	7.8	6.4	4.7 !	5.2	5.3	2.3 !	22.7
9th	80.7	19.3	11.9	4.2 !	8.7	7.2 !	9.1	4.4 !	30.7
10th	81.1	18.9	7.4	4.6 !	9.8	6.3	11.5	4.9 !	34.2
11th	85.3	14.7	9.8 !	‡	6.0 !	10.9 !	7.6 !	5.7 !	35.6
12th	87.8	12.2	10.0 !	‡	10.3 !	5.0 !	8.1 !	‡	28.3
Household income									
Less than $7,500	73.8	26.2	11.4 !	‡	‡	‡	‡	‡	36.4
$7,500–14,999	73.4	26.6	11.9 !	‡	15.4 !	7.2 !	‡	‡	34.8
$15,000–24,999	77.6	22.4	6.7 !	‡	3.4 !	10.4	‡	5.0 !	29.4
$25,000–34,999	79.0	21.0	14.8	3.6 !	13.0	5.6	8.3 !	‡	28.5
$35,000–49,999	83.4	16.6	11.3	‡	10.1	5.2 !	6.8 !	4.2 !	33.5
$50,000 or more	80.2	19.8	8.3	5.3	5.7	7.5	8.5	3.1	28.1

Rounds to zero.

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

[1] Respondents who identified themselves as being of Hispanic or Latino origin were classified as "Hispanic or Latino," regardless of their race. "Black, not Hispanic or Latino" includes African Americans. "All other races, not Hispanic or Latino" includes Native Hawaiians or Other Pacific Islanders, American Indians or Alaska Natives, and respondents of Two or more races (3.7 percent of all respondents).

[2] The School Crime Supplement sample includes students ages 12–18 and, therefore, might not be representative of students in 6th grade. Comparisons between students in 6th grade and those in other grades should be made with caution.

NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Perceived relation totals may sum to more than 100 percent because students could have selected more than one perceived relation. Missing data are not shown for household income. Detail may not sum to totals because of rounding and missing student characteristic data. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.9. Standard errors for Table 2.9: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by perceived relationship of bullying to personal characteristics and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied: Perceived relationship of bullying to						
			Race	Religion	Ethnic origin	Disability	Gender	Sexual orientation	Appearance
Total bullied and not bullied	0.71	0.71	1.05	0.79	0.83	0.90	0.86	0.60	1.41
Sex									
Male	0.87	0.87	1.73	1.23	1.43	1.17	0.85	0.78	2.01
Female	1.01	1.01	1.25	0.74	1.03	1.28	1.37	0.91	2.07
Race/ethnicity									
White, not Hispanic or Latino	1.02	1.02	0.94	1.01	0.78	1.22	1.23	0.83	1.94
Black, not Hispanic or Latino	1.98	1.98	3.30	†	2.35	2.99	2.62	1.73	4.72
Hispanic or Latino	1.12	1.12	2.83	1.41	2.51	1.17	1.97	†	2.99
Asian, not Hispanic or Latino	1.56	1.56	9.69	9.35	10.77	†	†	†	7.93
All other races, not Hispanic or Latino	2.69	2.69	5.80	†	3.97	4.05	†	†	5.38
Grade									
6th	2.79	2.79	2.91	1.00	2.30	2.98	2.83	†	5.25
7th	1.60	1.60	2.40	2.32	1.94	1.76	1.64	1.23	2.79
8th	1.69	1.69	1.93	1.80	1.45	1.34	1.59	0.91	2.84
9th	1.52	1.52	2.72	1.95	2.55	2.51	2.64	1.77	4.01
10th	1.67	1.67	2.00	1.71	2.38	1.73	2.87	1.91	4.11
11th	1.45	1.45	3.13	†	1.89	3.33	3.18	2.38	4.83
12th	1.34	1.34	3.16	†	3.44	1.88	2.87	†	5.61
Household income									
Less than $7,500	3.88	3.88	4.72	†	†	†	†	†	7.70
$7,500–14,999	3.21	3.21	4.34	†	4.96	3.17	†	†	6.33
$15,000–24,999	2.18	2.18	2.47	†	1.29	3.07	†	2.17	4.41
$25,000–34,999	2.14	2.14	3.79	1.70	3.63	1.64	3.48	†	4.50
$35,000–49,999	1.57	1.57	3.17	†	2.76	1.80	2.18	2.09	3.81
$50,000 or more	0.92	0.92	1.34	1.11	1.10	1.33	1.26	0.75	1.90

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.10. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by perceived relationship of bullying to personal characteristics and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Perceived relationship of bullying to						
			Race	Religion	Ethnic origin	Disability	Gender	Sexual orientation	Appearance
Total bullied and not bullied	79.3	20.7	9.4	4.6	7.3	7.5	7.2	3.5	29.8
Region									
Northeast	82.0	18.0	8.5 !	8.1 !	7.8 !	12.0	6.7 !	‡	32.2
Midwest	76.5	23.5	7.7	3.7 !	3.5	6.5	10.0	3.6 !	28.5
South	79.4	20.6	11.3	4.1 !	7.9	7.3	5.3	4.1	27.3
West	80.1	19.9	8.7	4.2 !	9.9	6.4	7.7	3.3 !	33.7
Sector									
Public	78.9	21.1	9.7	4.8	7.6	7.5	7.6	3.7	29.2
Private	85.0	15.0	‡	#	‡	‡	‡	‡	41.3
Catholic	87.6	12.4 !	‡	#	‡	#	‡	#	52.1
Other religious	86.7	13.3 !	‡	#	#	‡	#	#	‡
Nonsectarian	83.7	16.3 !	#	#	#	‡	#	#	‡
Locale									
City	80.1	19.9	10.7	6.1	11.6	9.2	7.9	3.0 !	34.3
Suburb	81.9	18.1	11.1	5.3	9.1	7.6	6.1	5.0	29.5
Town	73.1	26.9	7.8 !	‡	1.8 !	5.4 !	8.5	2.5 !	30.6
Rural	76.2	23.8	6.3	3.1 !	2.6 !	6.4	7.4	2.4 !	23.4
Level[1]									
Primary	74.7	25.3	‡	‡	7.2 !	8.6 !	10.1 !	‡	25.2
Middle	73.3	26.7	10.5	5.8	6.1	7.0	6.0	2.4 !	27.5
High	83.2	16.8	7.6	3.9	7.4	7.6	8.0	4.8	30.6
Other	78.2	21.8	16.2	‡	12.7 !	8.4 !	6.7 !	‡	40.0
Enrollment size									
Less than 300	73.9	26.1	5.0 !	‡	3.5 !	6.4 !	5.9 !	‡	26.5
300–599	75.9	24.1	9.2	3.7 !	6.9	6.5	7.8	4.9 !	32.4
600–999	75.9	24.1	10.1	7.1	7.5	6.8	4.5	1.6 !	27.0
1,000–1,499	81.7	18.3	13.0	6.9 !	7.9	9.3	10.4	5.3 !	26.3
1,500–1,999	81.5	18.5	6.5 !	‡	5.9 !	9.7 !	10.2 !	3.4 !	37.9
2,000 or more	87.7	12.3	10.9 !	‡	13.3 !	7.8 !	7.1 !	5.5 !	31.1
Student-to-full-time-equivalent (FTE) teacher ratio									
Less than 13 students	77.4	22.7	8.9	5.8 !	6.1 !	6.2 !	5.7 !	‡	29.1
13 to less than 16 students	77.6	22.4	10.5	4.4 !	6.0	11.0	8.8	2.3 !	28.5
16 to less than 20 students	80.1	19.9	8.3	5.5	7.1	7.6	6.5	5.9	29.9
20 or more students	81.5	18.5	10.5	2.6 !	9.7	4.8 !	7.8	3.5 !	31.0

See notes at end of table.

Table 2.10. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by perceived relationship of bullying to personal characteristics and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Perceived relationship of bullying to						
			Race	Religion	Ethnic origin	Disability	Gender	Sexual orientation	Appearance
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races									
Less than 5 percent	80.1	19.9	‡	‡	‡	‡	11.8 !	‡	16.2 !
5 to less than 20 percent	77.3	22.7	4.5	2.1 !	1.2 !	6.1	6.7	4.7 !	31.5
20 to less than 50 percent	77.3	22.7	8.0	5.4	5.7	8.1	8.0	3.8	30.6
50 percent or more	81.4	18.6	14.1	5.5	12.7	8.1	6.7	3.0 !	28.6
Percent of students eligible for free or reduced-price lunch[2]									
0 to less than 20 percent	79.6	20.4	9.3	8.1 !	9.0	6.0 !	7.9	5.2 !	25.6
20 to less than 50 percent	80.2	19.8	7.4	3.7 !	5.2	10.0	8.7	3.9	32.4
50 percent or more	77.5	22.5	11.0	4.5	8.2	6.0	5.9	3.0	27.1

Rounds to zero.
! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.
[1] The School Crime Supplement sample includes students ages 12–18 who were enrolled in grades 6–12 and, therefore, might not be representative of students in primary schools. Comparisons between students in primary schools and those in other school levels should be made with caution.
[2] Data on free or reduced-price lunch eligibility are only available for public schools.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Perceived relation totals may sum to more than 100 percent because students could have selected more than one perceived relation. No school match was available for 1,338,000 students. Additional missing and not applicable school characteristic data are not shown for locale; school level; enrollment size; student-to-FTE teacher ratio; percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races; and percent of students eligible for free or reduced-price lunch. Detail may not sum to totals because of rounding and these missing data. Total bullied and not bullied is based on respondents for whom data on school and bullying are available (93.6 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.10. Standard errors for Table 2.10: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by perceived relationship of bullying to personal characteristics and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Perceived relationship of bullying to						
			Race	Religion	Ethnic origin	Disability	Gender	Sexual orientation	Appearance
Total bullied and not bullied	0.74	0.74	1.06	0.80	0.82	0.93	0.86	0.60	1.45
Region									
Northeast	1.79	1.79	3.36	3.78	2.99	3.45	2.29	†	4.14
Midwest	1.56	1.56	1.67	1.14	1.05	1.47	2.05	1.24	2.89
South	1.04	1.04	1.65	1.29	1.43	1.55	1.34	1.04	2.56
West	1.52	1.52	1.93	1.54	1.88	1.60	1.80	1.18	2.98
Sector									
Public	0.76	0.76	1.12	0.85	0.87	0.93	0.90	0.63	1.46
Private	2.47	2.47	†	†	†	†	†	†	7.73
Catholic	3.83	3.83	†	†	†	†	†	†	13.13
Other religious	4.03	4.03	†	†	†	†	†	†	†
Nonsectarian	5.10	5.10	†	†	†	†	†	†	†
Locale									
City	1.35	1.35	1.75	1.78	1.90	1.76	2.14	1.04	3.24
Suburb	0.90	0.90	2.02	1.45	1.82	1.63	1.47	1.31	2.47
Town	1.75	1.75	2.47	†	0.83	2.03	2.54	1.10	4.20
Rural	1.56	1.56	1.77	1.22	0.88	1.81	1.89	1.07	2.87
Level									
Primary	3.39	3.39	†	†	3.16	2.99	4.51	†	5.46
Middle	1.33	1.33	1.56	1.32	1.28	1.34	1.19	0.75	2.19
High	0.87	0.87	1.31	1.02	1.18	1.35	1.54	1.11	2.35
Other	2.56	2.56	4.24	†	4.06	3.71	2.77	†	6.19
Enrollment size									
Less than 300	2.56	2.56	1.87	†	1.43	2.40	2.33	†	3.95
300–599	1.50	1.50	2.46	1.37	1.82	1.67	2.22	1.61	3.69
600–999	1.37	1.37	1.83	1.66	1.51	1.45	1.15	0.75	2.53
1,000–1,499	1.39	1.39	2.43	2.36	1.98	2.15	2.38	1.84	3.36
1,500–1,999	1.79	1.79	2.52	†	2.11	3.16	4.17	1.68	5.24
2,000 or more	1.31	1.31	3.91	†	4.11	3.03	2.86	2.54	5.42
Student-to-full-time-equivalent (FTE) teacher ratio									
Less than 13 students	2.14	2.14	2.49	2.22	2.28	2.12	2.05	†	4.12
13 to less than 16 students	1.38	1.38	1.95	1.31	1.68	2.03	1.88	0.82	2.73
16 to less than 20 students	1.15	1.15	1.58	1.35	1.34	1.60	1.74	1.44	2.90
20 or more students	1.47	1.47	2.24	0.91	2.16	1.75	1.77	1.43	3.46

See notes at end of table.

Table S2.10. Standard errors for Table 2.10: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by perceived relationship of bullying to personal characteristics and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Perceived relationship of bullying to						
			Race	Religion	Ethnic origin	Disability	Gender	Sexual orientation	Appearance
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races									
Less than 5 percent	3.20	3.20	†	†	†	†	5.29	†	5.28
5 to less than 20 percent	1.55	1.55	1.32	0.80	0.56	1.62	1.86	1.57	2.98
20 to less than 50 percent	1.18	1.18	1.36	1.50	1.25	1.58	1.47	1.04	2.62
50 percent or more	1.12	1.12	2.24	1.44	1.81	1.67	1.44	0.93	2.36
Percent of students eligible for free or reduced-price lunch									
0 to less than 20 percent	1.74	1.74	1.96	2.61	2.09	2.00	2.34	2.08	3.44
20 to less than 50 percent	1.17	1.17	1.64	1.33	1.41	1.84	1.83	1.02	2.42
50 percent or more	1.11	1.11	1.78	1.24	1.31	1.04	1.27	0.89	1.98

† Not applicable.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.11. Number and percentage of students ages 12 through 18 who reported being bullied at school, by bullying components and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Bullied with repetition	Bullied with power imbalance	Bullied with repetition and power imbalance
Total bullied and not bullied	79.8	20.2	15.4	16.9	13.6
Sex					
Male	83.3	16.7	12.1	13.4	10.3
Female	76.2	23.8	18.9	20.5	17.0
Race/ethnicity[1]					
White, not Hispanic or Latino	77.2	22.8	17.9	19.3	16.0
Black, not Hispanic or Latino	77.1	22.9	17.0	18.6	14.4
Hispanic or Latino	84.3	15.7	11.2	13.0	9.8
Asian, not Hispanic or Latino	92.7	7.3	5.4	6.5	5.3
All other races, not Hispanic or Latino	76.7	23.3	17.1	18.1	13.9
Grade[2]					
6th	70.5	29.5	24.8	24.8	22.3
7th	75.6	24.4	20.2	20.1	17.4
8th	74.7	25.3	17.2	20.0	14.3
9th	80.7	19.3	14.4	16.6	13.0
10th	81.1	18.9	13.5	16.0	12.4
11th	85.3	14.7	12.5	12.5	10.9
12th	87.8	12.2	8.6	10.6	7.7
Household income					
Less than $7,500	73.8	26.2	20.7	23.4	20.1
$7,500–14,999	73.4	26.6	22.3	22.6	19.6
$15,000–24,999	77.6	22.4	14.9	16.9	12.3
$25,000–34,999	79.0	21.0	15.9	18.0	13.6
$35,000–49,999	83.4	16.6	13.2	14.0	11.9
$50,000 or more	80.2	19.8	15.1	16.6	13.4

[1]Respondents who identified themselves as being of Hispanic or Latino origin were classified as “Hispanic or Latino,” regardless of their race. “Black, not Hispanic or Latino” includes African Americans. “All other races, not Hispanic or Latino” includes Native Hawaiians or Other Pacific Islanders, American Indians or Alaska Natives, and respondents of Two or more races (3.7 percent of all respondents).
[2] The School Crime Supplement sample includes students ages 12–18 and, therefore, might not be representative of students in 6th grade. Comparisons between students in 6th grade and those in other grades should be made with caution.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. “Bullied” includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. “At school” includes the school building, school property, school bus, or going to and from school. “Repetition” includes students who reported being bullied more than one day or more than once in a day, as well as students who thought the bullying would happen again. “Power imbalance” includes students who reported being bullied by someone who had more power or strength (e.g., someone bigger, more popular, with more money, influence, or more power in any other way) as well as students who reported being bullied by multiple students acting as a team or acting both alone and as a team. The inclusion of students who reported being bullied by multiple students acting as a team, or acting both alone and as a team, as part of the definition of power imbalance is new for this report and differs from any reports including power imbalance estimates using the 2015 School Crime Supplement data. Therefore, caution should be used when comparing to the 2015 estimates. Detail may not sum to totals because of rounding and missing student characteristic data. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.11. Standard errors for Table 2.11: Number and percentage of students ages 12 through 18 who reported being bullied at school, by bullying components and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Bullied with repetition	Bullied with power imbalance	Bullied with repetition and power imbalance
Total bullied and not bullied	0.71	0.71	0.64	0.68	0.62
Sex					
Male	0.87	0.87	0.78	0.78	0.72
Female	1.01	1.01	0.91	0.96	0.88
Race/ethnicity					
White, not Hispanic or Latino	1.02	1.02	0.91	0.96	0.86
Black, not Hispanic or Latino	1.98	1.98	1.82	1.87	1.66
Hispanic or Latino	1.12	1.12	0.89	1.05	0.83
Asian, not Hispanic or Latino	1.56	1.56	1.42	1.52	1.41
All other races, not Hispanic or Latino	2.69	2.69	2.39	2.62	2.31
Grade					
6th	2.79	2.79	2.71	2.35	2.45
7th	1.60	1.60	1.49	1.47	1.35
8th	1.69	1.69	1.59	1.66	1.56
9th	1.52	1.52	1.37	1.46	1.30
10th	1.67	1.67	1.39	1.57	1.37
11th	1.45	1.45	1.35	1.32	1.23
12th	1.34	1.34	1.03	1.29	1.01
Household income					
Less than $7,500	3.88	3.88	3.64	3.67	3.62
$7,500–14,999	3.21	3.21	2.92	2.99	2.61
$15,000–24,999	2.18	2.18	1.73	2.09	1.70
$25,000–34,999	2.14	2.14	1.89	1.94	1.70
$35,000–49,999	1.57	1.57	1.44	1.49	1.40
$50,000 or more	0.92	0.92	0.77	0.86	0.74

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.12. Number and percentage of students ages 12 through 18 who reported being bullied at school, by bullying components and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Bullied with repetition	Bullied with power imbalance	Bullied with repetition and power imbalance
Total bullied and not bullied	79.3	20.7	15.7	17.2	13.8
Region					
Northeast	82.0	18.0	14.6	16.1	13.2
Midwest	76.5	23.5	17.8	19.2	15.7
South	79.4	20.6	14.9	16.8	13.0
West	80.1	19.9	15.9	16.8	14.0
Sector					
Public	78.9	21.1	15.8	17.5	13.9
Private	85.0	15.0	14.3	13.4	13.1
Catholic	87.6	12.4 !	11.3 !	10.4 !	10.4 !
Other religious	86.7	13.3 !	11.8 !	13.3 !	11.8 !
Nonsectarian	83.7	16.3 !	16.3 !	15.1 !	15.1 !
Locale					
City	80.1	19.9	14.7	16.9	13.0
Suburb	81.9	18.1	13.9	14.9	12.0
Town	73.1	26.9	20.3	23.2	18.6
Rural	76.2	23.8	18.5	19.2	16.1
Level[1]					
Primary	74.7	25.3	22.7	21.3	20.0
Middle	73.3	26.7	19.9	21.4	16.8
High	83.2	16.8	12.5	14.3	11.3
Other	78.2	21.8	18.1	19.0	16.6
Enrollment size					
Less than 300	73.9	26.1	22.1	21.0	19.2
300–599	75.9	24.1	19.4	21.4	17.7
600–999	75.9	24.1	18.5	19.0	15.3
1,000–1,499	81.7	18.3	12.7	15.2	11.4
1,500–1,999	81.5	18.5	13.8	16.6	13.0
2,000 or more	87.7	12.3	8.3	10.0	7.0
Student-to-full-time-equivalent (FTE) teacher ratio					
Less than 13 students	77.4	22.7	18.8	19.7	17.0
13 to less than 16 students	77.6	22.4	16.9	18.6	15.1
16 to less than 20 students	80.1	19.9	14.5	16.3	12.5
20 or more students	81.5	18.5	13.9	15.1	11.7

See notes at end of table.

Table 2.12. Number and percentage of students ages 12 through 18 who reported being bullied at school, by bullying components and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Bullied with repetition	Bullied with power imbalance	Bullied with repetition and power imbalance
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races					
Less than 5 percent	80.1	19.9	15.3	17.2	14.1
5 to less than 20 percent	77.3	22.7	18.8	19.0	16.5
20 to less than 50 percent	77.3	22.7	16.1	18.8	14.0
50 percent or more	81.4	18.6	14.0	15.4	12.3
Percent of students eligible for free or reduced-price lunch[2]					
0 to less than 20 percent	79.6	20.4	15.2	16.9	13.3
20 to less than 50 percent	80.2	19.8	15.3	16.7	13.4
50 percent or more	77.5	22.5	16.5	18.3	14.3

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.

[1] The School Crime Supplement sample includes students ages 12–18 who were enrolled in grades 6–12 and, therefore, might not be representative of students in primary schools. Comparisons between students in primary schools and those in other school levels should be made with caution.

[2] Data on free or reduced-price lunch eligibility are only available for public schools.

NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Location totals may sum to more than 100 percent because students could have been bullied in more than one location. "Repetition" includes students who reported being bullied more than one day or more than once in a day, as well as students who thought the bullying would happen again. "Power imbalance" includes students who reported being bullied by someone who had more power or strength (e.g., someone bigger, more popular, with more money, influence, or more power in any other way) as well as students who reported being bullied by multiple students acting as a team or acting both alone and as a team. The inclusion of students who reported being bullied by multiple students acting as a team, or acting both alone and as a team, as part of the definition of "power imbalance" is new for this report and differs from any reports including power imbalance estimates using the 2015 School Crime Supplement data. Therefore, caution should be used when comparing to the 2015 estimates. No school match was available for 1,338,000 students. Additional missing and not applicable school characteristic data are not shown for locale; school level; enrollment size; student-to-FTE teacher ratio; percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races; and percent of students eligible for free or reduced-price lunch. Detail may not sum to totals because of rounding and these missing data. Total bullied and not bullied is based on respondents for whom data on school and bullying are available (93.6 percent of students).

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.12. Standard errors for Table 2.12: Number and percentage of students ages 12 through 18 who reported being bullied at school, by bullying components and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Bullied with repetition	Bullied with power imbalance	Bullied with repetition and power imbalance
Total bullied and not bullied	0.74	0.74	0.66	0.71	0.64
Region					
Northeast	1.79	1.79	1.47	1.65	1.37
Midwest	1.56	1.56	1.38	1.49	1.42
South	1.04	1.04	0.95	1.03	0.93
West	1.52	1.52	1.44	1.42	1.32
Sector					
Public	0.76	0.76	0.68	0.74	0.65
Private	2.47	2.47	2.48	2.36	2.36
Catholic	3.83	3.83	3.77	3.34	3.34
Other religious	4.03	4.03	3.96	4.03	3.96
Nonsectarian	5.10	5.10	5.10	5.00	5.00
Locale					
City	1.35	1.35	1.20	1.33	1.16
Suburb	0.90	0.90	0.75	0.79	0.69
Town	1.75	1.75	1.82	1.61	1.70
Rural	1.56	1.56	1.45	1.53	1.49
Level					
Primary	3.39	3.39	3.40	2.97	3.06
Middle	1.33	1.33	1.15	1.25	1.10
High	0.87	0.87	0.70	0.79	0.66
Other	2.56	2.56	2.40	2.39	2.27
Enrollment size					
Less than 300	2.56	2.56	2.42	2.37	2.29
300–599	1.50	1.50	1.42	1.43	1.34
600–999	1.37	1.37	1.18	1.19	1.06
1,000–1,499	1.39	1.39	1.07	1.24	0.99
1,500–1,999	1.79	1.79	1.45	1.70	1.43
2,000 or more	1.31	1.31	1.07	1.15	0.95
Student-to-full-time-equivalent (FTE) teacher ratio					
Less than 13 students	2.14	2.14	1.92	2.02	1.90
13 to less than 16 students	1.38	1.38	1.21	1.33	1.21
16 to less than 20 students	1.15	1.15	0.97	1.07	0.96
20 or more students	1.47	1.47	1.44	1.23	1.22

See notes at end of table.

Table S2.12. Standard errors for Table 2.12: Number and percentage of students ages 12 through 18 who reported being bullied at school, by bullying components and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Bullied with repetition	Bullied with power imbalance	Bullied with repetition and power imbalance
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races					
Less than 5 percent	3.20	3.20	2.90	3.08	2.81
5 to less than 20 percent	1.55	1.55	1.32	1.38	1.23
20 to less than 50 percent	1.18	1.18	1.15	1.15	1.09
50 percent or more	1.12	1.12	1.01	1.05	0.95
Percent of students eligible for free or reduced-price lunch					
0 to less than 20 percent	1.74	1.74	1.43	1.59	1.37
20 to less than 50 percent	1.17	1.17	0.99	1.07	0.89
50 percent or more	1.11	1.11	1.08	1.10	1.02

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.13. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the type of power imbalance and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied: Type of power imbalance					
			Physically stronger	More popular	More money	Ability to influence what other students think	More power than you in any other way	Multiple people acting as a team[1]
Total bullied and not bullied	79.8	20.2	40.3	49.6	31.5	56.3	24.5	33.2
Sex								
Male	83.3	16.7	41.5	46.1	30.6	48.2	21.9	27.0
Female	76.2	23.8	39.3	52.2	32.2	62.2	26.4	37.6
Race/ethnicity[2]								
White, not Hispanic or Latino	77.2	22.8	37.5	51.3	34.2	59.7	26.2	33.8
Black, not Hispanic or Latino	77.1	22.9	43.1	48.3	23.8	43.1	15.9	32.8
Hispanic or Latino	84.3	15.7	42.2	46.5	30.8	57.1	25.9	30.1
Asian, not Hispanic or Latino	92.7	7.3	49.3	41.8	19.8 !	60.0	23.3 !	49.5
All other races, not Hispanic or Latino	76.7	23.3	56.2	48.7	29.9	52.6	26.3	31.4
Grade[3]								
6th	70.5	29.5	41.8	54.9	25.3	52.3	18.6	38.9
7th	75.6	24.4	42.2	52.9	27.0	53.6	26.4	33.8
8th	74.7	25.3	38.7	46.5	26.1	49.9	22.4	26.2
9th	80.7	19.3	38.7	52.3	39.7	60.7	23.3	36.9
10th	81.1	18.9	41.8	49.0	38.0	60.2	27.5	35.8
11th	85.3	14.7	45.1	47.7	36.4	55.0	27.8	28.3
12th	87.8	12.2	31.6	41.4	30.8	70.2	26.4	35.4
Household income								
Less than $7,500	73.8	26.2	50.8	40.2	36.4	54.2	32.4	47.6
$7,500–14,999	73.4	26.6	47.0	53.7	39.1	51.8	29.0	29.7
$15,000–24,999	77.6	22.4	43.0	42.0	30.2	45.6	13.0	21.6
$25,000–34,999	79.0	21.0	39.0	52.6	33.8	63.4	21.5	37.5
$35,000–49,999	83.4	16.6	38.9	52.7	32.8	60.6	28.9	30.8
$50,000 or more	80.2	19.8	38.9	49.9	29.9	56.6	25.2	34.5

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
[1] Includes respondents who reported being bullied by multiple students acting as a team or acting both alone and as a team.
[2] Respondents who identified themselves as being of Hispanic or Latino origin were classified as "Hispanic or Latino" regardless of their race. "Black, not Hispanic or Latino" includes African Americans. "All other races, not Hispanic or Latino" includes Native Hawaiians or Other Pacific Islanders, American Indians or Alaska Natives, and respondents of Two or more races (3.7 percent of all respondents).
[3] The School Crime Supplement sample includes students ages 12–18 and, therefore, might not be representative of students in 6th grade. Comparisons between students in 6th grade and those in other grades should be made with caution.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. Missing data are not shown for household income. Type of power imbalance totals may sum to more than 100 percent because students could have experienced more than one type of power imbalance. Detail may not sum to totals because of rounding and missing student characteristic data. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.13. Standard errors for Table 2.13: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the type of power imbalance and selected student characteristics: School year 2016–17

Student characteristic	Not bullied	Bullied	Among students who reported being bullied: Type of power imbalance					
			Physically stronger	More popular	More money	Ability to influence what other students think	More power than you in any other way	Multiple people acting as a team
Total bullied and not bullied	0.71	0.71	1.69	1.80	1.59	1.79	1.37	1.46
Sex								
Male	0.87	0.87	2.37	2.73	2.56	2.62	1.75	2.35
Female	1.01	1.01	2.24	2.16	2.08	2.26	1.99	1.86
Race/ethnicity								
White, not Hispanic or Latino	1.02	1.02	1.96	2.31	1.97	2.23	2.14	1.80
Black, not Hispanic or Latino	1.98	1.98	4.00	4.56	3.98	4.74	2.96	4.19
Hispanic or Latino	1.12	1.12	3.27	3.73	3.77	3.43	2.62	3.26
Asian, not Hispanic or Latino	1.56	1.56	9.80	10.16	8.47	10.49	9.76	10.95
All other races, not Hispanic or Latino	2.69	2.69	7.48	7.29	7.91	8.82	7.10	6.60
Grade								
6th	2.79	2.79	4.52	4.78	4.57	5.45	3.26	5.03
7th	1.60	1.60	4.34	3.42	3.25	3.96	3.50	3.41
8th	1.69	1.69	3.88	4.19	3.60	3.95	3.22	2.87
9th	1.52	1.52	3.88	3.77	4.45	4.43	3.36	4.16
10th	1.67	1.67	4.37	4.82	4.56	4.42	3.85	4.76
11th	1.45	1.45	5.00	5.34	4.90	5.40	5.17	5.01
12th	1.34	1.34	5.34	5.79	5.19	5.59	5.60	5.24
Household income								
Less than $7,500	3.88	3.88	8.35	8.47	8.31	8.09	8.92	9.01
$7,500–14,999	3.21	3.21	7.91	7.20	7.92	7.23	6.08	6.99
$15,000–24,999	2.18	2.18	4.93	4.64	4.13	5.09	3.40	3.36
$25,000–34,999	2.14	2.14	4.93	5.18	5.31	4.72	4.00	4.58
$35,000–49,999	1.57	1.57	5.26	5.08	5.04	4.45	4.54	4.19
$50,000 or more	0.92	0.92	1.97	2.20	2.10	2.07	1.87	2.02

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 2.14. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the type of power imbalance and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Type of power imbalance					
			Physically stronger	More popular	More money	Ability to influence what other students think	More power than you in any other way	Multiple people acting as a team[1]
Total bullied and not bullied	79.3	20.7	40.5	49.3	31.0	56.1	24.3	32.9
Region								
Northeast	82.0	18.0	37.7	58.0	31.6	54.0	27.2	41.0
Midwest	76.5	23.5	38.5	51.1	33.1	61.4	22.5	30.1
South	79.4	20.6	41.0	44.0	26.4	50.5	20.9	30.2
West	80.1	19.9	43.0	51.2	35.8	61.0	30.2	35.8
Sector								
Public	78.9	21.1	41.0	49.5	31.4	55.4	24.3	33.0
Private	85.0	15.0	30.5	45.0	23.0	70.2	25.8	29.7
Catholic	87.6	12.4!	‡	28.9!	‡	84.1	22.1!	‡
Other religious	86.7	13.3!	41.2!	58.8	‡	48.8!	‡	33.1!
Nonsectarian	83.7	16.3!	‡	30.2!	‡	80.6	42.2!	‡
Locale								
City	80.1	19.9	46.8	52.2	34.5	58.7	26.2	33.1
Suburb	81.9	18.1	38.0	50.1	31.8	58.8	25.6	34.7
Town	73.1	26.9	41.1	51.0	31.0	50.8	25.8	32.4
Rural	76.2	23.8	36.2	43.1	25.5	51.8	19.2	29.9
Level[2]								
Primary	74.7	25.3	46.2	45.4	26.4	57.7	30.9	31.2
Middle	73.3	26.7	40.9	51.5	28.1	51.4	21.8	30.8
High	83.2	16.8	38.7	49.1	35.9	59.4	25.9	34.3
Other	78.2	21.8	41.8	47.5	26.0	62.0	24.3	40.4
Enrollment size								
Less than 300	73.9	26.1	35.1	44.3	19.4	52.9	23.8	28.3
300–599	75.9	24.1	46.9	56.4	32.9	59.7	25.0	40.6
600–999	75.9	24.1	38.0	46.4	32.0	52.4	21.2	34.3
1,000–1,499	81.7	18.3	41.4	49.2	26.3	50.8	27.1	30.5
1,500–1,999	81.5	18.5	41.3	56.7	40.6	67.6	19.7	30.6
2,000 or more	87.7	12.3	36.0	40.9	37.7	59.9	32.7	27.3
Student-to-full-time-equivalent (FTE) teacher ratio								
Less than 13 students	77.4	22.7	43.6	51.6	24.3	58.0	25.1	33.4
13 to less than 16 students	77.6	22.4	40.2	49.4	29.8	55.9	22.3	32.8
16 to less than 20 students	80.1	19.9	39.9	48.5	34.8	51.3	20.9	35.4
20 or more students	81.5	18.5	38.7	49.2	33.7	60.6	31.5	27.7

See notes at end of table.

Table 2.14. Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the type of power imbalance and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Type of power imbalance					
			Physically stronger	More popular	More money	Ability to influence what other students think	More power than you in any other way	Multiple people acting as a team[1]
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races								
Less than 5 percent	80.1	19.9	32.0	49.7	21.3	47.9	15.0!	29.0
5 to less than 20 percent	77.3	22.7	35.4	46.1	34.3	57.6	23.9	30.2
20 to less than 50 percent	77.3	22.7	37.2	51.3	33.1	59.8	24.1	36.9
50 percent or more	81.4	18.6	46.4	48.9	28.8	53.7	26.1	32.1
Percent of students eligible for free or reduced-price lunch[3]								
0 to less than 20 percent	79.6	20.4	26.1	50.1	39.0	60.6	24.2	34.7
20 to less than 50 percent	80.2	19.8	41.6	51.8	32.8	58.0	26.0	35.7
50 percent or more	77.5	22.5	45.3	46.8	26.6	51.0	22.2	29.6

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

[1] Includes respondents who reported being bullied by multiple students acting as a team or acting both alone and as a team.

[2] The School Crime Supplement sample includes students ages 12–18 who were enrolled in grades 6–12 and, therefore, might not be representative of students in primary schools. Comparisons between students in primary schools and those in other school levels should be made with caution.

[3] Data on free or reduced-price lunch eligibility are only available for public schools.

NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. "At school" includes the school building, school property, school bus, or going to and from school. No school match was available for 1,338,000 students. Additional missing and not applicable school characteristic data are not shown for locale; school level; enrollment size; student-to-FTE teacher ratio; percent of combined Black/African American, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races; and percent of students eligible for free or reduced-price lunch. Type of power imbalance totals may sum to more than 100 percent because students could have experienced more than one type of power imbalance. Detail may not sum to totals because of rounding and these missing data. Total bullied and not bullied is based on respondents for whom data on school and bullying are available (93.6 percent of students).

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S2.14. Standard errors for Table 2.14: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the type of power imbalance and selected school characteristics: School year 2016–17

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Type of power imbalance					
			Physically stronger	More popular	More money	Ability to influence what other students think	More power than you in any other way	Multiple people acting as a team
Total bullied and not bullied	0.74	0.74	1.72	1.84	1.64	1.81	1.40	1.50
Region								
Northeast	1.79	1.79	4.30	4.63	4.70	5.20	5.04	4.39
Midwest	1.56	1.56	3.53	3.85	3.21	2.77	2.47	2.39
South	1.04	1.04	3.02	2.73	2.47	3.03	2.24	2.36
West	1.52	1.52	3.42	4.15	3.48	3.72	3.17	3.10
Sector								
Public	0.76	0.76	1.81	1.88	1.74	1.83	1.49	1.55
Private	2.47	2.47	8.03	8.30	6.46	8.06	6.42	7.31
Catholic	3.83	3.83	†	13.34	†	6.70	11.03	†
Other religious	4.03	4.03	18.84	16.46	†	17.97	†	15.17
Nonsectarian	5.10	5.10	†	13.88	†	11.77	16.81	†
Locale								
City	1.35	1.35	3.19	3.92	3.57	3.59	2.74	2.91
Suburb	0.90	0.90	2.80	2.90	2.49	2.63	2.48	2.87
Town	1.75	1.75	3.87	4.32	4.05	4.79	3.70	4.12
Rural	1.56	1.56	3.54	3.94	3.33	3.54	3.11	3.29
Level								
Primary	3.39	3.39	6.41	6.56	5.27	7.53	6.43	6.51
Middle	1.33	1.33	2.77	2.66	2.57	2.57	2.01	2.55
High	0.87	0.87	2.41	2.62	2.46	2.56	2.13	2.37
Other	2.56	2.56	5.24	6.24	5.15	5.91	4.87	6.29
Enrollment size								
Less than 300	2.56	2.56	5.44	5.74	3.84	5.44	3.49	3.66
300–599	1.50	1.50	3.86	4.47	3.83	3.87	3.57	3.81
600–999	1.37	1.37	2.99	3.10	3.01	3.48	2.32	2.97
1,000–1,499	1.39	1.39	3.94	4.51	3.38	4.09	3.37	3.50
1,500–1,999	1.79	1.79	4.95	4.98	5.98	4.65	3.82	4.16
2,000 or more	1.31	1.31	6.03	6.05	5.67	5.88	5.88	5.02
Student-to-full-time-equivalent (FTE) teacher ratio								
Less than 13 students	2.14	2.14	4.71	4.94	4.44	4.23	4.40	4.38
13 to less than 16 students	1.38	1.38	3.47	3.45	3.16	3.19	2.49	2.97
16 to less than 20 students	1.15	1.15	2.70	2.83	3.07	3.30	2.26	2.76
20 or more students	1.47	1.47	3.64	4.09	3.90	3.78	2.97	3.09

See notes at end of table.

Table S2.14. Standard errors for Table 2.14: Number and percentage distribution of students ages 12 through 18 who reported being bullied at school, by the type of power imbalance and selected school characteristics: School year 2016–17—Continued

School characteristic	Not bullied	Bullied	Among students who reported being bullied: Type of power imbalance					
			Physically stronger	More popular	More money	Ability to influence what other students think	More power than you in any other way	Multiple people acting as a team
Percent of combined Black/African American, Hispanic/ Latino, Asian/Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native students and students of Two or more races								
Less than 5 percent	3.20	3.20	7.26	8.10	5.48	6.88	5.09	7.66
5 to less than 20 percent	1.55	1.55	2.88	3.29	3.07	3.29	3.59	2.89
20 to less than 50 percent	1.18	1.18	2.78	3.02	3.07	2.97	2.61	2.62
50 percent or more	1.12	1.12	2.62	3.01	2.94	2.75	2.31	2.59
Percent of students eligible for free or reduced-price lunch								
0 to less than 20 percent	1.74	1.74	3.52	4.57	4.24	4.37	3.68	3.72
20 to less than 50 percent	1.17	1.17	2.68	3.17	2.89	3.14	2.80	2.42
50 percent or more	1.11	1.11	2.93	2.75	2.48	2.52	2.14	2.28

† Not applicable.
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 3.1. Percentage of students ages 12 through 18 who reported being bullied at school, by student reports of unfavorable school conditions: School year 2016–17

Bullying reported	Gangs present at school	Saw student with a gun	Drugs at school[1]	Alcohol at school	Saw hate-related graffiti at school
Total bullied and not bullied	8.6	0.7	31.7	21.2	23.2
Bullied	16.0	2.2	48.0	33.8	44.3
Not bullied	6.7	0.3 !	27.5	18.1	17.9

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
[1] Includes students who reported that marijuana, prescription drugs illegally obtained without a prescription, or other illegal drugs, such as cocaine, uppers, or heroin, were available at school.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S3.1. Standard errors for Table 3.1: Percentage of students ages 12 through 18 who reported being bullied at school, by student reports of unfavorable school conditions: School year 2016–17

Bullying reported	Gangs present at school	Saw student with a gun	Drugs at school	Alcohol at school	Saw hate-related graffiti at school
Total bullied and not bullied	0.49	0.14	0.77	0.67	0.83
Bullied	1.29	0.57	2.12	1.71	1.80
Not bullied	0.44	0.11	0.83	0.74	0.83

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 3.2. Percentage of students ages 12 through 18 who reported being bullied at school, by the reported presence of selected school security measures: School year 2016–17

Bullying reported	Security guards or assigned police officers	Staff supervision in hallways	Security cameras	Student code of conduct
Total bullied and not bullied	71.0	88.3	83.8	94.8
Bullied	72.5	88.9	89.1	96.4
Not bullied	70.7	88.2	82.4	94.4

NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. “Bullied” includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S3.2. Standard errors for Table 3.2: Percentage of students ages 12 through 18 who reported being bullied at school, by the reported presence of selected school security measures: School year 2016–17

Bullying reported	Security guards or assigned police officers	Staff supervision in hallways	Security cameras	Student code of conduct
Total bullied and not bullied	1.06	0.58	0.76	0.38
Bullied	2.14	1.06	1.30	0.63
Not bullied	1.01	0.63	0.83	0.45

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 3.3. Percentage of students ages 12 through 18 who reported being bullied at school, by whether the student reported experiencing criminal victimization at school: School year 2016–17

Bullying reported	No victimization	Any victimization[1]	Theft victimization[2]	Violent victimization[3]
Total bullied and not bullied	97.8	2.2	1.5	0.8
Bullied	94.4	5.6	2.7	3.0
Not bullied	98.6	1.4	1.2	0.2 !

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
[1] "Any victimization" includes theft and violent crimes.
[2] "Theft victimization" includes attempted and completed purse snatching, completed pickpocketing, and all attempted and completed thefts, excluding motor vehicle theft. Theft does not include robbery, in which the threat or use of force is involved.
[3] "Violent victimization" includes rape, sexual assault, robbery, aggravated assault, and simple assault.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S3.3. Standard errors for Table 3.3: Percentage of students ages 12 through 18 who reported being bullied at school, by whether the student reported experiencing criminal victimization at school: School year 2016–17

Bullying reported	No victimization	Any victimization	Theft victimization	Violent victimization
Total bullied and not bullied	0.22	0.22	0.17	0.12
Bullied	0.70	0.70	0.45	0.53
Not bullied	0.19	0.19	0.19	0.07

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table 3.4. Percentage of students ages 12 through 18 who reported being bullied at school, by student reports of personal fear, avoidance behaviors, fighting, and weapon carrying at school: School year 2016–17

Bullying reported	Feared attack or harm[1]	Skipped school	Skipped class	Avoided school activities	Avoided a specific place at school[2]	Engaged in a physical fight	Carried a weapon to school[3]
Total bullied and not bullied	4.2	1.2	0.8	1.3	4.9	3.3	2.0
Bullied	12.7	4.8	3.2	4.5	15.2	12.0	3.9
Not bullied	2.1	0.3	0.1 !	0.5	2.3	1.0	1.5

! Interpret data with caution. The standard error for this estimate is 30 to 50 percent of the estimate's value.
[1] Includes fear of attack at school and on the way to or from school. Includes respondents who "sometimes" or "most of the time" were fearful at school.
[2] Includes the entrance into the school, hallways or stairs, parts of the cafeteria, restrooms, and other places inside the school building.
[3] Includes guns, knives, or objects that can be used as weapons.
NOTE: Tabular data include only students who reported being enrolled in grades 6 through 12 and not receiving any of their education through homeschooling during the school year reported. "Bullied" includes students who reported being made fun of, called names, or insulted; being the subject of rumors; being threatened with harm; being pushed, shoved, tripped, or spit on; being pressured into doing things they did not want to do; being excluded from activities on purpose; and having property destroyed on purpose. Total bullied and not bullied is based on respondents for whom data on bullying are available (98.5 percent of students).
SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.

Table S3.4. Standard errors for Table 3.4: Percentage of students ages 12 through 18 who reported being bullied at school, by student reports of personal fear, avoidance behaviors, fighting, and weapon carrying at school: School year 2016–17

Bullying reported	Feared attack or harm	Skipped school	Skipped class	Avoided school activities	Avoided a specific place at school	Engaged in a physical fight	Carried a weapon to school
Total bullied and not bullied	0.32	0.16	0.12	0.17	0.35	0.28	0.23
Bullied	1.11	0.73	0.60	0.70	1.21	1.14	0.64
Not bullied	0.24	0.07	0.04	0.11	0.25	0.18	0.23

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey, 2017.