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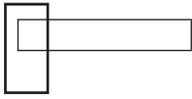
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What is This?

What Can Be Done About School Bullying? Linking Research to Educational Practice

Susan M. Swearer, Dorothy L. Espelage, Tracy Vaillancourt, and Shelley Hymel

In this article, the authors review research on individual, peer, and school contributions that may be critical factors for enhancing efforts to address bullying among students. Methodological challenges are delineated, with an emphasis on how bullying is defined and assessed and the subsequent implications for bullying prevention and intervention program evaluation. The impact of school-based anti-bullying programs and the challenges currently facing educators and researchers in this area are discussed. The article concludes with a proposal for a broader, ecologically based model of school bullying based on the emerging literature.

Bullying is now recognized as a widespread and often neglected problem in schools around the world, and one that has serious implications for children who are victimized by bullies and for those who perpetrate the bullying. A rapidly growing body of research over the past 15 years has shown that both bullies and victims are at risk for short-term and long-term adjustment difficulties such as academic problems (Batsche & Knoff, 1994; Fonagy, Twemlow, Vernberg, Sacco, & Little, 2005), psychological difficulties (Kaltiala-Heino, Rimpela, Rantanen, & Rimpela, 2000; Kumpulainen, Räsänen, Henttonen, Almqvist, et al., 1998; Swearer, Song, Cary, Eagle, & Mickelson, 2001), and social relationship problems (Goldbaum, Craig, Pepler, & Connolly, 2003; Graham, Bellmore, & Juvonen, 2003; Graham & Juvonen, 1998; Ladd, 2003; Nansel et al., 2001; Olweus, 1993b, 1995). Bullying has been linked to anger, aggression, violence, hyperactivity, and externalizing problems as well as to later delinquency and criminality (Olweus, 1993a). Victimization by peers has been linked to illnesses, school avoidance, poor academic performance, increased fear and anxiety, and suicidal ideation as well as to long-term internalizing difficulties including low self-esteem, anxiety, and depression (see Hawker & Boulton, 2000; McDougall, Vaillancourt, & Hymel, 2009). Moreover, suicidal ideation is reported by both bullies and victims, and especially by bully-victims (e.g., Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999). Although

the aforementioned findings are robust, it is not entirely clear whether the connections between bullying, victimization, and psychosocial difficulties reflect causes, consequences, or merely concomitant correlates of bullying and/or victimization. In this article, we review recent research on academic achievement, school climate, peer group functioning, and individual factors that may be critical for enhancing our efforts to effectively address school bullying. We consider the impact of school-based anti-bullying programs and the challenges currently facing educators and researchers, and we propose an ecologically based model of school bullying influenced by the emerging empirical literature.

Research on Bullying Among School-Aged Youth

Over the years, considerable debate has ensued regarding aspects of the school environment that foster or buffer the development of bullying among youth. Early research focusing on physical aspects of the school environment, including teacher–student ratio, population, and budgets (Griffith, 1996; Huber, 1983; Rutter, Maughan, Mortimore, Ouston, & Smith, 1979), yielded no definitive conclusions about which particular aspects of schools, families, or communities were protective or risk factors. Subsequently, researchers expanded their inquiries to consider broader constructs such as school policies, teacher attitudes, peer group functioning, and school climate as potential predictors of children's prosocial and problematic behaviors.

Bullying and Academic Achievement

Some, but not all, studies have demonstrated links between involvement in bullying and poor academic performance. Surveying 3,530 students in Grades 3 to 5, Glew, Fan, Katon, Rivara, and Kernic (2005) identified bullies, victims, and bully-victims based on responses to two items: (a) "Students at this school make fun of, bother, or hurt me," and (b) "How often have you yourself made fun of, bothered, or hurt another student at school?" Glew et al. found that victims of bullying and bully-victims were less likely to be high achievers in school (measured by a composite score including reading, math, and listening) than students who were bystanders. Low achievement was not associated with bullying others. In contrast, in a study of 930 sixth graders, Nansel, Haynie, and Simons-Morton (2003) found significantly ($p < .01$) poorer school adjustment (e.g., doing well on schoolwork, getting along with classmates, following rules, doing homework) among students who were bullies, victims, or bully-victims as compared with students who were not involved. Other

studies have demonstrated that children who are bullied are more likely to avoid school (e.g., Kochenderfer & Ladd, 1996; Olweus, 1992) or even drop out (Fried & Fried, 1996). In contrast, Hanish and Guerra (2002) and Woods and Wolke (2004) failed to demonstrate significant links between peer victimization and academic achievement, and Beran (2008) found a significant, albeit modest, relation between victimization and teacher-rated achievement for preadolescents (10–12 years) but not early adolescents (12–15 years). In summarizing her results, Beran concluded that preadolescents who are bullied are at some risk for demonstrating poor achievement, although this risk increases substantially if the child also receives little support from parents and is already disengaged from school. Among early adolescents, Beran concluded that the effect of peer harassment on academic achievement is not a direct one, and peer harassment becomes one of several factors contributing to poor achievement. Specifically, those students who are harassed and who also have few or no friends and little opportunity for positive peer interactions are at greater risk for low achievement, especially if they already exhibit conduct problems or hyperactivity. Thus, involvement in bullying does not automatically place a child at risk for poor achievement but can be one of a combination of factors that undermine a child's engagement in school, underscoring the need for educators to pay particular attention to children who are victimized.

The links between peer victimization and achievement are complicated at the individual level, and yet researchers have shown that school-based bullying prevention efforts can positively enhance school performance and achievement. Specifically, Fonagy et al. (2005) found that elementary students who attended schools where a bullying and violence prevention program was in place for 2 years or more had higher achievement than a matched comparison group of students in control schools that did not have the bullying prevention program. Moreover, academic achievement decreased among students who left schools with the program and moved to schools that did not. Thus, although the relationship between bullying and school performance is a complex one, the challenge for educators is to create a safe learning environment so that all students can achieve optimally in school.

Bullying and School Climate

School climate is an important consideration in understanding school bullying because adult supervision decreases as students move from elementary to middle and secondary school. In turn, less structure and supervision are associated with concomitant increases in student bullying, particularly in locations such as playgrounds, lunchrooms, and hallways (American Association of University Women Educational Foundation, 2001; Craig & Pepler, 1997; Vaillancourt et al., in press). Students often report feeling unsafe and afraid in unsupervised places in and around schools (Astor, Meyer, & Pitner, 2001; Vaillancourt et al., in press).

For nearly two decades, Kasen and colleagues have studied the impact of school climate on child outcomes (Kasen, Berenson, Cohen, & Johnson, 2004; Kasen, Cohen, & Brook, 1998; Kasen, Johnson, & Cohen, 1990). In their 1990 article, they found that students (ages 6–16) attending schools with high rates of student–student and teacher–student conflict showed greater increases in oppositional, attentional, and conduct problems than students from well-organized schools that emphasized learning, who showed decreases in these negative behaviors. A 6-year follow-up study indicated increased risk of alcohol abuse and criminality among students from high-conflict schools (Kasen et al., 1998). In their most comprehensive examination of the impact of school climate, Kasen et al. (2004) surveyed 500 students and their mothers across 250 schools over a 2.5-year interval (ages 13.5 and 16) on a broad range of measures of both the school environment and student problem behaviors (e.g., bullying, physical/verbal aggression, deviance, rebelliousness, etc.). Results indicated that students in highly conflictual schools, where teachers were ineffective in maintaining order and students defied teachers and engaged in fighting and vandalism, showed an increase in verbal and physical aggression, even after controlling for baseline aggression. Students who attended schools that emphasized learning showed a decrease in aggression.

These studies demonstrated that general aggression levels in the classroom and schools do co-occur with other school-related problems, suggesting that prevention programs that address aggression may have an impact on other school-related problems. Positive school bonding plays a significant role in buffering against the presence of other negative influences and has been associated with lowered risk of student substance abuse, truancy, and other acts of misconduct (Hawkins, Catalano, & Miller, 1992) even when families and neighborhoods are not a positive influence. In a study of 7,376 seventh and eighth graders in middle school, Espelage and Swearer (2009) found that greater bullying and victimization were associated with fewer positive peer influences and fewer parent–child relationships that were perceived as caring from the students' perspective. In addition, positive school climate buffered the potentially negative impact of low parental caring and low positive peer influences on bullying perpetration and bullying victimization. Thus positive, connective school climates are likely to have attenuated these risk factors.

Bullying and Peer Group Functioning

Bullying is also strongly influenced by peer behaviors and reactions. Bystanders—students who are aware of bullying—can have a powerful effect on bullying, positive or negative. One observational study of students found that peers were involved in 85% of bullying episodes, usually by either providing attention to the bullying or actually joining in the aggression (Craig & Pepler, 1995, 1997). Students tend to look to other youth for cues regarding how to respond when they witness bullying (Salmivalli, Lagerspetz, Bjorkqvist, & Kaukiainen, 1996). Providing an audience for bullying by standing around and watching or laughing can encourage and prolong bullying (Craig & Pepler, 1995, 1997; Salmivalli et al., 1996). Elementary students who participated in the Steps to Respect program showed a decrease in destructive bystander behavior (Frey, Hirschstein, Edstrom, & Snell, 2009).

One peer-based theory that dominates the bullying research literature is the application of the homophily hypothesis, which posits that aggressive youths affiliate with other aggressive youths (Cairns & Cairns, 1994). Consistent with this hypothesis, peer group members tend to have similar involvement in bullying behaviors (Espelage, Green, & Wasserman, 2007). In addition,

for both boys and girls, peer group bullying predicts individual bullying behaviors over time, even after controlling for baseline levels of bullying (Espelage, Holt, & Henkel, 2003). Research by Salmivalli and colleagues in Finland (e.g., Salmivalli et al, 1996; Salmivalli & Voeten, 2004) has clearly demonstrated that bullying behavior is often reinforced by peers and can be seen as acceptable and normative within the peer group.

Overall, these studies highlight the powerful effect of peer norms on bullying attitudes and behaviors. Although many bullying prevention programs do address the role of the bystander, they do not address the fact that in many peer groups bullying might be the norm. This is a major oversight and is likely one reason why bullying prevention programs have yielded less-than-encouraging outcomes (Swearer, Espelage, & Napolitano, 2009). Until these peer norms are modified, it is likely that bullying behaviors will remain intractable in our schools (Vaillancourt, Hymel, & McDougall, 2003). One promising approach to changing group norms are anti-bullying interventions that target how children, especially peers who witness bullying, respond (e.g., Aboud & Miller, 2007; Frey et al., 2009; Orpinas & Horne, 2006; Salmivalli, Karna, & Poskiparta, 2010; Stevens, Van Oost, & De Bourdeaudhuij, 2000). Strategies to foster positive bystander responses in bullying situations may be more effective with younger, elementary students than with older, secondary students, given evidence that younger students are significantly more likely to take direct positive action as bystanders (e.g., direct intervention, helping the victim, talking to adults) and that passive (do nothing) and aggressive (get back at the bully) responses increase with age (Trach, Hymel, Waterhouse, & Neale, in press).

Bullying and Individual Factors

Certain individual characteristics heighten risks for being a victim of bullying. Boys are more often victimized than girls (Espelage & Holt, 2001; Kumpulainen, Rasanen, & Henttonen, 1998; Vaillancourt et al., 2008), although this depends somewhat on the form of victimization. Boys are also more likely to experience physical bullying victimization (e.g., being hit), and girls are more likely to be targets of indirect victimization (e.g., social exclusion; Jeffrey, Miller, & Linn, 2001). In addition to gender, ethnicity is a complex issue in the bullying literature. One of the few studies that addressed the influences of race on bullying found that Black students in the United States reported less victimization than White or Hispanic youth (Nansel et al., 2001). Juvonen, Graham, and Schuster (2003) found Black middle school youth more likely to be categorized as bullies and bully-victims than White students were. Additional factors related to victimization risk include not fitting in with a peer group (Hoover, Oliver, & Thomson, 1993), obesity (Janssen, Craig, Boyce, & Pickett, 2004), remedial education enrollment (Byrne, 1994), and developmental disabilities (Marini, Fairbairn, & Zuber, 2001). In addition, victims are often characterized as more insecure and anxious and quieter than their peers (Olweus, 1995).

Identifying the characteristics of bullies has been more challenging (Graham, 2009). For example, consistent with a social skills deficit model of bullying, some research suggests that bullies display deficiencies in social problem solving (Slee, 1993; Warden & Mackinnon, 2003). Other studies, however, have linked bullying behavior to seemingly positive social competencies, including high social intelligence (Kaukiainen et al., 1999) and being seen by peers as powerful and popular (Rodkin, Farmer, Pearl, & Van Acker, 2006; Thunfors & Cornell, 2008; Vaillancourt et al., 2003). Research by Vaillancourt et al. has also demonstrated that most adolescent bullies are perceived by their peers as being attractive, popular, and leaders in their schools.

Students with disabilities. Although many researchers investigating victimization indicate that students with disabilities (i.e., learning, physical, psychological) are victimized more frequently than their nondisabled peers, findings related to prevalence and predictors have yielded inconsistent results. Woods and Wolke (2004) found comparable self-reported victimization rates among students with and without disabilities, but Little (2002) found that up to 94% of students with disabilities reported experiencing some form of victimization. The majority of studies on victimization of students with disabilities have documented that these students experience increased verbal abuse (e.g., name-calling, mimicking disability characteristics, teasing), social exclusion, and physical aggression when compared with students without disabilities (Llewellyn, 2000; Marini et al., 2001; Norwich & Kelly, 2004).

Other research has indicated that students with disabilities display more bullying and/or aggressive behaviors (physical, verbal) than students without disabilities (Kaukiainen et al., 2002; O'Moore & Hillery, 1989; Unnever & Cornell, 2003; Whitney, Smith, & Thompson, 1994). Over time, victimized students with disabilities may develop aggressive characteristics as a strategy to combat victimization (Kumpulainen, Räsänen, & Puura, 2001; O'Moore & Hillery, 1989; Van Cleave & Davis, 2006), suggesting that these students become provocative victims. Overall, researchers have documented that between 15% (Van Cleave & Davis, 2006) and 42% (O'Moore & Hillery, 1989) of victims with disabilities also exhibit characteristics (such as impulsivity, aggression) of youth who bully others. Data also suggest that students with psychiatric disorders or high-incidence disabilities such as behavior disorders may adopt these aggressive behaviors in response to being victimized (Brockenbrough, Cornell, & Loper, 2002; Kumpulainen et al., 2001).

Lesbian, gay, bisexual, and transgender (LGBT) students. Many LGBT students also report experiencing victimization while at school, including physical and verbal harassment, isolation and stigmatization, and physical assault (Kosciw, Diaz, & Greytak, 2008; Rivers, 2001). In a recent survey of LGBT youth, approximately 85% reported experiencing some form of bullying or harassment while at school (Kosciw et al., 2008). In addition, Rivers (2001) found that 82% of a LGB (did not measure transgender) student sample reported being targets of name-calling (mostly homophobic in nature) and 60% reported being assaulted. LGBT youth also report victimization and insults from school administrators, staff, and teachers (Chesir-Teran, 2003). However, when the school climate is perceived as positive, it serves to buffer against the experience of negative psychological and social concerns among LGBT youth and those questioning their own sexual orientation (Espelage, Aragon, Birkett, & Koenig, 2008).

Even in the absence of direct homophobic victimization, a child might experience increased anxiety, depression, and

isolation in schools where antigay language is widely used (Swearer, Turner, Givens, & Pollack, 2008). More than 90% of LGB teens report that they *sometimes* or *frequently* heard homophobic remarks in school such as "faggot," "dyke," or other homophobic words. Of these students, 99.4% said they heard remarks from students and 39.2% heard remarks from adults at school (Kosciw & Diaz, 2006). Antigay language in schools suggests that many school environments are unsupportive of lesbian, gay, bisexual, and transgendered students, which may contribute to negative outcomes for these youth.

Collectively, this rapidly growing body of research on school bullying has motivated increased efforts to develop and implement school-based intervention and prevention programs addressing bullying in countries around the world (e.g., see Jimerson, Swearer, & Espelage, 2009). In the current zeitgeist of evidence-based practice, research attention has moved from obtaining information on the prevalence, correlates, and consequences of bullying to issues of assessment and program evaluation.

Methodological Challenges in Research-to-Practice

Methodological issues challenge the field of bullying research, making comparisons across studies and evaluation efforts difficult. Bullying can be assessed via different approaches (i.e., rating scales, surveys, observations, interviews), and different assessment strategies may yield different findings (Cornell & Bandyopadhyay, 2010; Cornell & Brockenbrough, 2004; Furlong, Sharkey, Felix, Tanigawa, & Green, 2010; Swearer, Siebecker, Johnsen-Frerichs, & Wang, 2010). A lack of consensus regarding how to define bullying continues, and problems ensue when researchers attempt to agree on a common definition and a common metric for measuring bullying.

Despite variability across definitions and methods of assessment, most agree that bullying describes intentionally harmful, aggressive behavior that is repetitive in nature and in which there is a power differential between the aggressor and victim (e.g., Olweus, 1993b). How one defines bullying has important implications for assessing the construct. Indeed, Vaillancourt et al. (2008) examined whether the provision of a definition (or not) would yield different prevalence rates in self-reported bullying. More than 1,700 students (ages 8–18) were randomly assigned to either a definition or no definition condition and asked to report on their experiences with bullying as a victim or perpetrator. Provision of a standardized definition of bullying was related to different prevalence rates—students who were provided a definition reported being bullied less and bullying others more than students who were not given a definition.

There are several important challenges to the accurate measurement of bullying. Intervention and prevention efforts that seek to raise awareness regarding bullying can initially increase student reports of bullying, making evaluation of changes in rates of bullying difficult in short-term longitudinal evaluations. Second, one's interpretation of bullying varies across cultures, language groups (Smith, Cowie, Olafsson, & Liefooghe, 2002), reporters (e.g., Vaillancourt et al., 2008), and individual characteristics like age and gender (e.g., Boulton, Trueman, & Flemington, 2002; Smith & Levan, 1995). Third, the use of different approaches to the assessment of bullying can lead to different findings. Bullying

has been assessed using direct observations (e.g., Craig, Pepler, & Atlas, 2000; Frey et al., 2009; Tapper & Boulton, 2005), teacher ratings (Nabuzoka, 2003), parent reports (Nordhagen, Neilsen, Stigum, & Kohler, 2005), peer nominations (Vaillancourt et al., 2003; Veenstra et al., 2005), peer ratings (Salmivalli et al., 1996), and most commonly, self-reports (Nansel et al., 2001; Olweus, 1993b; Vaillancourt et al., in press), which vary across and within methods. Some studies have documented weak agreement across self- versus peer reports of bullying (Cole, Cornell, & Sheras, 2006; Graham et al., 2003; Juvonen, Nishna, & Graham, 2001), although others have demonstrated more consistent agreement among younger (Frey et al., 2009) and among older children (Ladd & Kochenderfer-Ladd, 2002). Importantly, however, researchers such as Ladd and Kochenderfer-Ladd have shown that in terms of predicting future adjustment, a multi-informant approach yields better estimates than a single-informant measure. In the area of bullying, it is typical that the status designation of bully, victim, bully-victim, or bystander is based on one informant, most often the child. This narrow approach increases measurement error in that extreme biases are not attenuated as they would be if other evidence were considered.

One critical question that remains unanswered is whether particular assessment approaches are sufficiently sensitive to changes in rates of bullying. In one of the few studies utilizing both observation and self-report data to evaluate intervention effects, Frey et al. (2009) found that observed changes over time in bullying and victimization on the school playground were not confirmed in student or teacher reports. Almost all evaluations of school-based interventions rely on anonymous self-report to measure outcomes. Research is needed to determine whether self-report measures are sufficiently sensitive to detect changes in bullying over time, especially given evidence that school-based intervention efforts do not demonstrate consistent success, as reviewed in the section below.

School-Based Anti-Bullying Efforts

School-based anti-bullying efforts often involve universal programs administered to the entire school population, typically with the goal of increasing awareness about bullying and decreasing bullying behaviors among students. Although some research has demonstrated significant and positive outcomes for school-based anti-bullying intervention and prevention efforts (e.g., Cross, Hall, Hamilton, Pintabona, & Erceg, 2004; Frey et al., 2009; Olweus, 1993a, 2004; Salmivalli, Kaukiainen, Voeten, & Sinisammal, 2004), not all efforts have met with consistent success (e.g., Bauer, Lozano, & Rivara, 2007; Hanewinkel, 2004; Limber, Nation, Tracy, Melton & Flerx, 2004). In fact, four recent reviews evaluating school-based anti-bullying efforts have yielded mixed results.

Results from a 2004 meta-analysis of 14 whole-school antibullying programs by Smith, Schneider, Smith, and Ananiadou (2004) found small to negligible effect sizes for desired changes in student self-reports of both victimization and perpetration. In fact, in some cases, program effects were actually negative, with documented increases in bullying among students. These reported "increases," however, may reflect an increase in awareness and vigilance regarding bullying behavior. The validity of self-reports is seldom questioned in bullying intervention studies. In fact, far

too often researchers rely on anonymous self-reports to measure program effects, without corroboration from other sources. This important limitation is highlighted in Frey et al.'s (2009) recent longitudinal study of the Steps to Respect anti-bullying program in which "change" was found to be closely linked to the method used to assess change (i.e., observations vs. teacher and student reports).

Vreeman and Carroll (2007) examined the findings of 26 studies evaluating school-based anti-bullying efforts, distinguishing between classroom curriculum studies, whole-school/multidisciplinary interventions, and targeted social and behavioral skill training for bullies and victims. The most promising results were reported for whole-school anti-bullying efforts, including those to establish schoolwide rules and consequences for bullying, teacher training, conflict resolution strategies, and classroom curricula and individual training. Schoolwide programs were found to be far more effective in reducing bullying and victimization than were classroom curriculum programs or social skills training strategies, although at least some research showed positive benefits of these latter two approaches.

Of the 10 studies evaluating whole-school programs, 2 studies examining the impact of the pioneering Olweus Bullying Prevention Programme (OBPP), both conducted in Norway, yielded disparate results. Although Olweus (1993a, 1994) reported decreases in both bullying and victimization, Roland (1993, 2000) reported increases in bullying (for boys) and victimization (for boys and girls). Seven of the 8 other schoolwide interventions demonstrated at least some significant improvements in bullying or victimization, although results varied across subsamples and measures.

A more recent, 2008 meta-analytic investigation of 16 studies published from 1980 to 2004 yielded similarly disappointing results regarding the impact of anti-bullying programs (Merrell, Gueldner, Ross, & Isava, 2008). This meta-analysis included data from more than 15,000 students (Grades K–12) in Europe, Canada, and the United States. Positive effect sizes were found for only one third of the study variables, which primarily reflected favorable changes in knowledge, attitudes, and perceptions of bullying. No changes were found for bullying behaviors, as predominately assessed via student self-report (across 13 studies).

Despite the rather disheartening results of these two meta-analyses, a third recent meta-analysis by Ttofi, Farrington, and Baldry (2008) yielded mixed results. In a report for the Swedish National Council for Crime Prevention, the authors evaluated 30 bullying intervention studies, of which 13 were based on the OBPP. This meta-analysis was noteworthy because of the rigorous study selection procedures used (i.e., focus on reducing school bullying, bullying defined clearly, bullying measured using self-report, studies that included both experimental and control conditions, inclusion of effect sizes, and sample sizes of 200 or larger). Results indicated that bullying and victimization were reduced by 17% to 23% in experimental schools compared with control schools, with programs based on the OBPP being the most efficacious. Ttofi et al. found that reductions in bullying were associated with parent training, increased playground supervision, disciplinary methods (dichotomized as punitive vs. nonpunitive), home–school communication, classroom rules, classroom management, and use of training videos. Further, there

was a dosage effect; the more elements included in a program, the greater the likelihood of reducing bullying. The researchers also noted that anti-bullying programs were more efficacious in smaller scale European studies and less effective in the United States.

So, what do these findings mean for school-based bullying programming in North America? These mixed results suggest that, although school-based and schoolwide bullying prevention efforts *can* be effective, success in one school or context is no guarantee of success in another. Indeed, given the pioneering work that Dan Olweus has done in the area of bullying (e.g., Olweus, 1993a), it is not surprising that almost half of the programs included in the meta-analyses described above were based on the OBPP (Olweus, 1993a), which, despite many successful trials in Scandinavian countries, has not yet demonstrated consistent efficacy in schools in North America (Bauer et al., 2007). Researchers are only beginning to understand the factors that contribute to this variation in outcomes across schools and across countries. Indeed, there is no single, large-scale randomized clinical trial of a schoolwide bullying prevention program, a fact that highlights the need to conduct rigorous randomized trials in this area.

Why are whole-school approaches to reducing bullying relatively ineffective? We contend that anti-bullying programs are struggling for five critical reasons. First, as noted previously, many if not most intervention studies have relied on self-report indices of bullying and victimization, which may not be sufficiently valid and accurate in detecting behavioral change. Second, most anti-bullying programs are not well grounded in a guiding theoretical framework that would inform program development and evaluation. Third, most fail to direct interventions at the social ecology that promotes and sustains bullying perpetration, such as peers and families. Fourth, many of these programs do not address the changing demographics of communities and fail to incorporate factors such as race, disability, and sexual orientation. Finally, schoolwide programs are designed to reach *all* students, when in fact a relatively small percentage of students are directly engaged in bullying perpetration (typically 10%–20% of students are the perpetrators of bullying). Schoolwide programs seldom include direct intervention for the perpetrators, who need to be taught how to engage in prosocial behaviors.

A Social-Ecological Model of Bullying

We argue that a social-ecological framework is particularly useful for understanding bullying in schools (Espelage & Swearer, 2004; Espelage & Swearer, 2010). This framework views youth behavior as shaped by individual characteristics and a range of nested contextual systems of schools, adults, neighborhoods, and society (Benbenishty & Astor, 2005; Bronfenbrenner, 1979). The ecological perspective provides a conceptual framework to investigate the combined impacts of social contexts and influences on behavioral development. Within this framework, the systems directly affecting children and adolescents include families, schools, peer groups, teacher–student relationships, parent–child relationships, parent–school relationships, neighborhoods, and cultural expectations. This perspective has been used to predict school violence in a study in Israel (with a sample of 10,400 students in Grades 7–11 in 162 schools across Israel), showing that the variables male, junior high, low socioeconomic status, one

religious/culture-specific type of school versus another, crowded classrooms, and school climate were significantly related to engagement in school violence (Khoury-Kassabri, Benbenishty, Astor, & Zeira, 2004). Although a social-ecological perspective on the interrelations among these systems in the school violence literature has been studied, the application of this framework in the bullying literature has been slower to evolve.

A social-ecological perspective offers a holistic view of bullying, but within this framework are situated process-oriented theories of attitude and behavior change in children and adolescents. For example, what is it about positive peer influences or a positive school climate that deters adolescents from engaging in bullying perpetration? How do the developmental demands of early adolescence foster the use of bullying to establish dominance within a peer group? At the individual level, what are the cognitive factors that support or inhibit engagement in bullying (Doll & Swearer, 2006)? Future empirical research in bullying prevention and intervention should examine these questions based on social-ecological theory.

Implications for Future Research, Policy, and Practice

Research on the interrelations among schools, families, peer groups, and individual factors has been slower to evolve in bullying prevention and intervention efforts. Before selecting a specific intervention, educators should investigate whether or not the intervention is based in research, if it promotes prosocial behavior (Colvin, Tobin, Beard, Hagan, & Sprague, 1998; Greenberg et al., 2003), and if there are documented outcome data. The research that has been conducted on bullying prevention and intervention suggests that anti-bullying initiatives should include individual, peer, family, school, and community efforts. Finally, it is important to consider school bullying as part of a larger focus within schools on social and emotional development and learning (see Greenberg et al., 2003; see also www.casel.org).

Armed with a theoretically driven and data-based model of bullying prevention, education researchers and practitioners not only can significantly reduce attitudes and perceptions supportive of bullying but also can create meaningful and sustainable behavior change. One challenge, however, is getting educators to adopt such evidence-based programs. In a recent study examining how 1,176 educators determine which anti-bullying programs they choose to implement, Cunningham et al. (2009) found that educators preferred to adopt anti-bullying programs in their schools that their colleagues anecdotally reported were effective over programs that were scientifically shown to be effective.

This article explicates the need for comprehensive programming that incorporates the various levels of the social ecology and pays particular attention to methodological issues that plague the bullying literature. Given that almost all evaluations of school-based interventions rely on anonymous self-report, there is a need for studies to examine the veracity of different methodological approaches. These methodological challenges influence prevention and intervention outcomes. Unfortunately, the research suggests that the majority of school-based bullying prevention programs have had little impact on reducing bullying behavior.

Bullying will be reduced and/or stopped when prevention and intervention programs target the complexity of individual, peer, school, family, and community contexts in which bullying unfolds. Given the rapid growth of this literature, and the advent of information on the Internet that has facilitated international exchanges of information in this area (e.g., Bullying Research Network, n.d.; see Hymel & Swearer, 2009), research on bullying and victimization will influence educational practice. The linkage between research and practice is the answer to the question how to eradicate bullying among youth.

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